

Aligning Public Participation Processes in
Urban Development Projects to the Local Context

by

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ABSTRACT

Public participation is considered an essential process for achieving sustainable urban development. Often, however, insufficient attention is paid to the design of public participation, and processes are formulaic. Then, participation may not match the local context of the communities within which a project is conducted. As a result, participation may become co-optative or coercive, stakeholders may lose trust, and outcomes may favor special interests or be unsustainable, among other shortcomings.

In this research, urban public participation is a collaborative decision-making process between residents, businesses, experts, public officials, and other stakeholders. When processes are not attuned with the local context (participant lifestyles, needs, interests, and capacities) misalignments between process and context arise around living conditions and personal circumstances, stakeholder trust, civic engagement, collaborative capacity, and sustainability literacy, among others.

This dissertation asks (1) what challenges arise when the public participation process does not match the local context, (2) what are key elements of public participation processes that are aligned with the local context, (3) what are ways to design public participation that align with specific local contexts, and (4) what societal qualities and conditions are necessary for meaningful participatory processes?

These questions are answered through four interrelated studies. Study 1 analyzes the current state of the problem by reviewing public participation processes and categorizing common misalignments with the local context. Study 2 envisions a future in which the problem is solved by identifying the features of well-aligned processes. Studies 3 and 4 test interventions for achieving the vision.

This dissertation presents a framework for analyzing the local context in urban development projects and designing public participation processes to meet this context. This work envisions public participation processes aligned with their local context, and it presents directives for designing deliberative decision-making processes for sustainable urban development. The dissertation applies a systems perspective to the social process of public participation, and it provides empirical support for theoretical debates on public participation while creating actionable knowledge for planners and practitioners.

To Jannan, for all your love and support.

And to Eli, for showing me there is still magic in the world.

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CHAPTER 1

Introduction

1. Problem Statement

Meaningful public participation is widely considered a requisite procedural element for achieving sustainability (WCED, 1987; UNCED, 1992; Koontz, 2006; Geczi, 2007) as well as planning for urban development (Arnstein, 1969; Plein et al, 1998; Hawkins and Wang, 2011). Therefore, sustainable urban development projects often emphasize the importance of public participation (Agyeman and Evans, 2003; Smith and Wiek, 2012).

Public participation is lauded by many (for purported benefits, see Fischer, 1993; Innes and Booher, 2004; Fung and Wright, 2001; Walls et al, 2010; Bailey et al, 2012; Lang et al, 2012). But many scholars also argue that the practice has numerous shortcomings and pitfalls. For instance, many participation processes are formulaic, they may be coercive and co-optative, and public input does not actually influence policy making as often as one might assume (Cooke, 2001; Hailey, 2001; Chaskin, 2012). It is challenging to reconcile these two perspectives, especially because most research on public participation is theoretical, and there is little empiricism to guide the debate (Shipley and Utz, 2012).

Still, some scholars argue that many of public participation's shortcomings can be avoided through careful process design (Dietz and Stern, 2008; von Korff et al, 2010). One popular recommendation is to design public participation to meet the local context (Fischer, 2006; Koontz, 2006; Dietz and Stern, 2008; Bryson et al, 2012); however, there are few directives in the literature for achieving this.

2. Research Objectives and Questions

Through a study of public participation processes in cities in the Global North, this dissertation defines the local context of urban development projects through the identification of common challenges in urban public participation processes. This body of research conceptualizes the challenges as misalignments between the public participation process (as designed by planners and experts) and the local context. Examples include misalignment between the public participation process and policy maker support, community civic engagement, and participant trust, among others.

After identifying these misalignments, the dissertation seeks strategies for aligning the public participation process and the local context in urban development projects. The perpetuation of misalignments can be conceptualized from two complementary perspectives:

1. There is room to improve public participation design to avoid formulaic, one-size fits all approaches (Hailey, 2001) that are insensitive to social and cultural contexts.
2. Citizen capacity is unequally distributed in society, and it can be challenging for prospective participants to dedicate the time and attention required to meaningfully engage in advanced public participation processes.

Both situations lead to sub-optimal public participation processes, and subsequently to insufficient sustainability outcomes in urban development. There is a need for better alignment, which can be achieved by (1) improving the participatory process to meet the local context, or (2) modifying the local context so that institutions, communities, and

participants can support public participation. This dissertation tests an intervention for each approach.

This dissertation pursues the research objectives by answering the following questions:

1. What are common challenges to designing and implementing public participation processes in urban development projects?
2. What strategies might be employed to overcome these challenges?
3. Are there ways to design public participation processes for sustainable urban development to align with specific local contexts and to meet the existing capacity, availability, and interest of participants?
4. What societal qualities and conditions are necessary for meaningful participatory processes? Can these conditions be cultivated?

3. Research Methods

This thesis is a multi-methodological project employing different research tools over four individual studies. Research methods include:

- Literature review
- Case study research
- Participatory research
- Expert interviews

4. Individual Studies

Avoiding Misalignments Between Public Participation Process and Local Context in Urban Development: Chapter 2 defines public participation and local context for the purposes of this body of research. The study then identifies and categorizes common

challenges to public participation in urban development projects. This is achieved through a review of peer-reviewed literature on public participation in urban development. These common challenges, conceptualized as misalignments between the public participation process and local context, constitute the guiding framework for the rest of the dissertation.

Coping with Misalignments Between Public Participation Process and Local Context in Urban Development Projects – An Expert-Based Study: Chapter 3 revisits the misalignments identified in Chapter 2 and presents strategies for overcoming these challenges. These strategies are identified through interviews with scholars and practitioners experienced in public participation.

Aligning a Public Participation Process to Participants' Sustainability Literacy – A Case Study on Urban Development in Phoenix, Arizona: Chapter 4 relays the case of Reinvent Phoenix, an urban development project that featured a robust public participation process to generate sustainability visions for Phoenix's light rail corridor. Through participatory research, researchers identified low participant sustainability literacy as an obstacle to creating sophisticated sustainability visions. As a result, researchers adjusted the participatory process to better align with participants' sustainability literacy. This study presents an evaluation of these research efforts and generates empirical evidence for overcoming one of the misalignments (sustainability literacy) identified in Chapter 2.

Citizenship Education through Participatory Budgeting – The Case of Bioscience High School in Phoenix, Arizona: Successful public participation processes require a public with the capacity and interest to engage in local decision making. The knowledge,

attitudes, skills, and practices of participatory citizens are not universally taught. Chapter 5 presents a participatory research project that developed in high school students the competencies required of engaged, democratic citizens.

5. Value Proposition

This dissertation leaves behind the theoretical debates on the merit of participation, and it instead generates empirically supported directives for making public participation a meaningful input to guide sustainable urban development. The research included here fills multiple research gaps, including an analysis of local context, an evaluation of a public participation process, empirical research on public participation, and the generation of directives for good public participation process design.

These contributions are generated through a sustainability science perspective on urban planning. The research applies a fresh systems perspective to understanding the social process of public participation that has been studied in planning literature for decades.

This dissertation is intended to be useful to both scholars and practitioners. While the findings of the individual studies may inform theoretical debates and add empiricism to the literature, this research also creates actionable knowledge for practitioners that are designing and carrying out public participation processes in urban development projects. And it is with this intention—to conduct research that both informs scholarship and drives practice—that we begin.

CHAPTER 2

Avoiding Misalignments between Public Participation Process and Local Context in Urban Development

Abstract

Public participation is a common element in state-of-the-art urban development projects. Tailoring the public participation process to the local context is a popular strategy for ensuring sufficient turnout and meaningful engagement, but this strategy faces several challenges. Through a systematic review of case studies of public participation in urban development projects, we identify ten typical misalignments between the public participation process and the local context, including the lack of policy maker support, adverse personal circumstances of participants, low collaborative capacity, and mistrust, among others. When a public participation process is not aligned to the local context, the process may generate outcomes that compromise public interests, inequitably distribute benefits among stakeholders, or favor powerful private interests. This study offers caution and guidance to planning practitioners and researchers on how to contextualize public participation in urban development projects through the categorization of common misalignments that ought to be avoided.

1. Introduction

Once a top-down process, over the past four decades governance has shifted to the local level, and there towards civic engagement and the democratization of policy making (Arnstein, 1969; Pateman, 1970; Hawkins and Wang, 2011). Civil society now plays a larger role in setting priorities for and contributing to local community development, environmental management, transportation, health, and public safety issues (Hall, 2002;

Walls et al, 2010). Highlighting its general acceptance in society, public participation has become a rhetorical feature of good local governance (Fischer, 2006; Mimicopoulos et al, 2007; Thomas, 2009).

Urban development is one of the prominent arenas for local governance efforts. Following the general trend, public participation is now a common feature of urban development projects (DiGaetano and Strom, 2003; Bengston et al, 2004; van Bueren, E. & Heuvelhof; Smedby and Neij, 2013), in particular when they aim at fostering urban sustainability (Agyeman and Evans, 2003; Smith and Wiek, 2012). Its rise in urban development in general, and urban sustainability efforts in particular, is due to a number of benefits public participation is assumed to offer.

Supportive perspectives contend that public participation builds trust between participants and experts (Fischer, 1993), and between the public and decision makers (Walls et al, 2010); facilitates conflict resolution (Zhang and Fung, 2013); establishes support for implementation (Fagotto and Fung, 2006; Nevens and Roorda, 2013); creates equitable processes, which in turn produces just outcomes (Bailey et al, 2012); fosters social learning and builds capacity in individuals as well as across society (Sipilä and Tyrväinen, 2005; Blackstock et al, 2007; Wiek et al, 2014a); engages stakeholders with diverse perspectives that collaborate to understand and solve complex societal problems (Lang et al, 2012; Newman and Jennings, 2008); develops social capital through the formulation of social networks (Innes and Booher, 2004; Wiek et al, 2014a); and builds institutional capacity (Innes and Booher, 2004). There are many case studies that describe public participation as a beneficial process (Fung and Wright, 2001; Fagotto and Fung, 2006; DeSousa, 2011; Mandarano, 2011).

While there are numerous arguments in favor of participation, other researchers and practitioners caution that there are also challenges to and adverse effects from public participation: governments are often overly dominant in public participation processes (Innes and Booher, 2004; Koontz, 2006), or completely lack capacity to conduct such processes (Hall, 2002); civil society's civic capacity is declining, and many citizens now lack capacity to participate (Hall, 2002; Chaskin et al, 2012); citizens often do not have the time to meaningfully engage (Innes and Booher, 2004), or are apathetic and not interested in participating (Cuthill, 2002; Krek, 2005), while others distrust participation as a process that bends to manipulative sponsors and powerful elites (Connelly, 2006); and resources to participate are not equally distributed to disadvantaged groups (Innes and Booher, 2004), among other challenges. As a result, public participation processes are often formulaic (Hailey, 2001), susceptible to cooptation (Chaskin et al, 2012), or can even be coercive (Cooke, 2001).

Both sides of this debate are predominantly grounded in theory (Shipley and Utz, 2012), creating opportunity for further empirical research to substantiate positive and negative arguments and to establish directives for mitigating shortcomings while maximizing benefits from public participation. Many pitfalls can be mitigated and avoided through careful process design (Dietz and Stern, 2008; von Korff et al, 2010), and one popular recommendation is to design processes to fit the local context (Fischer, 2006; Dietz and Stern, 2008; von Korff et al, 2010; Bryson et al, 2013; DeCaro and Stokes, 2013). Yet, little specific directives are provided for how such contextualization might be achieved.

Urban development is generally guided by planning processes that include opportunities for varying degrees of public involvement on topics such as transportation, land use, infrastructure, housing, economic development, environmental management. Yet, public participation may not be fruitful if the process is not well aligned to the local context, i.e., the capacities and needs of the public or the decision makers. This research defines the local context of urban development projects by asking what categorizable impediments to high quality public participation arise when the participatory process is not attuned to the local context. Through a review of urban development projects, we identify ten typical instances in which the public participation process does not align with the local context. This study both cautions and guides planning practitioners and researchers on how to contextualize public participation in urban development projects through the categorization of misalignments that ought to be avoided.

2. Conceptual Framework: Contextualizing Public Participation

Public participation is often vaguely defined in the literature, while in actuality it can take many shapes and forms. Dietz and Stern (2008) acknowledge that public participation may encompass all facets of democracy, including voting, expressing opinion, interest groups, demonstrations, and even artistic expressions like songs. Thus, we first present the concept of public participation we adopt in this study, which is based on a proposal made by Wiek et al. (2014b).

The concept composes three key features of public participation (Figure 2.1), dealing with the questions of who is doing what, with whom, when, for what purpose, and with what outcome (Kruetli et al., 2010). First, public participation as conceptualized here is part of and therefore depends on an ‘official’ urban development

project, in which the public participates. We focus here on participation that occurs in ‘officialized spaces’ and is part of regulated procedures (Cornwall, 2004). The urban development project, as the main process, is structured into various phases (e.g., preparing, planning, implementing, and evaluating), with each phase generating certain outcomes, including a proposal, a plan, real-world changes, and recommendations.

Second, the urban development project is supervised by Strategic Agents such as elected officials and investors (applying and/or influencing laws and regulations), and is carried out through Operating Agents such as planners and experts (who report back to the Strategic Agents). The Operating Agents engage stakeholders through the public participation process; stakeholders might include citizens, residents, non-profit organizations, businesses, governmental agencies (not supervising), and the media.

Third, through the public participation process the public might participate in one, several, or all phases of the urban development project, and to varying degrees. The public participation process may rely on different standardized procedures, such as public meetings, citizen juries, focus groups, stakeholder workshops, consensus conferences, and web-based engagements, among others (Shipley and Utz, 2012). Apart from substantive inputs that might inform, to varying degrees, the outcomes of the phases as indicated above – the public participation process can also yield less tangible outcomes such as agreement, trust, new or strengthened relationships, and enhanced capacities (Wiek et al., 2014a).

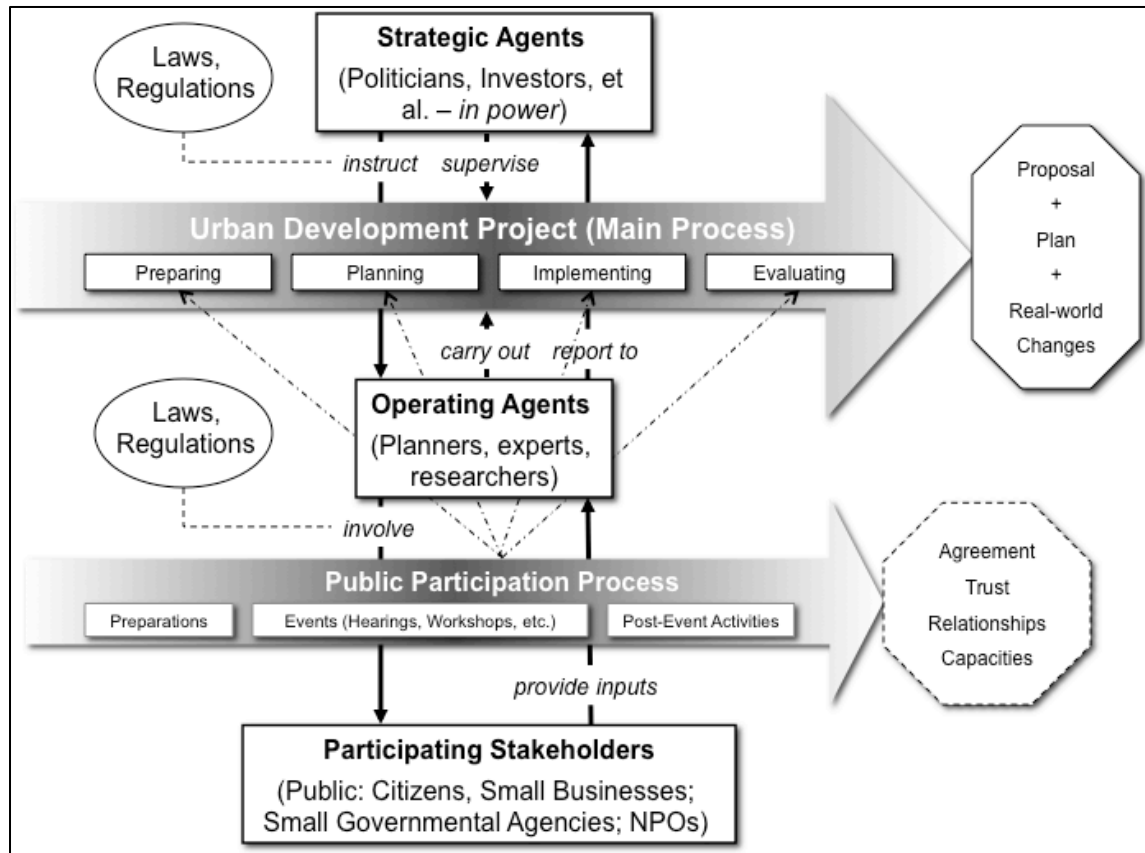


Figure 2.1. Key Features of Public Participation in Urban Development Projects [adapted from Wiek et al., 2014b]

Even within the parameters used in this study to define public participation, there is a wide spectrum of processes ranging in levels of participant engagement. For decades, planning literature has addressed this issue. Arnstein (1969) presented a framework for interpreting degrees of citizen power in local decision making, ranging from manipulative processes, to tokenistic engagements like public hearings, to instances of delegated power and true citizen control. In the years following, many scholars further studied, revised, and built upon Arnstein’s concept to define public participation as an engaged and empowered mechanism for the public (for some examples, see Friedmann, 1987; Fisher,

1993; Hickey and Mohan, 2004; Innes and Booher, 2004; Fisher, 2006; Dietz and Stern, 2008).

Today, there is much support in the literature for public participation processes to be popular, deliberative mechanisms for shaping public policy. Voogd and Woltjer (1999) present five ethical criteria for what they term communicative planning: (1) involve all relevant stakeholders in the planning process, (2) prevent cultural and educational differences from hindering stakeholders, (3) design manageable and transparent planning processes, (4) provide participating stakeholders with necessary professional knowledge, and (5) prioritize the interests of stakeholders in defining and weighting solutions. Fung and Wright (2001) idealize empowered deliberative democracy (EDD), which pursues participatory and deliberative governance by (1) devolving power to local stakeholders, (2) centrally managing participation through governmental structures, and (3) institutionalizing participation within government. Abelson et al (2003) evaluate deliberative processes in terms of (1) representation of stakeholders; (2) legitimacy, reasonableness, and responsiveness of procedures; (3) sharing, presentation, and interpretation of information; and (4) outcomes in terms of legitimacy and accountability, participant satisfaction, and level of consensus.

All of these conceptualizations of public participation define a decision-making process that engages diverse stakeholders through deliberative procedures to shape policy. This study inspects the common challenges to realizing these ideals and argues that considering such challenges at the outset will help project planners understand the local context of where a participatory process is designed and implemented.

In this article, we focus on *how* the public participation process is designed by planners and other Operating Agents, considering the features just described. When aligning the process to the local context, planners need to consider the interplay between issue, public agency, and participant (King et al, 1999; Dietz and Stern, 2008), as well as conflicts between stakeholders, participants' previous experiences in civic engagement, legal and regulatory settings, budgets, and stakeholder interest and apathy (von Korff et al, 2010). Furthermore, factors including cultural norms, race, socio-economic status, gender, the salience of issues, and the political climate also contribute to how well a participatory process fits within the local context (DeCaro and Stokes, 2013).

Through this research, we identify common instances in which the public participation process (as designed by planners and experts) is misaligned with the local context. Referring back to the framework outlined above (Figure 2.1), a misalignment between the public participation process and the local context may feature incongruous expectations between Strategic Agents and the Operating Agents and/or Participating Stakeholders. In such cases, participants may not be satisfied with their level of engagement, and final policy decisions may not reflect participant input or the recommendations that arise from the main process (Bailey and Grossardt, 2010; Leino and Laine, 2011).

In other cases, Operating Agents may fail to adequately understand how a community organizes and may not fully consider the types of events they will hold, where and when engagements might occur, and how Participating Stakeholders are engaged through post-event activities. Other misalignments may show Operating Agents'

inability to adequately involve all concerned Stakeholders, which impedes Participating Stakeholders from providing complete input.

Overall, misalignments between the public participation process and the local context may damage the public participation process and result in outcomes that compromise public interests, inequitably distribute benefits among stakeholders, favor powerful private interests, or yield unsustainable policy outcomes. Examples of such outcomes are presented in Section 4.

3. Methods

This study conducts a qualitative analysis of peer-reviewed literature that recounts public participation processes in urban development projects. Through exploratory research, we inductively defined misalignments between the public participation process and local context by (1) reviewing case studies, (2) recording challenges identified in the cases, and (3) grouping the identified challenges into overarching categories. These challenge categories are conceptualized as misalignments between the process (as designed by planners and experts) and the local context.

We approached this review with a heuristic developed in urban development projects with public participation we have been involved in over the past five years, mainly in low-income neighborhoods in Phoenix, Arizona (2009-2014). Challenges we encountered include lack of collaborative capacity, civic competence, and sustainability literacy, as well as living conditions and personal circumstances not conducive to continuous and meaningful public engagement (Wiek et al, 2014b). As we reviewed case study literature on public participation in urban development, we refined and added to the list of challenges we had already identified.

To select case studies for review we searched for scholarly articles and books in *Google Scholar*. We used the following search terms: *case study AND public participation*; *public participation AND urban development*; *public participation AND urban planning*; *public participation AND sustainability*; *public participation AND sustainable*; and *challenge AND public participation*. In total, these searches generated more than 11 million potential references. To reduce these initial results, we considered only resources published since 1995 and results appearing on the first five pages of each search. This produced an initial pool of sources to review.

To further filter the search results, we created a small set of selection criteria. First, this study seeks to learn from real cases of public participation in urban development projects. Therefore, we eliminated pieces that were theoretical in nature or that spoke in generalities without referencing specific cases. Second, this study is strictly concerned with public participation in urban development projects. Thus, we eliminated materials that discussed participation in contexts other than urban development settings. Third, we review only cases from the Global North. It is already challenging to compare experiences between such dissimilar cultures as northern Europe and the United States, and we chose to eliminate cases from developing countries that have much different development needs. Finally, this study synthesizes common challenges reported in the literature, and therefore considers only case studies that acknowledge real challenges that have arisen in public participation processes. After narrowing the case pool further, we consulted the reference sections of the relevant sources to uncover additional empirical studies that did not show up through the Boolean search. These methods yielded 24 cases. Table 2.1 lists and describes the cases studied for this research.

Table 2.1

Case Studies from the Literature for Misalignment Analysis

	City	Project Details	Source
1.	New York, U.S.	Citizen advisory committees in environmental planning	Cohen, 1995
2.	Northeast Ohio, U.S.	Survey of participants of public processes in three cities	King et al, 1998
3.	Ontario, Canada	Public roundtables addressing environmental degradation	Chipeniuk, 1999
4.	Atlanta, U.S.	Public housing revitalization project	Poindexter, 2000
5.	Chicago, U.S.	Empowered participatory school management	Fung and Wright, 2001
6.	Unidentified city, Australia	Aboriginal arts and economic development program	Eversole, 2003
7.	London, England	Economic development initiative in Hackney	Perrons and Skyers, 2003
8.	Two unidentified cities, England	Public participation initiatives in two English cities	Barnes et al, 2004
9.	Omaha, U.S.	Participatory watershed planning	Irvin and Stansbury, 2004
10.	Sydney, Australia	Community participation in transportation planning	Lahiri-Dutt, 2004
11.	Waterloo, Canada	Participatory visioning project	Shipley et al, 2004
12.	Waterloo, Canada	Public participation for local transportation planning	Bickerstaff and Walker, 2005
13.	Helsinki, Finland	Participatory process for urban forestry planning	Sipilä and Tyrväinen, 2005

Table 2.1 continued

Case Studies from the Literature for Misalignment Analysis

	City	Project Details	Source
14.	Multiple cities, U.S.	Survey of public administrators	Yang, 2005
15.	Unidentified city, England	Public involvement for Local Agenda 21	Connelly, 2006
16.	Minneapolis, U.S.	Neighborhood revitalization program	Fagotto and Fung, 2006
17.	Multiple cities, Europe	Public participation in urban forestry	Janse and Konijnendijk, 2007
18.	San Diego, U.S.	Environmental conservation for coastal development	Lee, 2007
19.	Ottawa, Canada	Participatory evaluation of supportive housing	Sylvestre et al., 2008
20.	Vancouver, Canada	Public process for creating sustainability indicators	Holden, 2011
21.	Vancouver, Canada	Climate change visioning and scenario building	Sheppard et al., 2011
22.	Tampere, Finland	Participatory process for city transportation plan	Leino and Laine, 2011
23.	South Dunedin, New Zealand	Attempt to include low income community in decision making	Walker and Shannon, 2011
24.	Chicago, U.S.	Participatory process for mixed-income housing development	Chaskin et al., 2012

4. Results: Misalignments between Public Participation Process and Local Context

The literature review resulted in 10 misalignments. These misalignments are organized into three categories, by where they occur within the participatory process. These three categories were derived inductively through the literature reviewed for this study. *Misalignments that Impede Process and Outcomes* pertains to top-down issues of whether policy makers and special interests support public participation processes, divest power to diverse stakeholders, and allow public input to shape policy. There is one misalignment under this category.

Misalignments that Impede Participants' Attendance considers the structural and systemic barriers to participants certain communities experience. When these misalignments transpire, participation events may feature low participant turnout, and particular groups may not be included in the process. This category includes three misalignments.

Misalignments that Impede Participants' Input covers barriers experienced by participants that do attend events. These may include the values, preferences, and capacities of participants. When these misalignments arise, participants may refrain from full participation, they may feel unheard, or they may even obstruct the process. There are six misalignments reported for this category.

All 10 misalignments present unique impediments to conducting a high quality public participation process. Identifying, analyzing, and planning to mitigate these misalignments presents a framework for understanding the local context within which the public participation process and greater urban development project take place. Table 2.2 presents the misalignments.

Table 2.2

Misalignments between Public Participation Process and Local Context

The public participation process does not align with		Description	Example	Case Studies
Impediments to				
Process and outcomes	Policy maker support	The level of decision-making power public authorities are willing to divest to the public	Participants draft white papers but documents do not influence decision makers (Leino and Laine, 2011)	Cohen, 1995; King et al, 1998; Perrons and Skyers, 2003; Irvin and Stansbury, 2004; Lahiri-Dutt, 2004; Shipley et al, 2004; Bickerstaff and Walker, 2005; Yang, 2005; Connelly, 2006; Janse and Konijnendijk, 2007; Lee, 2007; Leino and Laine, 2011; Walker and Shannon, 2011
Participant attendance	Participants' personal circumstances and living conditions	The impact of stakeholders' lifestyles on their ability and willingness to engage	Certain groups identify barriers to participation, including lack of resources like wealth, education, status, and time (Fagotto and Fung, 2006)	King et al, 1998; Perrons and Skyers, 2003; Bickerstaff and Walker, 2005; Fagotto and Fung, 2006; Chaskin et al, 2012

Table 2.2 continued

Misalignments between Public Participation Process and Local Context

The public participation process does not align with		Description	Example	Case Studies
Impediments to				
Participant attendance	Community civic engagement	The level of engagement already existing within a community	Respondents identify the decline of neighborhoods as a social organization as reason for communities becoming less civically engaged (King et al, 1998)	King et al, 1998; Perrons and Skyers, 2003; Chaskin et al, 2012
	Participants' trust	Participants' buy-in of the participatory process	Prospective participants do not trust the process and are hesitant due to experiences from past engagements (Eversole, 2003)	Eversole, 2003; Shipley et al, 2004; Holden, 2011; Chaskin et al, 2012
Participant input	Participants' engagement preferences	The input participants may provide in how they wish to engage	Participants prefer more intensive engagements with personal interactions; public officials prioritize other practices (Sipilä and Tyrväinen, 2005)	King et al, 1998; Perrons and Skyers, 2003; Barnes et al, 2004; Sipilä and Tyrväinen, 2005; Chaskin et al, 2012

Table 2.2 continued

Misalignments between Public Participation Process and Local Context

The public participation process does not align with		Description	Example	Case Studies
Impediments to				
Participant input	Participants' expectations	Participants' anticipated policy outcomes	Throughout the engagement process, participants do not see direct outcomes from participation (Bickerstaff and Walker, 2003)	Barnes et al, 2004; Bickerstaff and Walker, 2005; Sipilä and Tyrväinen, 2005; Holden, 2011
	Participants' civic competence	Participant understanding of local political processes	Tenants in a public housing revitalization program submit a project proposal but did not participate in the revision process because they thought the process had already concluded (Poindexter, 2000)	Poindexter, 2000; Perrons and Skyers, 2003; Holden, 2011; Leino and Laine, 2011

Table 2.2 continued

Misalignments between Public Participation Process and Local Context

The public participation process does not align with		Description	Example	Case Studies
Impediments to	Participant input			
	Participants' collaborative capacity	The ability of stakeholders to meaningfully participate in a facilitated group activity	Citizens admit community members do not have the capacity to participate in decision making and that they have been granted too much power too soon (Perrons and Skyers, 2003)	Fung and Wright, 2001; Perrons and Skyers, 2003; Sipilä and Tyrväinen, 2005; Sylvestre et al, 2008; Walker and Shannon, 2011; Chaskin et al, 2012
	Participants' sustainability literacy	The gap in knowledge and attitudes about sustainability between experts and stakeholders	Participants tasked with identifying sustainability indicators admit to being unfamiliar with sustainability principles, requiring substantial capacity building (Holden, 2011)	Chipeniuk, 1999; Holden, 2011; Sheppard et al, 2011

Table 2.2 continued

Misalignments between Public Participation Process and Local Context

The public participation process does not align with		Description	Example	Case Studies
Impediments to				
Participant input	Participants' issue competence	Participant's lack of knowledge about urban development issues, principles, processes	Participants require capacity building on issues including crime, education, housing, and health to produce relevant statistics (Perrons and Skyers, 2003)	Perrons and Skyers, 2003; Fagotto and Fung, 2006; Fagotto and Fung, 2006; Janse and Konijnendijk, 2007

4.1. Misalignments that Impede Process and Outcomes

Top-down, institutional support is a critical factor for successful participation (Abers, 2003; Goldfrank, 2013), and public administrators' confidence in the public strongly influences citizen involvement in policy making (Yang, 2005). When the public participation process does not align with policy-maker support, it may be that decision makers are not willing to divest authority to the public or special interests hold more power than participating stakeholders. When this occurs, policy outcomes may not reflect participant recommendations, bringing into question whether the political impact equals the effort devoted by participants and the resources invested by process planners (Holden et al, 2009). Leino and Laine (2011) describe a participatory process to develop the traffic master plan for Tampere in Finland. A group of stakeholders, recruited by the city, convened to provide input to the plan. Participants felt, however, that they did not have sufficient influence through this process. Instead, they collaboratively wrote two position papers about the traffic plan and provided these as input. Decision makers did not consider the participants' input, and the final plan did not reflect the participants' preferences. In this case, the process broke down and participants lost faith in government, choosing to operate outside of the official process. Ultimately stakeholders received no return on the time they invested, and the city wasted resources holding a process that did not inform the final plan.

4.2. Misalignments that Impede Participant Attendance

4.2.1. Misalignment Between the Public Participation Process and Participants'

Personal Circumstances and Living Conditions

When the public participation process does not align with participants' personal circumstances and living conditions, planners and experts are not sensitive to the impact that stakeholders' lifestyle have on their ability and willingness to participate. Some obstacles to participating may include individuals working multiple jobs, caring for children, and lacking transportation, among others. When participation is not attuned to personal circumstances and living conditions of prospective participants, then events may be poorly attended or traditionally underrepresented groups (low-income individuals, minorities, women, youth) may be excluded. Through a study of the Minneapolis Neighborhood Revitalization Program (NRP) in Minnesota, United States, Fagotto and Fung (2006) identify certain groups that participate less, specifically communities of lower socioeconomic status. In these communities, resources like wealth, education, status, and time are not equally distributed and a lack of these resources presents a barrier to participation. The NRP, an empowered governance program for neighborhood improvement, demanded skill, time, and background knowledge, making it hard for some populations to participate. These challenges, among others established a process that favored homeowners, while in many neighborhoods renters and minorities did not sufficiently influence decision making.

4.2.2. Misalignment between the Public Participation Process and Community Civic Engagement

The level of civic engagement that is present in a community may influence the public's capacity and interest in participating in urban development projects. Putnam (2000) describes the general decline of civic engagement in the United States, including a reduction in political, civic, and religious participation; volunteering and philanthropy; social engagement in the workplace; unionization; and social interaction. Through interviews and focus group discussions with citizens and public administrators in northeast Ohio, United States, King et al (1998) learned from respondents that the decline of neighborhoods as social organizations was leading communities to become less civically engaged. As these neighborhoods lose a culture of community, they are experiencing social isolation and a decline in civic participation.

There are also cases in which the public wishes to provide input, but process designers fail to engage stakeholders through means that are relevant to the context of the community. In a mixed-income housing project in Chicago, professionals wished to engage relocated public housing residents through neighborhood association mechanisms that were commonly used to communicate with higher income neighborhood residents. The neighborhood association mechanism was not relevant to the relocated public housing residents because the associations were oriented towards homeownership and institutional interests with which public housing residents did not relate. Low income renters had traditionally participated in Local Advisory Councils (LACs), which were common in public housing developments. LACs were disbanded in favor of neighborhood associations, and low income residents lost their outlet for participation.

Professional stakeholders (developers, property managers, etc.) thought it would be beneficial to integrate relocated public housing residents into mainstream associations, but the low income residents instead felt disempowered. Because the government and professional actors would not engage with relocated public housing residents through mechanisms with which the population was comfortable, the interests of developers, institutional actors, and homeowners outweighed the needs of low income residents (Chaskin et al, 2012).

4.2.3. Misalignment between the Public Participation Process and Participants' Trust

Bad experiences with previous engagements, disempowerment, and general lack of trust in government are some contributing factors to low participant trust. When the public participation process does not align with participants' trust, individuals may choose to not participate, or those that do attend events may withhold input or be obstructionist. Eversole (2003) describes a community consultation process for an aboriginal arts and economic development program in Australia. The process was managed by consultants seeking to empower urban aboriginal communities. The consultants did not communicate public meetings through the appropriate community channels, leading the consultants to be perceived as outsiders. This poor communication coupled with negative experiences from past participatory engagements led community members to distrust the process and to not participate. It is important to note that bad experiences in prior engagements compromised recruitment of participants for this case. Likewise, a poorly executed participation process today may compromise the success of future projects.

4.3. Misalignments that Impede Participant Input

4.3.1. Misalignment Between the Public Participation Process and Participants'

Engagement Preferences

When the public participation process does not align with participants' engagement preferences, process designers may have failed to seek or incorporate stakeholder input for engagement structure and have not considered whether prospective participants have preferences for how they might engage. When this happens, stakeholders may be uncomfortable participating or dissatisfied with the process, leading to a lack of acceptance, diminishing trust, and declining attendance at events. In a case study of urban forestry planning in Helsinki, Finland, authorities were concerned with the cost of intensive participation. Although the participatory system employed was considered extensive, residents still felt that the process lacked sufficient opportunities for participation. While the public showed preferences for small group meetings and similar methods, planning authorities preferred to use surveys for data collection. The authors conclude that no single method is perfect for all situations and several methods should be employed throughout a participatory process (Sipilä and Tyrväinen, 2005).

4.3.2. Misalignment between the Public Participation Process and Participants'

Expectations

In many cases, experts and planners have different goals and expectations than the public, with participants often reporting to prefer greater levels of engagement than planners typically provide (Bailey and Grossardt, 2010). To accept the legitimacy of public participation, stakeholders need to see the efficacy of their participation.. When the public participation process does not align with participants' expectations, process

designers may worry about losing participant buy-in for the immediate engagement and losing public trust over the long term. In public transportation planning processes in Warrington Borough and Warwickshire County, England, participants expected their input to directly influence the resulting transportation plan. Instead, they found the process to lack transparency and could not explicitly see how their input was included in process outputs. After the process, participants were left confused and frustrated (Bickerstaff and Walker, 2005).

4.3.3. Misalignment between the Public Participation Process and Participants' Civic Competence

Not all members of the public fully understand local political processes. When the public participation process does not align with participants' civic competence, process designers may not have appropriately articulated the purpose of the engagements, how engagements will fit into the greater decision-making process, and how participant input will be used. When this occurs, the process and its outcomes may fail to meet participant expectations, leading to an erosion of trust. Also, when navigating the participation process requires certain competency levels, participants may be filtered out decision making (Kyem, 2004). Poindexter (2000) describes a public housing revitalization process in Atlanta, United States in which tenants negotiated and ratified a project proposal. Participants thought that they had concluded the participatory process and that their proposal would be accepted. Instead, authorities saw this point as the beginning of the planning process and revised citizen input with little additional consultation. Because the tenants did not understand the full policy-making procedures, they failed to engage

during a critical point in the process and the policy outcome favored developers' rather than the residents' interests.

4.3.4. Misalignment between the Public Participation Process and Participants'

Collaborative Capacity

Meaningful participation in a facilitated group activity requires skill. Participants may need to speak publicly, listen actively, balance diverse and contrasting perspectives, weigh tradeoffs, and seek compromise. When the public participation process does not align with participants' collaborative capacity, then engagement activities may not have been designed with varying public capacities in mind. When this misalignment persists, participants that are better prepared to participate may have disproportionate influence. When a group of participants struggles to listen to each other and share their perspectives constructively, a negative dynamic may obstruct the generation of ideas. In a public planning process for economic development in the London Borough of Hackney, policy makers sought to engage members of the population that were traditionally excluded from decision making. Through the process, citizens admitted that members of their community lacked the capacity to participate and that they had been given too much power too soon. Anger arose amongst participants because they felt empowerment and capacity building was poorly executed and treated as a formality (Perrons and Skyers, 2003). Conversely, Bailey et al (2012) found that reducing skill demands of participants can produce broader participation and improve the input received through the process.

4.3.5. Misalignment between the Public Participation Process and Participants'

Sustainability Literacy

While public participation is an assumed process in sustainability science, large segments of the public are not familiar or do not agree with sustainability norms and principles. When the public participation process does not align with participants' sustainability literacy the gap in knowledge and attitudes about sustainability between experts and stakeholders can be quite large. Also, in some parts of the United States, a sustainability agenda can be met with distrust. Infusing sustainability outcomes into participatory process outputs may require significant capacity building at the front end of the process or experts would have to insert their own perspectives post-process, reducing the credibility of outputs as public-driven. In the case of a participatory process for identifying sustainability indicators in Vancouver, Canada, participants admitted to substantial knowledge gaps regarding sustainability. At first, this lack of sustainability literacy impeded group progress. Through a study circle method, experts built participant capacity and participants successfully developed a robust indicator set (Holden, 2011).

4.3.6. Misalignment between the Public Participation Process and Participants' Issue

Competence

When engaging the public on matters of urban development, experts and planners may be confronted with the challenge of leading participants through discussions of complex urban issues. When the public participation process does not align with participants' issue competence, participants may lack knowledge about urban issues, principles, processes, and planning mechanisms. Cities are complex webs of nested and interrelated systems (Samet, 2013), and not all participants may have the background to

meaningfully engage in sophisticated discussions about urban challenges. In the Hackney economic development case discussed above, participants were at first unequipped to engage. One participant admitted that he didn't understand a lot of what was being discussed at meetings, and other participants questioned the level of empowerment when they lacked the capacity to provide meaningful input. Other participants wished for a longer process that would provide more time to acquire the knowledge needed to understand the issues and influence policy. Ultimately, participants required and received capacity building on issues including crime, education, housing, and health (Perrons and Skyers, 2003).

When any of these ten misalignments persist, they can impede the design and implementation of high quality public participation. As described in the introduction to this section, the misalignments manifest at different points during the public participation process. Misalignments may impede the implementation of process outputs, participant attendance at public events, or the input provided by participants (Figure 2.2).

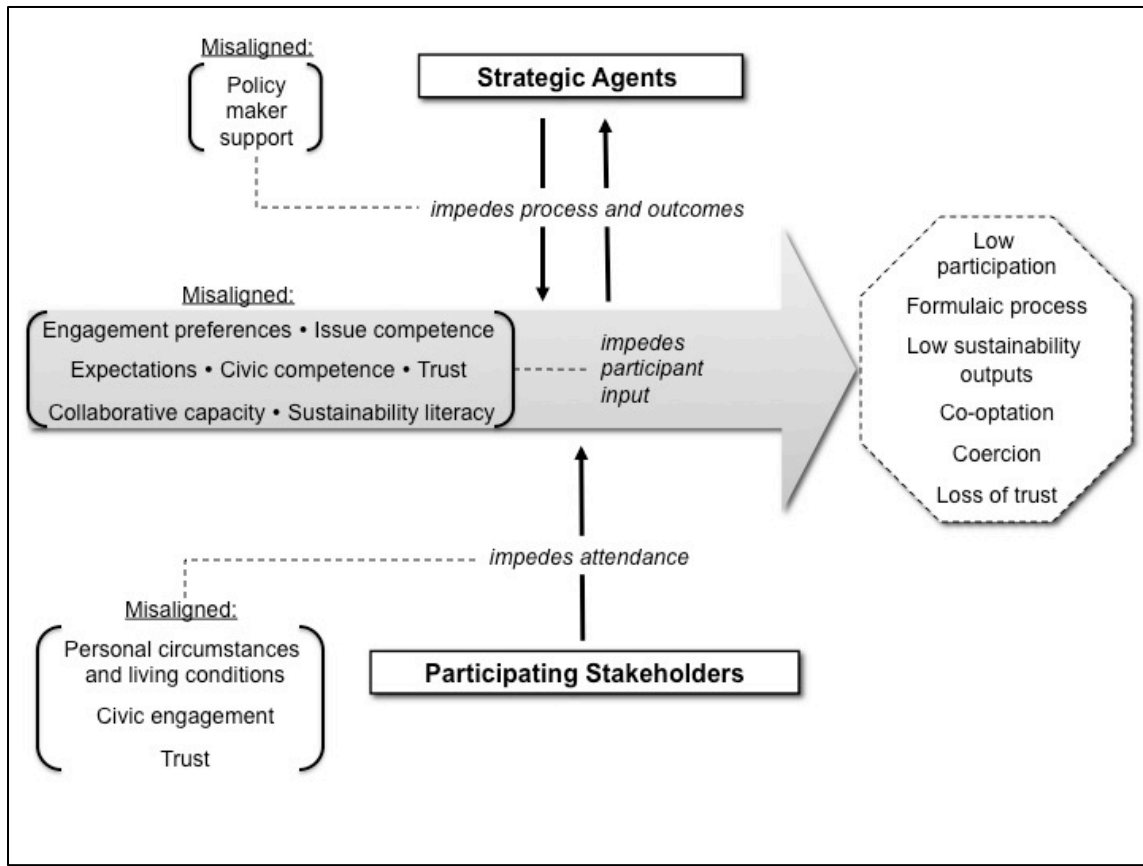


Figure 2.2. Misalignments Mapped onto the Public Participation Process

5. Discussion and Conclusions

Impediments to high-quality public participation may manifest themselves through misalignments between the public participation process and policy maker support, civic engagement, and through participants' personal circumstances and living conditions, engagement preferences, civic competence, collaborative capacity, expectations, trust, sustainability literacy, and issue competence. Designing public participation to fit the local context is a popular recommendation for state-of-the-art urban development projects, but the literature does not provide clear guidance for how this should be achieved. The ten misalignments between the public participation process

and the local context identified in this article present a contextual frame for public participation process design that avoids major flaws.

While the ten misalignments have been presented here on equal footing, one must consider how to weight each misalignment. For instance, a process that mitigates impediments to participant attendance and input may yield valuable policy recommendations from the public, but the process outputs are not guaranteed to influence policy without policy maker support. Furthermore, mitigating impediments to participant input is less impactful if participant attendance is low or the pool of engaged stakeholders is not diverse or representational of the general public. Therefore, it may be helpful to think of the misalignments, organized by at what points they impede the process, as such a hierarchy and consider which misalignments are preconditions for others to be met.

Four research streams need to be pursued to consolidate the findings presented here. Future research should

1. Further expand on potential misalignments: These 10 misalignments may not present an exhaustive list, and the conceptualization of policy maker support may be broken into smaller, more nuanced issues. The 10 misalignments identified in this study present an initial list of common challenges and establishes an agenda to uncover explicit challenges and barriers to public participation in urban development.

2. Select measurable indicators for each misalignment: A small set of measurable indicators for each misalignment would facilitate the design of well-aligned processes. Indicators would also provide process aspects to measure in evaluations and empirical testing.

2. Identify coping strategies for each misalignment: This study presents the misalignments as common challenges to avoid when planning public participation processes. This research, however, does not provide directives or insights on how to avoid the misalignments.

3. Evaluate public participation processes that attempt to align with the local context: In this study, we contend that the misalignments impede the public participation process, which yields negative consequences for both the process and its outcomes. Substantiating these claims requires empirical evaluation of public participation processes, which is lacking in the literature (Shipley and Utz, 2012).

By identifying tangible challenges that are common in public participation, this study presents a set of issues around which experts and planners should design public participation processes. While this study raises awareness, it does not provide actionable knowledge for coping with the misalignments. The literature on public participation is mostly descriptive rather than prescriptive and lacks clear directives (Shipley and Utz, 2012). Future research will need to study cases that have successfully coped with each misalignment to build an evidence-supported toolset of strategies for aligning participatory processes and contexts for sustainable urban development.

Finally, there is a dearth of evaluative studies of participatory processes in peer-reviewed literature (Walls et al, 2010; Bailey et al, 2012), and this is partially responsible for the insufficient collection of directives for designing public participation. Defining the misalignments between process and context provides a framework for evaluating public participation processes as we can now ask how well a public participation process is aligned to the local context. Missing from this analysis are potential indicators for

measuring each misalignment. By establishing indicators of misalignments and empirically studying real public participation processes, alignment could be measured by collecting data for each indicator. Addressing these misalignments better adapts a public participation process to the local context and presumably result in both a better process and better outcomes. This hypothesis must be tested and validated.

A public participation process that is attuned to the local context is the antithesis to the misalignment framework presented in this paper. Avoiding these misalignments is an aspirational goal and this framework provides a roadmap for achieving an implied vision for high quality public participation in urban development.

CHAPTER 3

Coping with Misalignments Between Public Participation Process and Local

Context in Urban Development Projects – An Expert-Based Study

Abstract

Public participation processes are idealized for decision making in both sustainability and urban development literature. Research on the topic purports both positive and negative qualities of public participation, although many scholars assert that shortcomings can be mitigated and benefits maximized through careful process design. Much of the research on public participation is theoretical in nature, and due to a lack of empiricism, scholarship produces few directives for achieving high quality public participation in urban development projects. To fill this research gap this study, through expert interviews, identifies strategies for aligning public participation processes to the local context. The study finds that there are clear strategies for designing and carrying out high quality public participation in urban development projects, however many of these strategies need empirical testing.

1. Introduction

Public participation processes are often emphasized as a requisite decision-making procedure for planning and urban development projects (Arnstein, 1969; Pateman, 1970; Hawkins and Wang, 2011). Participatory decision making is a core element of sustainability governance (Jerneck et al, 2010; Lang et al, 2012), and it is assumed to be essential for sustainable urban development projects (Agyeman and Evans, 2003; Smith and Wiek, 2012). In actuality the ideal of quality public participation

informing urban development decisions is not often achieved, and public participation is frequently formulaic and tokenistic (Hailey, 2001; Chaskin et al, 2012).

Because public participation is valued but in practice not always achieved, literature on the topic provides both positive and negative arguments (see Cohen and Wiek (2014) for a discussion of these perspectives). These opinions are often grounded in theory with little empirical support (Shipley and Utz, 2012). Some scholars argue that pitfalls of participation can be avoided through careful process design (Dietz and Stern, 2008; von Korff et al, 2010).

One common recommendation for designing better participation is to design participatory processes to meet the local context (Fischer, 2006; Dietz and Stern, 2008; von Korff et al, 2010; Bryson et al, 2013; DeCaro and Stokes, 2013). But peer-reviewed literature provides insufficient directives for how to accomplish this. Cohen and Wiek (2014) conceptualize the local context of urban development projects by identifying common challenges to public participation that should be avoided. But again, this research lacks directives for avoiding such challenges and achieving good participation.

This study presents strategies for achieving high quality public participation. Through expert interviews, this research identifies strategies for designing and carrying out public participation processes and presents these strategies as solution options for common challenges to good participation. The following sections define the public participation context, outline common challenges to achieving high quality participation, review literature to determine what is considered good participation, and present expert perspectives on achieving the ideal of high quality public participation for urban development projects. This study provides planning practitioners and participatory

researchers directives for public participation design. Identifying such directives also establishes a future research agenda to test and generate empirical evidence for public participation methods in urban development projects.

2. Understanding Public Participation, the Local Context, and Common Challenges to Good Process Design

Before identifying strategies for aligning participatory processes with the local context, this section first establishes what we mean by public participation and provides a conceptualization of the local context. Then we discuss common challenges that arise in public participation processes and describe an ideal of what would constitute high quality public participation.

2.1. Public Participation Processes in Urban Development Projects

The term *public participation* can be used to describe numerous forms of engagement (Dietz and Stern, 2008); therefore it is important to define how it is conceptualized for this research. We take a perspective proposed by Wiek et al (2014b) and further described by Cohen and Wiek (2014). Here, we conceptualize public participation as an official process within an urban development project. The urban development project is also situated within a specific context. Strategic Agents (i.e. elected officials and investors) oversee the process, which is conducted by Operating Agents (i.e. city staff and project partners). Participating Stakeholders (i.e. residents, non-profits, businesses) engage through a structured participatory process to provide their preferences. Stakeholders might engage through such methods as public meetings, focus groups, workshops, citizen juries, among others, and their involvement may be included

throughout project phases including preparing, planning, implementing, and evaluating development outcomes.

2.2. Misalignments between the Public Participation Process and the Local Context

As described in the introduction, high quality public participation processes are more often ideals than they are realities. Cohen and Wiek (2014) reviewed case studies of public participation processes in urban development projects to identify common challenges to achieving good public participation. In this analysis, the challenges are conceptualized as misalignments between the participatory process (designed by planners and experts) and the local context. When the participatory process is not attuned with the local context, policy makers may ignore public input (impediments to process and outcome), participation events may be poorly attended (impediments to participant attendance), or those that do attend events may not feel heard (impediments to participant input). Chronic misalignment compromises the long-term legitimacy of civic engagement in a community as it may erode stakeholder trust and limit buy-in for future participatory processes. Table 3.1 presents ten common misalignments between the public participation process and the local context.

Table 3.1

Misalignments between Public Participation Process and Local Context

Impediments to	The public participation process does not align with...	Description
Process and outcomes	Policy maker support	The level of decision-making power public authorities are willing to divest to the public
Participant attendance	Participants' personal circumstances and living conditions	The impact of stakeholders' lifestyles on their ability and willingness to engage
	Community civic engagement	The level of engagement already existing within a community
	Participants' trust	Participants' buy-in of the participatory process
Participant input	Participants' engagement preferences	The input participants may provide in how they wish to engage
	Participants' expectations	Participants' anticipated policy outcomes
	Participants' civic competence	Participant understanding of local political processes
	Participants' collaborative capacity	The ability of stakeholders to meaningfully participate in a facilitated group activity
	Participants' sustainability literacy	The gap in knowledge and values about sustainability between experts and stakeholders
	Participants' issue competence	Participant's lack of knowledge about urban development issues, principles, processes

Source: Cohen and Wiek, 2014

2.3. Defining High Quality Public Participation

We have discussed to this point the interest in high quality participation as well as the challenges to carrying out such processes, but this study has not yet defined what it means for a public participation process to be ‘good’. Much of the contemporary research on public participation relates back to Arnstein’s (1969) landmark paper in which she identified the reality that in most planning processes, public participation was not meaningful, and that it was actually often coercive and illegitimate. Arnstein categorized the spectrum of participation from civic engagement that featured no participation to experiences that represented full citizen control. She conceptualized this spectrum as a ladder of participation, showing that the highest rungs of the ladder signify the greatest levels of empowerment.

In the decades since the publishing of Arnstein’s ladder, numerous scholars have studied participation, revised and modified Arnstein’s concept, and thought about what it means to foster higher levels of empowerment (for some examples, see Friedmann, 1987; Fisher, 1993; Hickey and Mohan, 2004; Innes and Booher, 2004; Fisher, 2006; Dietz and Stern, 2008). One example of this ideal is Fung and Wright’s (2001) empowered deliberative democracy (EDD). With the goal of promoting participation, deliberation, and empowerment, EDD is intended to make government more responsive and effective as well as “more fair, participatory, deliberative, and accountable (8).” This is achieved by structuring participation around real issues, including participants through bottom-up processes, and engaging participants in deliberation around solutions to the issues of concern. EDD has three design properties: (1) devolve power to local stakeholders, (2) coordinate participation through a central body, (3) and institutionalize participatory

governance within the existing governmental system. In this model, there is a clear balance between devolving power to individual participants and supporting the process through officialized mechanisms. EDD would signify a higher rung on Arnstein's ladder.

Even, EDD does not represent Arnstein's highest level of participation (i.e. citizen control), but for the purposes of this study, that is acceptable. When polling a large sample of participants ($n > 600$) in multiple infrastructure planning projects, Bailey and Grossardt (2010) found that participants on average preferred their level of engagement to fall between partnership and delegated power. Therefore, this study sets an intention to identify strategies for achieving public participation that ranges between partnership and delegated power, as a formalized process with centralized coordination that is legitimized through state rules but is participant-centered.

3. Methods

To identify strategies for overcoming the misalignments identified in Table 3.1, we conducted expert interviews with participatory researchers and practitioners experienced in public participation in urban development projects. Through our professional and academic networks, we identified 15 potential respondents, seven of whom agreed to be interviewed. We interviewed scholars and practitioners in the U.S., Canada, and Europe (Sweden and Switzerland).

Respondents prepared for the interview by reviewing the ten misalignments. During each interview, the researcher described each misalignment and asked the respondent about cases in which they had seen the misalignments successfully mitigated. Respondents in some cases provided anecdotal stories of participatory processes they had experienced, while in other cases respondents relied on empirical evidence they had

gathered. Some discussions remained theoretical, with respondents speaking from their general experience. After the interviews, respondent reflections were organized by misalignment and written as recommendations for aligning public participation processes to the local context.

4. Strategies for High Quality Public Participation Processes

Through expert interviews, we identify strategies for aligning the public participation process with the local context. Table 3.2 presents strategy recommendations organized by misalignment. The number of strategy recommendations range from two to seven, depending on the misalignment. Because these results are based on expert interviews, the list of strategies is limited to options identified by the respondents.

Table 3.2

Strategies for Aligning Public Participation Process with Local Context

Misalignment	Recommendation	Source
Policy maker support	<i>Build flexible participation into RFPs:</i> City RFPs set rules for participation. Planners then design formulaic processes based on the RFP framework. RFPs should require better participation.	Interview #7
	<i>Conduct authentic participation:</i> Officials are more likely to support processes that are representative and engage large numbers. A groundswell of participation legitimizes decisions.	Interview #7
	<i>Engage diverse stakeholders:</i> Bringing a wider range of stakeholders into the process gets officials' attention and increases public demand for accountability.	Interview #6
	<i>Institutionalize transparency:</i> For instance, Portland, OR requires policy papers to state how outcomes were conceived	Interview #7

Table 3.2 continued

Strategies for Aligning Public Participation Process with Local Context

Misalignment	Recommendation	Source
Policy maker support	<i>Transparently collect data:</i> Transparently collected data is more meaningful to policy makers and crystalizes public confidence.	Interview #5
	<i>Encourage project sponsors to support process assessment:</i> Engaging policy makers in the evaluation of the participatory process confronts them with participant satisfaction.	Interview #5
	<i>Make support in policy makers' best interest:</i> Elected officials may benefit from a positive process through media coverage, which may foster greater voter support in elections.	Interview #6
Participants' personal circumstances and living conditions	<i>Identify community-scale barriers to participation:</i> Personal barriers to participation can be structural issues due to systemic barriers within communities. Identify and address top barriers.	Interview #6
	<i>Research community needs and assets:</i> Understand community-scale barriers to participation before designing the process.	Interview #7
	<i>Provide diverse engagement opportunities:</i> Schedule events at diverse times and in diverse locations.	Interview #1
	<i>Reframe recruitment:</i> For instance, in Maui County, CA, planners recruited hosts, who identified locations and invited participants. Planners then brought the process to small groups.	Interview #7
	<i>Keep events short:</i> Plan engagements to last between 60 and 90 minutes.	Interview #5
	<i>Provide resources to participants:</i> Meet participants' needs by providing food, childcare, interpretation, and other benefits.	Interviews #1; #6; #7

Table 3.2 continued

Strategies for Aligning Public Participation Process with Local Context

Misalignment	Recommendation	Source
Participants' personal circumstances and living conditions	<i>Host public information centers:</i> In addition to formal meetings, create centers in common locations, open daily from morning through night. Include posters and informational materials. People can come and go and engage on an individual basis.	Interview #2
Community civic engagement	<i>Invest in public participation:</i> If there is a lack of civic engagement, then public participation processes can bring a community together.	Interview #7
	<i>Build agency in potential participants:</i> For instance, in Port Elizabeth, SA, an RFP required firms to employ local citizens. Low-income individuals created companies to subcontract their work. People engaged because they directly benefited.	Interview #3
	<i>Conduct targeted outreach:</i> Focus outreach on communities that don't tend to participate. Host meetings in those neighborhoods.	Interview #6
	<i>Meet people where they engage:</i> Civic life is not localized. People engage where they commute, meet their peers, take their families, etc. Engage in these settings, not just where they live.	Interview #1
	<i>Include community members in positions of leadership:</i> In Toronto, CA, the Youth Cities Initiative was a youth-led event. Appointing youth leaders motivated other youth to participate.	Interview #4
Participants' trust	<i>Evaluate policy options in real-time:</i> When participants make decision, show results immediately. This creates buy-in of data.	Interview #5

Table 3.2 continued

Strategies for Aligning Public Participation Process with Local Context

Misalignment	Recommendation	Source
Participants' trust	<i>Evaluate the participatory process in real-time:</i> For instance, at the end of events, allow participants to evaluate the event by voting with a keypad. Display aggregated results immediately.	Interview #5
	<i>Allow participants to see direct outcomes of their participation within the process:</i> At the end of events, share participant ideas. Throughout the process, publicize public input to-date.	Interview #6
	<i>Allow participants to see direct outcomes of their participation after the process:</i> Identify some decisions that can be implemented within three years of the process.	Interview #6
	<i>Present the entire policy-making process:</i> Design and display a chart at events that depicts the entire process. Identify the event's place within the greater decision-making process.	Interview #7
Participants' engagement preferences	<i>Provide diverse engagement opportunities:</i> Employ a diversity of engagement tools, bring in a diversity of people to address participants, and allow deliberation around a diversity of issues.	Interviews #1; #6; #7
	<i>Challenge participants:</i> Often participants' preferences reflect what they think is possible. Design engaging formats that may push participants out of their comfort zones to show them new possibilities for engagement.	Interview #6
Participants' expectations	<i>Interview participants before designing process:</i> Before designing the participatory process, interview stakeholders about the best structure for participation and the best ways to recruit participants.	Interview #7

Table 3.2 continued

Strategies for Aligning Public Participation Process with Local Context

Misalignment	Recommendation	Source
Participants' expectations	<i>Research communities' most prominent concerns:</i> Before initiating the process, research every issue that concerns a community. Anticipate participants' interests and expectations.	Interview #7
	<i>Aim for temporary buy-in:</i> Planners can't make participants trust them but can stabilize expectations. For instance, gain support in a project by collecting and sharing trust-worthy data.	Interview #5
	<i>Apply methodologies for appropriate contexts:</i> Some participants expect expert-driven workshops. In other cases, they prefer participant-centric activities.	Interview #5
	<i>Make immediate and quantifiable decisions:</i> Allow for some decisions to be implemented within a finite timeframe.	Interview #6
	<i>Be transparent:</i> From the outset, clarify and discuss goals with participants.	Interview #2
Participants' civic competence	<i>Employ a scaffolding approach to learning:</i> Most participatory processes ask participants to take 10 steps from the start. Instead in the first meeting take just one step; in subsequent meetings, push participants to the next level.	Interview #6
	<i>Structure experiential learning:</i> Participants can learn about issues and legislative mechanisms by creating policy proposals and seeing their ideas through the process.	Interview #6
Participants' collaborative capacity	<i>Keep participation simple:</i> Incorporate some basic consultative procedures, like voting, into the deliberative process.	Interview #5

Table 3.2 continued

Strategies for Aligning Public Participation Process with Local Context

Misalignment	Recommendation	Source
Participants' collaborative capacity	<i>Use visualizations:</i> If participants debate and vote on policy options, present these options visually. After participants make decisions, display results graphically.	Interview #5
	<i>Build intentional training into the process:</i> Allow participants to mentor each other.	Interview #6
	<i>Build intentional training into the process:</i> Staff should model collaboration and structure 'learning by doing' experiences.	Interview #6
	<i>Build flexibility into activities:</i> For instance, form a focus group, break into an individual exercise, convene a larger group, and then break into smaller groups.	Interview #1
Participants' sustainability literacy	<i>Recruit diverse participants:</i> This is a concern at the group level. If the sample of participants is diverse, the process will include a wide range of perspectives, values, literacies, etc.	Interviews #1; #6
	<i>Engage participants on issues with long time horizons:</i> Scenario construction and visioning helps participants think about the future and identify what needs to happen in the short term for that future to occur.	Interview #4
	<i>Pre-select sustainable options:</i> Facilitate deliberation of policies/projects that are already assessed as sustainable options.	Interview #5
Participants' issue competence	<i>Pre-select feasible options:</i> Facilitate deliberation of policies/projects that are already assessed as feasible options.	Interview #5

Table 3.2 continued

Strategies for Aligning Public Participation Process with Local Context

Misalignment	Recommendation	Source
Participants' issue competence	<i>Allow participants to self-select into issue-specific deliberation:</i> Not everyone is competent in all issues, but most participants are competent in at least one. Allow participants to engage on the issues of their choosing.	Interview #6
	<i>Provide technical feedback to participants:</i> Facilitate interaction between participants, city staff, and technical experts.	Interview #6
	<i>Provide technical briefings to participants:</i> For instance, if participants are considering issues relating to parks, they could meet with staff from the parks department.	Interview #6
	<i>Use visuals:</i> Present information graphically on posters around the engagement space to reinforce pertinent information.	Interview #7
	<i>Disseminate information prior to engagement:</i> For instance, in an Albany, NY waterfront development project, planners created a magazine to cover all aspects of the project. The magazine was mailed to every household in the city.	Interview #7
	<i>Recruit diverse participants:</i> Issue competence is a concern at the group level. If the sample of participants is diverse, then the process will include a wide range of competencies.	Interviews #1; #6

5. Discussion

The expert interviews produced a wide range of recommendations for aligning participatory processes to the local context. This section highlights important themes from the interviews and calls for an agenda to empirically test these strategies.

Designing better public participation begins during the RFP process: Most cities initiate an urban development project by posting a request for proposals (RFP). The RFP outlines the project, states expectations, and sets criteria for project proposals, among other things. Firms respond to the RFP proposing how they would carry out the project, and the city selects the firm whose proposal it prefers. Most RFPs are prescriptive and set expectations for much of the project, including public participation. In many cases, the RFP stipulates the participation process, including how much time should be devoted to it and the types of engagements that should be utilized. As a result, planners that wish to lead higher-level participation are hamstrung by the RFP. For public participation to improve, project sponsors must build flexible expectations into the RFP (Interview #7). This change in project framing would facilitate the implementation of many of the suggestions highlighted in table 3.2.

Defining authenticity: As one respondent noted, policy makers are more likely to respond favorably to a process that includes a large number of respondents, but it is important to define what constitutes an authentic process. This may include outreach to a large number of participants, but such outreach should also be inclusive and feature a wide-range of stakeholders. Furthermore, it is not enough to engage a wide pool of stakeholders, but one must also collect participant input on meaningful issues that are relevant to the policy concerns at hand.

Emphasize diversity throughout the process: To engage a wide range of stakeholders with varying capacities and interests, process designers should make diversity a key feature of public participation. This includes recruiting diverse participants, holding events in diverse locations and at diverse times, discussing diverse

issues, and structuring public input through diverse activities and methods (Interview #1). Also, misalignments like sustainability literacy and issue competence can be overcome if diverse participants attend events. These misalignments are primarily concerning if no participants have the requisite literacies and competencies. However, if a process engages a wide range of participants with varying degrees of competence and expertise, then it is more likely that events will be attended by individuals that are able and willing to engage on the matters of concern (Interview #1; Interview #5; Interview #6).

Make transparency a goal of the process: Transparency can address a number of challenges that arise during a public participation process. For participants with low civic competence, a transparent decision-making process facilitates understanding of how participation informs policy. For instances of low policy maker support, institutionalizing transparency within local government raises accountability of elected officials and public staff. Transparent data collection shows participants how their input is used and addresses issues of trust with both policy makers and participants (Interview #5; Interview #7).

Build participant learning into the process: The public participation process does not have to be an extractive procedure through which planners and experts draw from participants the public preference. It can also be an occasion to build participant capacity. Participation offers an experiential learning opportunity for stakeholders to practice civic engagement and policy making. Issues of sustainability or complex planning principles may require time and resources to build in participants a shared understanding of topic areas and values (Interview #6).

Research barriers to participation at the community level: Misalignments that manifest at the level of the individual participant may in fact be due to structural issues

and systemic barriers to participation. Socio-economic and ethnic groups are often segregated within cities, and specific groups often share common experiences (Interview #6). For this reason, it is important to research and understand communities within which one is engaging. For instance, understand the times and places that are best for participants that may work multiple jobs. Identify if a significant population within a community requires childcare at a public event or if it is expected that food will be served (Interview #7). Although participants are individual people, the public participation process is a collective action, and disaggregating asset and barrier analyses to the individual level may miss important issues (Interview #1; Interview #3).

Structural barriers vs. short-term solutions: Two respondents (Interview #1; Interview #6) noted that misalignments like personal circumstances and living conditions and the questions of participant competence and capacity may manifest as issues of individuals, but in actuality are results of systemic and structural problems. When a given misalignment is common among specific socio-economic or ethnic groups, or it is concentrated in particular neighborhoods, one must ask at what scale does the problem truly persist. To address this issue, Interview #7 recommended researching and understanding community assets and barriers before designing a participatory process. Many of the strategies identified in the table are short-term solutions, like providing services (i.e. food, childcare, etc.) at events or provide diverse engagement opportunities (Interview #1; Interview #6; Interview #7). Still, meaningfully impacting structural barriers to participation may also require long-term initiatives to build participant capacity. Most of the recommendations provided in this study focus on short-term implementation within a finite public participation process.

Need for Empirical Validation: The initial analysis of misalignments (Cohen and Wiek, 2014) was based on a literature review of public participation processes in urban development projects, and the strategies presented in this study are derived from expert interviews, many of which relied on anecdotal evidence and general experiences. Our research on these misalignments presents the literature and expert opinions, but it still lacks strong empiricism. Therefore, the strategies presented in this paper require empirical testing and validation. Through process evaluations, researchers can identify which strategies achieve optimal alignment and determine whether such efforts truly impact both process and outcomes.

6. Conclusions

The literature on public participation is predominantly theoretical, and there is a need for more empirical work on the subject (Shipley and Utz, 2012). This paper seeks to push the research agenda away from the debate over whether or not participation is beneficial and towards a constructive discourse around how to shape public participation into a meaningful, deliberative, decision-making process. To achieve this goal, we take an initial step by identifying expert-suggested recommendations for aligning public participation processes to the local context. We posit that creating such an alignment leads to higher quality public participation in urban development projects.

Future research will need to evaluate these strategies as they are applied in real participation processes to generate empirical evidence for what does and doesn't work when designing and implementing public participation. Further research will also need to evaluate the outcomes of processes that are aligned to the local context to determine how well aligned processes actually influence urban development decisions.

If scholarship grows around evaluations of public participation, and the body of empirical literature on the topic expands, the research community will be better able to answer the theoretical questions about participation. Furthermore, participatory researchers and planning practitioners will be able to design public participation processes using evidence-supported methods and protocols, further strengthening urban decision-making. The ultimate goal is to transform public participation in urban development into a meaningful and authentic governance model to guide sustainable urban development.

CHAPTER 4

Aligning a Public Participation Process to Participants' Sustainability Literacy – A Case Study on Urban Development in Phoenix, Arizona

Abstract

In public planning processes for sustainable urban development, planners and experts often face the challenge of engaging a public that is not familiar with sustainability principles or does not subscribe to sustainability values. Although there are calls to build the public's sustainability literacy through social learning, such efforts require time and other resources that are not always available. Alternatively, public participation processes may be realigned with the sustainability literacy the participants possess, and their capacity can be built during the engagement. This article describes and evaluates a public participation process in Phoenix, Arizona, in which researchers, in collaboration with city planners, facilitated sustainability conversations as part of an urban development process. The tool employed for Visually Enhanced Sustainability Conversation (VESC) was specifically designed to better align public participation with stakeholders' sustainability literacy. We test and evaluate VESC through interviews with participants, city planners, and members of the research team, as well as an analysis of the project reports. We conclude that the use of VESC successfully facilitated discussions on pertinent sustainability issues and embedded sustainability objectives into the project reports. We close with recommendations for strengthening such tools like VESC for future public engagements.

1. Introduction

Both sustainability science and urban planning literature identify public participation as an important decision making procedure (Arnstein, 1969; Agyeman and Evans, 2003; Hawkins and Wang, 2011; Smith and Wiek, 2012). Yet, high quality public participation is not always achieved. Some challenges include overly dominant government agencies, participants that lack capacities to engage, and inequitable distributions of resources (Innes and Booher, 2004). Particularly, in planning for sustainable urban development, public participation requires not only engaged participants, but also participants that understand sustainability principles, norms, and behaviors (Cuthill, 2002; Holden et al, 2009).

Engaging with a public that lacks sustainability literacy is a significant challenge for planners and experts working towards sustainable urban development. Cohen and Wiek (2014) identify ten ways in which the public participation process (as designed by planners and experts) is often misaligned with the local context. Participants' sustainability literacy is one key misalignment that can impair the quality of public conversations on urban sustainability and ultimately compromise the robustness of sustainability outcomes in project planning and implementation.

Obstacles to high quality public participation, including low sustainability literacy, can often be avoided with careful process design (Dietz and Stern, 2008; von Korff et al, 2010). However, the body of planning literature on public participation is weak in providing directives for designing good processes. The majority of published papers on public participation are theory-based, and there are far fewer examples of empirical studies (Shipley and Utz, 2012). The magnitude of empirical research on the topic lags

behind both the theoretical and practitioner communities (Delli Carpini et al, 2004; von Korff et al, 2010) due in part to a lack of evaluative studies on public participation and stakeholder engagement processes (Bailey et al, 2012; Walls et al, 2010; Rowe and Frewer, 2000).

Therefore, this article describes and evaluates a case in which researchers, in collaboration with city planners, attempted to align the public participation process to participants' sustainability literacy in an urban development process in Phoenix, Arizona. The project encountered low sustainability literacy amongst participants and redesigned engagement activities to strengthen sustainability conversations at public visioning workshops. This study generates evidence-supported directives for designing public participation for sustainable urban development.

2. Public Participation Processes in Urban Development Projects

2.1. Defining Public Participation

'Public participation' is used in the literature to describe a variety of processes applied in diverse contexts (Dietz and Stern, 2008). For the purposes of this study, we define public participation as a process that is part of an official urban development project. It is situated within the urban development project, which itself is positioned within a specific context. Strategic Agents (i.e., elected officials and investors) supervise the process, which is carried out by Operating Agents (i.e., city staff and project partners), and Participating Stakeholders (i.e., residents, non-profits, businesses) provide input through a structured process. Stakeholders may be involved throughout multiple project phases, including preparing, planning, implementing, and evaluating project outcomes. Stakeholders may be asked to engage through different methods, including public

meetings, focus groups, workshops, citizen juries, and other protocols (Cohen and Wiek, 2014; Wiek et al, 2014b).

2.2. Misalignments between the Public Participation Process and the Local Context

The literature on public participation features numerous theoretical debates about whether participation yields positive outcomes or instead produces adverse effects. In planning literature, little empirical evidence supports either argument (Shipley and Utz, 2010), yet some scholars contend that most shortcomings of participation processes can be mitigated through careful process design (Dietz and Stern, 2008; von Korff et al, 2010).

To avoid challenges to high quality public participation, one must first identify these pitfalls. Through a broad review of the literature on public participation in urban development, Cohen and Wiek (2014) found common challenges to public participation and organized these issues into ten categories, conceptualized as misalignments between the public participation process and the local context, including policy maker support, community civic engagement, and participants' collaborative capacity, among others. These common challenges to public participation in urban development occur when the public participation process (as designed by experts and planners) does not align with the local context where participation is taking place.

This article is concerned with one specific misalignment between the public participation process and the local context: participants' sustainability literacy. Generating robust sustainability outcomes through public participation processes requires stakeholders to engage in sustainability-oriented conversations. Many members of the public, however, lack a strong grounding in sustainability principles, and their values and

behaviors may be in conflict with sustainability. Meaningful engagement around sustainability is challenging when participants are not, in this sense, sustainability literate.

When a public participation process is not aligned with participants' sustainability literacy, there is a knowledge and/or values gap on sustainability between experts and stakeholders. When this problem persists, participants may feel confused, they may harbor frustrations or distrust, and their input may be incompatible with sustainability goals and objectives (Cohen and Wiek, 2014).

2.3. Strategies for Aligning Public Participation Processes to Participants' Sustainability Literacy

Building participant capacity for sustainability can strengthen the quality of citizen participation in urban sustainability governance (Cuthill, 2002). Participant capacity for sustainability can be developed through social learning, experiences in which participants build understanding and shape their values through collaboration with others. Social learning is a common potential benefit of public participation, and there are many cases of facilitating social learning of sustainability (see: Pahl-Wostl, 2002; Tippet et al, 2005; Holden, 2011). Although social learning is popular in sustainability governance literature, it is important to note, that this form of capacity building requires a significant investment of time and other resources that may not be available in all participatory processes (Tippet et al, 2005). In an empirical study of social learning in public participation for sustainability outcomes, Garmendia and Stagl (2010), for example, found that participants need ample time for interaction and deliberation.

As an alternative to enhancing sustainability literacy through separate capacity building events, the planning process itself can be designed as a learning experience,

using guidelines from the literature. In the following we review a set of guidelines for aligning public participation processes to participants' sustainability literacy.

Innes and Booher (2004) identify keys to successful public participation, one of which is *dialogue*. Dialogue can be transformative because participants who listen to and inform each other can develop new ideas and shared meanings. They recommend that public agencies promote procedures that foster deliberation between stakeholders and that planners be trained to design and manage collaborative processes.

Other scholars repeat this recommendation. Through case studies of participatory processes, Fung and Wright (2001) synthesize key principles of empowered participatory governance. They state that procedures should lead dialogue beyond an abstract discourse on values and instead focus on conversations about practical issues and concrete problems. People affected by the problems being discussed should be given an opportunity to deliberate solutions to the problems. Healey (2008) discusses creative urban governance as an alternative to the “established routines [and] rule-bound bureaucratic procedures (88)” that typify planning processes. Under creative urban governance, processes would support informative conversations that are facilitated through experimental practices.

Rowe and Frewer (2000) propose four criteria for evaluating a public participation procedure, two of which may be particularly helpful to guide the construction of participatory procedures to foster social learning and structure participant interaction and deliberation. *Resource accessibility* stipulates the resources that participants need to make a decision. This includes (a) information resources, or the facts needed to make an informed decision; (b) human resources, or access to experts and other

individuals that can provide needed information; and (c) material resources, or objects like projectors or whiteboards to facilitate understanding. These resources would all be important for communicating sustainability concepts, problems, and solutions to diverse participants.

Another vital criterion is *structured decision making*, which states that activities should follow clear mechanisms for facilitating decision-making. Coping with low participant sustainability literacy in participatory procedures would lend to a need for competent facilitation. Subsequent works (see: Rowe et al, 2008; Walls et al, 2010) question whether this criterion should be further broken into more specific criteria, and Rowe et al (2008) consider including assessments of adequate and fair elicitation and information presentation.

One way to present information is through the use of *images*. In a study on the use of imagery for public engagement on climate change, O'Neill et al (2013) found that images of climate change impacts made participants feel that climate change was important (salience), but reduced their feeling that they could do something to address the problem (self-efficacy). On the other hand, images of energy futures increased participant efficacy. While images of the problem reduced participant self-efficacy, images of potential solutions awoke in participants a sense that they could tackle the challenge. This finding would support Fung and Wright's assertion that participants should be engaged on the topic of solutions, which is doubly relevant to sustainability planning, as sustainability science is framed as a solution-oriented endeavor (Kates et al, 2001; Clark and Dickson, 2003; Miller et al, 2014).

In summary, a public participation procedure to support sustainable urban development may be effective if it fosters deliberation about real problems and their potential solutions, and if it supports social learning. Due to common time constraints of participatory planning processes, we focus particularly on information resources and presentation as well as facilitation to enable conversations about sustainability outcomes amongst participants that may not be comfortable or familiar with sustainability. Therefore, facilitators need to be specially trained to lead deliberations on sustainability supported by materials like visuals to aid participant understanding.

3. Research Methods: Evaluation of a Public Participation Procedure

This study reports on a participatory visioning process for an urban development project in Phoenix, Arizona. The authors were members of a research team that designed and implemented a participatory process to elicit stakeholder input for sustainability visions for districts along the City of Phoenix's light rail corridor. Through direct observations during an engagement in the first district (Gateway District), the researchers recognized the challenge of facilitating discussions around sustainability with participants that had no background on the subject. The researchers identified participants' low sustainability literacy as a barrier to quality public participation and redesigned workshop activities and materials for use in other transit districts (including the Midtown District, which serves as the reference district in this study).

This article evaluates the tool of Visually Enhanced Sustainability Conversation (VESC) that was designed to better facilitate deliberation on sustainability options during the public visioning process. We evaluate VESC using select criteria from Rowe and Frewer (2000) that would support participant deliberation over sustainability issues

(information resources, human resources, material resources, elicitation, and information presentation), and we apply a fifth criterion that the activity must facilitate public discussion on sustainability. The ultimate research question is whether or not the application of VESC effectively facilitated conversations and decision-making about sustainability options.

To assess VESC in terms of the above criteria, the evaluation includes researchers' direct observations; document analysis of vision reports from two of the transit districts (Gateway and Midtown); and 11 interviews with process participants, project partners, and members of the research team. Table 4.1 outlines the data inputs used in the evaluation, and provides a citation format for each source as referenced later in this article.

Table 4.1

Data Inputs for Evaluating Visually Enhanced Sustainability Conversations

Data Type	Citation Code
Direct observations	DO
Document analysis	
Gateway District Vision Report	Wiek et al, 2012
Midtown District Vision Report	Wiek et al, 2013
Interviews	
Gateway District steering Committee Member #1, personal communication, January 6, 2015	GW01
Gateway District Steering Committee Member #2, personal communication, January 9, 2015	GW02

Table 4.1 continued

Data Inputs for Evaluating Visually Enhanced Sustainability Conversations

Data Type	Citation Code
Interviews	
Gateway District Steering Committee Member #3, personal communication, January 14, 2015	GW03
Midtown District Steering Committee Member #1, personal communication, December 5, 2014	MT01
Midtown District Steering Committee Member #2, personal communication, December 11, 2014	MT02
Midtown District Steering Committee Member #3, personal communication, December 12, 2014	MT03
Midtown District Steering Committee Member #4, personal communication, December 14, 2014	MT04
Midtown District Steering Committee Member #5, personal communication, December 19, 2014	MT05
City of Phoenix Planner, personal communication, December 17, 2014	CP01
Research Team Member #1, personal communication, January 30, 2015	RT01
Research Team Member #2, personal communication, February 3, 2015	RT02

After public participation concluded in each district, a steering committee of stakeholders was formed to support the visions through the City's planning and zoning process. Interviews with three Gateway Steering Committee and five Midtown Steering Committee members were conducted to compare the workshop experiences in the two districts. A City of Phoenix planner was interviewed to gain insight from a project

partner. The planner also recommended the steering committee members to be interviewed for this evaluation. Finally, to reduce bias in the evaluation, interviews with two members of the research team provide feedback from individuals that helped design the VESC tool and facilitate public participation, but are *not* authors of this article. The interviews with the research team members are particularly valuable because both respondents are now practicing urban planners in major metropolitan areas in the U.S.

In each interview, a researcher met with the respondent, reviewed copies of workshop activity posters from both districts and VESC posters from the Midtown district. Through the interview, respondents compared the experiences from the two districts and provided feedback on the tools that were used. After each interview, responses were coded by evaluative criteria, and the researcher assessed whether feedback was negative, ambivalent, or positive. This approach relies to some extent on the researchers' own judgments (coding and assessment), but respondent quotes provide rich details that support the assessment decisions.

4. Reinvent Phoenix: Aligning Public Participation Process to Participants'

Sustainability Literacy

4.1. The Reinvent Phoenix Participatory Visioning Process

Reinvent Phoenix was an urban development project in Phoenix, Arizona. Funded by the U.S. Department of Housing and Urban Development, Reinvent Phoenix was a partnership between the City of Phoenix, Arizona State University, St. Luke's Health Initiative, and other community organizations. The project sought to promote sustainable urban development along Phoenix's light rail corridor. This goal was to be achieved over multiple phases that included a public participation process to develop sustainability

visions for five specific transit districts: Gateway, Eastlake-Garfield, Midtown, Uptown, and Solano (Figure 4.1). The visions would then inform a zoning process to create form-based codes that support transit-oriented development.

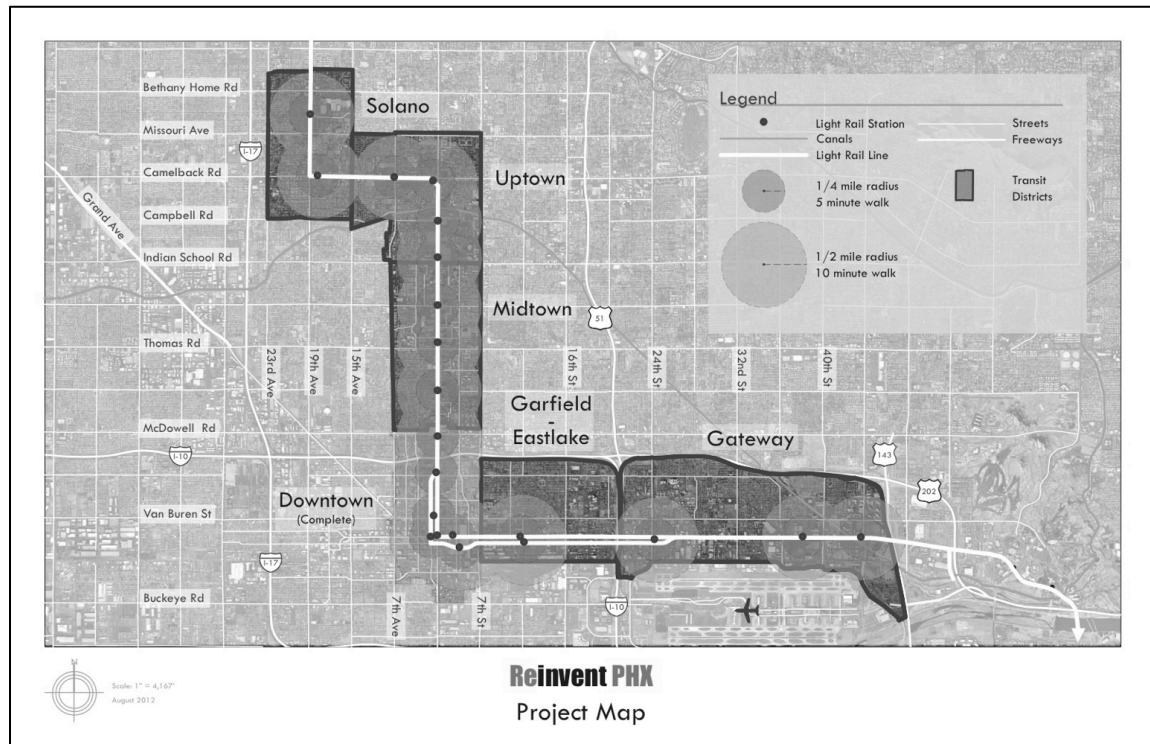


Figure 4.1. Reinvent Phoenix Project Map

The authors and their research team managed the public participation process to create the sustainability visions for each district. This article focuses on a particular aspect of the visioning processes in the Gateway and Midtown Districts. The Gateway District is the farthest east district of Phoenix on the light rail corridor. It is one of the most ethnically diverse transit districts, and it features the corridor's highest poverty rates and lowest educational levels. The Midtown District, by contrast, is the most affluent of Phoenix's transit districts. Comparing participation between these two districts is challenging as socioeconomic, educational, and other factors significantly impact

participation (Fagotto and Fung, 2006). However, Gateway's visioning process provides a convenient baseline against which to measure the effectiveness of VESC as this tool was not designed until after public participation in Gateway had concluded.

A pilot process was conducted in the Gateway District from September-December 2012. During this period, researchers engaged with stakeholders, i.e., those that live, work, do business in, or visit the district, through one-on-one interviews, community organization meetings, two public mapping forums, and two public visioning workshops. Through the engagements leading to the visioning workshops, participants identified areas they would like to see preserved or changed, and they discussed the types of changes they would like to see occur. Researchers identified consensus areas for change (transition areas) and prepared a visioning workshop to enable participants to discuss in detail how each of the transition areas might look in the future.

Accordingly, researchers engaged participants in discussions about specific changes for the identified transition areas in the Gateway District. These conversations revolved around a visual preference survey (VPS) in which participants discussed and voted on preferences for issues including building height, street design, and landscaping. The VPS facilitated form-based discussions that focused primarily on the district's physical form. Sustainability was implied in certain options. For instance, taller building heights promoted density, complete street designs fostered multi-modal transportation options, and low-water landscaping would require fewer natural resources. Sustainability was not explicitly addressed in these conversations, and function-oriented conversations (i.e. how participants would live and work in the buildings; how participants would travel on streets) occurred organically.

At the end of the public participation process in the Gateway District, researchers drafted a vision based strictly on stakeholder input. After the report was complete, one member of the research team conducted a criteria-based sustainability appraisal of the Gateway vision. The appraisal showed that the initial vision lacked sustainability substance (Wiek et al, 2012). Throughout the process, the researchers felt that public discussions about sustainability outcomes could have been stronger and that more targeted discussions would have further infused sustainability into the vision.

As the Gateway District was the first transit district in which visioning activities occurred, researchers had an opportunity to take lessons from that experience and revise the approach for subsequent districts. Identifying low sustainability literacy of participants and seeking to strengthen sustainability conversations at visioning workshops, the researchers devised new workshop activities and materials for facilitating public discussions. The Midtown District is one of the districts in which the revised participation procedures were implemented.

The Midtown visioning process occurred January-May 2013. Researchers employed a slightly altered process for identifying transition areas, including one-on-one interviews, forums at existing neighborhood meetings, and tabling at community events. At the visioning workshops, researchers again led participants through a VPS activity. After concluding the VPS, researchers facilitated a new activity, titled Visually Enhanced Sustainability Conversation (VESC).

4.2. Designing the Visually Enhanced Sustainability Conversation

The intention of VESC was to facilitate a public discussion to prioritize sustainability objectives and identify means (vision elements) for achieving these

objectives that would be acceptable to stakeholders. To foster deliberation towards sustainability outcomes, researchers pre-selected the objectives and vision elements prior to the visioning event. Figure 4.3 shows the hierarchy of a sustainability vision, from the most general component (guiding principle) to the most specific (vision element).

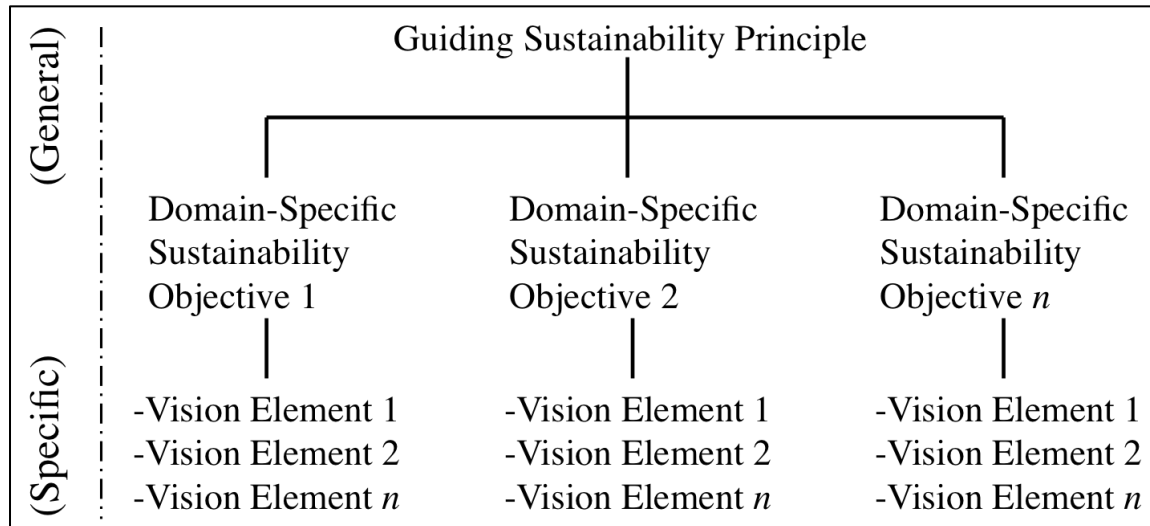


Figure 4.2. Hierarchy of a Sustainability Vision

In the case of Reinvent Phoenix, sustainability objectives were derived from sustainability principles that were identified through extensive literature reviews. The research team then explored approaches for achieving the different objectives. These approaches, called vision elements, are implementable options, which if successful, would be expected to help achieve the sustainability objectives. Here, the vision elements were created through a rigorous process in which undergraduate and graduate students spent weeks creating in-depth profiles for each element. Table 4.2 outlines the objectives and their related vision elements for each of Midtown's three transition areas.

Table 4.2

Sustainability Objectives and Vision Elements by Transition Area

Transition Area	Objective	Vision Element 1	Vision Element 2	Vision Element 3
Park Central Mall	Economic vitality through strong local businesses	Buy-local initiative	Small business support organization	Business in mixed-use building
	Diverse employment and training opportunities	Co-working spaces	University-community partnership	Participant suggestions
	Cool neighborhoods	Cool pavement	Vegetation	Living roof
	Walkable and bikeable neighborhoods	Neighborhood circulator	Pedestrian malls and promenades	Park-and-ride
Central Avenue Corridor	Diverse employment and training opportunities	Co-working spaces	University-community partnership	Participant suggestions
	Cool neighborhoods	Cool pavement	Living roof	Vegetation
	Walkable and bikeable neighborhoods	Neighborhood circulator	Pedestrian malls and promenades	Participant suggestions
	Saving money through conserving natural resources	Adaptive reuse	Energy efficient homes	Solar houses

Table 4.2 continued

Sustainability Objectives and Vision Elements by Transition Area

Transition Area	Objective	Vision Element 1	Vision Element 2	Vision Element 3
Third Street Corridor	Economic vitality through strong local businesses	Business incubator	Small business support organization	Buy-local initiative
	Cool neighborhoods	Cool pavement	Living roof	Vegetation
	Walkable and bikeable neighborhoods	Neighborhood circulator	Pedestrian malls and promenades	Participant suggestions
	Saving money through conserving natural resources	Adaptive reuse	Solar houses	Energy efficient homes

To complete the vision element profiles, the research team sought local and regional examples of each vision element in order to capture visual evidence of the element's use in the Phoenix area. In some cases, local examples did not exist, and researchers attempted to locate images as relevant to the Phoenix context as possible.

Although the content of the VESC tool is critical, it is not the only success factor for participatory vision. The facilitators themselves are equally as important as the facilitation tools. In preparation for public visioning workshops, members of the research team were paired as facilitators and note takers. Facilitators and note takers underwent rigorous training. Through a series of dry runs, the facilitators and note takers practiced the visioning activity that revolved around VESC. The facilitator played a focal role

leading the exercise, and note takers played a support role by recording all conversation onto a laptop, joining the group discussion when the facilitator couldn't manage multiple conversations, and organizing support materials like pens, markers, and post-it notes. In some cases, when group dynamic dictated, the note taker became a secondary facilitator.

4.3. Facilitating the Visually Enhanced Sustainability Conversation

During visioning activities, the facilitator employed the VESC tool by first showing participants a poster stating a small number (3-6) of sustainability objectives to discuss. Participants voted on the objectives that most interested or resonated with them (top 1-3). This voting served as an input for planners on how to prioritize objectives in the planning and implementation process of the Reinvent Phoenix project. The facilitator then led structured conversations about the most popular objectives, sharing a poster for each objective that illustrated potential vision elements for achieving the objective (Figure 4.3).

VESC

REINVENTPHX

ASU ARIZONA STATE UNIVERSITY

Objective: Walkable and bikable neighborhoods (reduced neighborhood traffic)
Objetivo: Vecindarios amigables para peatones y ciclistas (reducción del tráfico local)

A: Circulator



- Connects residents to local destinations from transit or Park-and-Ride (fare is free or reduced)
- Reduce need for automobile use and street parking in the District
- Provee un sistema que conecta los destinos locales con las redes de transporte público y estacionamientos asociados, con tarifas reducidas o gratuitas.
- Reduce la necesidad del uso del automóvil y de estacionamiento en el Distrito

B: Pedestrian Malls and Promenade



- Street lined with restaurants and storefronts that is closed off to automobile traffic, creating a pedestrian-only walking zone
- Improves traffic flows, as fewer cars drive near pedestrian malls, and people are more inclined to use public transit to access the mall/promenade
- Estacionamientos cubiertos con paneles solares
- Calles con restaurantes y tiendas cerrada al tránsito de vehículos, creando una zona de uso exclusivo peatonal
- Mejora el flujo de tráfico local, ya que la gente se inclina por el uso del transporte público para acceder a estas áreas

C: Additional Suggestions



Objective: Walkable and bikable neighborhoods (reduced neighborhood traffic)

Pros

Cons

Pros

Cons

Pros

Cons

Figure 4.3. Example Poster from a Visually Enhanced Sustainability Conversation

The poster for each objective listed two to three potential vision elements, and some posters prompted participants to suggest additional elements. For each vision element, there was a short description and a photograph providing visual representation. For issues involving building height and street design, we used photo-realistic visuals that depicted the vision elements (i.e. 5-8 story building) as they would actually look in a given location. The facilitator described each vision element and fielded questions. The facilitator then guided a pros/cons conversation in which participants provided strengths for each vision element as well as potential obstacles to successful implementation. The facilitator noted participant responses on sticky notes and placed these inputs on the poster.

Participant input was inserted directly into the Midtown District vision. The vision for each transition area was organized around the sustainability objectives that gained the greatest stakeholder interest. The specific vision elements that participants supported were included in the report, and any nuances in participant preferences were addressed. For instance, in discussing rooftop photovoltaics (strategy: *solar houses*) as a vision element for *saving money through conserving natural resources* along the Central Avenue Corridor, one participant noted that he was not comfortable with photovoltaic panels being visible from the street in the historic neighborhoods near Central Avenue. Through deliberation, he acknowledged that photovoltaic panels on historic homes were acceptable provided they were visible only from backyards. The note-taker recorded this request, and the vision stipulated that photovoltaic installations should not compromise historic character in such neighborhoods (Wiek et al, 2013).

Because the vision was oriented around pre-selected sustainability objectives, researches conducted the sustainability appraisal during the design of VESC. As described in section 4.2, sustainability scientists vetted potential vision elements prior to the visioning workshops, ensuring that the public discussions revolved around truly sustainable outcomes. A cursory sustainability appraisal of the vision reinforced that the vision does indeed describe a *sustainable* Midtown (Wiek et al, 2013).

5. Evaluating the Alignment between Participatory Visioning and Participants'

Sustainability Literacy in Reinvent Phoenix

The central focus of this article is to determine if Visually Enhanced Sustainability Conversation (VESC) aligned Reinvent Phoenix's participatory process to participants' sustainability literacy. We therefore evaluate the tool in terms of how it

facilitated participant conversations about sustainability. Table 4.3 shows the evaluation results. For each evaluation criterion, we identify which data sources gave a negative, ambivalent, or positive assessment (see Table 4.1 for data codes).

Table 4.3

Results of Evaluation of Visually Enhanced Sustainability Conversations

Evaluation Criteria	Assessment		
	Negative	Ambivalent	Positive
Information Resources	MT02; MT04	MT03; MT04	GW02; GW03; MT01; MT02; RT01
Human Resources	DO		DO; MT01; RT02
Material Resources			GW03; RT02
Elicitation	RT01	GW03	DO; CP01; GW02; GW03; MT01; MT02; MT03; MT04; MT05; RT02
Information presentation	CP01; GW01; MT03; MT04	GW01; GW02; MT02; RT02	GW01; GW02; GW03; MT01; MT03; MT04; RT02
Sustainability Discussions			DO; CP01; GW02; GW03; MT01; MT02; MT03; MT04; MT05; RT01; RT02; Wiek et al, 2013

In general, respondents regarded VESC as a useful tool for facilitating public discussions on sustainability objectives and vision elements. Respondents from Midtown reported that VESC did support the goal of infusing sustainability into both discussions at workshops and the resulting vision. Respondents from Gateway reviewed the VESC materials and felt that the tool would have been helpful in their district as well. The City of Phoenix planner and members of the research team also acknowledged the benefits of VESC. Although respondents supported the use of VESC, some also provided critiques and made recommendations for improving the tool. The most salient remarks and observations are discussed below.

5.1. Information Resources

The VESC posters, as information resources, were intended to define sustainability-oriented development objectives and present details about potential vision elements for achieving those objectives. The goal here was to foster informative conversations (as recommended by Healey, 2008). One Gateway respondent noted, “Everybody needs a starting point [to enter the discussion] (GW03). A member of the research team pointed out that by placing objectives and strategies on the posters, the researchers were telling participants “that these options are sustainable (RT01).” By presenting to participants sustainable options to discuss with examples and details, VESC gave participants the starting point they needed to enter the discussion about sustainability options.

To improve VESC posters as information resources, a Midtown respondent recommended providing more examples for each strategy and offering more local examples so that participants could understand the strategies through a context with

which they are familiar (MT02). Researchers attempted to provide local images of vision elements, but not all vision elements had been implemented locally. The research team included external examples so as not to limit the vision to only what had already been accomplished in Phoenix. O'Neill (2013) reported on the importance of images in facilitating public discussions, and respondent feedback in this evaluation seems to support this assertion. One Midtown respondent was concerned that participants that were learning of a potential strategy for the first time might walk away from the activity with an overly optimistic view if the group is unable to identify shortcoming and pitfalls (MT04). To mitigate a bias towards supporting the sustainability strategies (also a concern of Newman and Feigenson, 2013), the posters may need to include disadvantages and facilitators might need to be more transparent about the pros and cons of each option. To alleviate this concern, the VESC poster and facilitation included an opportunity to discuss shortcomings of each vision element. Ensuring then that participants have a firm grasp of each option depends on competent and transparent facilitation.

5.2. Human resources

Rowe and Frewer (2000) highlight the importance of human resources to a participatory exercise, and VESC involved two groups of people: (1) the facilitator and note-taker and (2) the participants. A member of the research team was very positive about the quality of facilitation and attributed facilitator competence to the training and preparation of facilitators prior to the event (RT02). Facilitators helped research the sustainability objectives and vision elements and therefore were experts on each option. A respondent from the Midtown District also noted the human resource value of fellow participants, saying, "It was good to have people with different ideas that can consider

something different than their own point of view. There were times that I changed my opinion when I heard other people's ideas (MT01).” This form of social learning was fostered by the facilitated discussions about the benefits and obstacles for each vision element. Furthermore, this outcome from VESC supports the emphasis placed on dialogue and deliberation by Innes and Booher (2004) and Fung and Wright (2001).

5.3. Material resources

One member of the research team felt strongly that posters were resources that aided “people that didn't necessarily have a literacy in sustainability or urban planning (RT02).” A Gateway Respondent said, “I think the materials are fine. I look at this, and I see ‘here's a priority and here are three strategies to do that.’ I think that is great (GW03).” The objectives and vision elements pose solutions to sustainability problems in the districts, and the VESC materials focus deliberation on solutions, as recommended by Fung and Wright (2001).

5.4. Elicitation

Interviews showed a favorable assessment of VESC as an elicitation tool. Respondents tended to like the structure of the activity, and they felt that VESC prompted discussion by first providing examples that participants could see and understand. One respondent noted, “If you give them tangible examples, then they can see themselves in it (MT02).” Another respondent liked the structure, saying “It might help with people that aren't as knowledgeable, getting them on the right path (MT04).” The City of Phoenix Planner said VESC “would help because [...] you need to have directions so you can prompt then to think and then go with it. You initiate some conversations and then you elicit additional ideas because you prompted (CP01).” Contrasting VESC against the

experience in Gateway, a member of the research team said, “In Gateway, it was hard to facilitate without the material to guide the conversations. We were less able to elicit responses because we didn’t have the tools to do that (RT02).” She felt that VESC solved this issue. These comments highlight VESC’s strength at structuring decision making (emphasized by Rowe and Frewer, 2000) and facilitating informative conversations (promoted by Healey, 2008).

In critique of elicitation under VESC, one Gateway Respondent said, “I think you should always leave an opportunity for people to come up with ideas that you might not have already thought of (GW03).” Some objective posters presented two strategy options and asked for additional ideas, while other posters presented three strategy options and did not elicit additional input. It would be possible to design posters that always ask for additional ideas. A member of the research team also felt that while the structured conversation around pre-selected options was helpful, “there would be more value if...there could have been a more organic discussion about, for example, what sustainable land use looks like (RT01).” One solution to this concern might be to initiate the conversation with the objective/strategies discussion and then facilitate a bigger-picture discussion of general sustainability once the participants have been prepared by first discussing tangible examples. However, such a structure may not be reasonable if an event is facilitated under time constraints.

5.5. Information Presentation

O’Neill et al (2013) show that images of solutions inspire participants and increase participants’ self-efficacy. The VESC sought to accomplish similar goals by including images of potential strategies for achieving the sustainability objectives. The

images allowed participants to see themselves in the sustainable future (MT02). VESC posters would also help participants that were visual thinkers (GW02), and visuals help move “the discussion along quicker in terms of people comprehending what we’re comparing in terms of several options (GW03).” All five respondents that participated in VESC in Midtown District felt that the visuals improved the activity and fostered good conversation.

There were several issues that should be improved so that VESC can better present information. The City of Phoenix Planner felt that “the language was very planner wonky. Why can’t it just say ‘good job choices?’ [Instead of ‘diverse employment opportunities’] (CP01).” Although there is credence to the respondent’s opinion, the language on each poster was negotiated between project partners, evaluated in pre-tests, and revised multiple times. Another critique focused on the quality of translation, because some of the Spanish language translation was inaccurate, making the activity confusing for Spanish speakers (GW01). This critique is especially troublesome because the Reinvent Phoenix research team included native Spanish speakers that translated the materials. Pre-testing VESC with Spanish speaking participants is one potential solution for checking translation quality. The presentation of strategy options would also have been better if images depicted implementations local to the Phoenix area (RT01). The goal was to show local examples, but there was not always local evidence available for the selected strategies.

5.6. Sustainability Discussions

Respondents overwhelmingly rated VESC positively as a tool for leading discussions about sustainability outcomes, and researcher observations support these conclusions. A member of the research team succinctly justified VESC and highlighted the activity's outcomes: "Our mandate was from a grant which stipulated that the vision had to be something sustainable. We weren't just talking about sustainability in general terms. Because the future has to be sustainable—what options would you support out of this pool of ideas? The VESC guided the conversation in a particular direction (RT02)." One respondent speculating on how VESC would have supported visioning in Gateway said, "I think you have to present some sustainable strategies and put those forth rather than work through 15 ideas people throw out that aren't sustainable. And if it is an opportunity for folks to learn about sustainability by discussing strategies that are based on sustainability, it allows people to meaningfully engage (GW03)." A Midtown respondent said, "If you just give someone a question their mind goes blanker than anything. These posters were a good way to start (MT01)." Another Midtown respondent praised VESC for supporting his own thought process, saying, "I'm thinking along these lines anyways. I might organize my ideas. But without these objectives, my ideas might not be so formalized (MT04)."

6. Discussion

The evaluation of VESC provides insights about designing tools for supporting public discussion about sustainability, but the evaluation did have some limitations that are discussed below.

The evaluator was a member of the research team: While there is opportunity for bias to cloud the evaluation, the authors' role in the process afforded rich opportunities to collect direct observations of the design of visioning workshop, the VESC tool, workshop implementation, and participant experiences. Because the evaluation occurred up to two years after the public participation events, the authors were also able to distance themselves from the research project and approach the evaluation more objectively.

The evaluation occurred as much as two years after the public participation events: While this gap in time afforded greater objectivity, it also undermined the quality of participant reflection. Some respondents clearly remembered the participation events and activities. Others were able to recall what occurred after brief conversations about the process. Others had trouble remembering specific conversations and themes. Ideally the research questions and evaluation would have been established prior to the visioning process in each district and conducted during and immediately after. Still, given the circumstances, the authors felt that there was value in collecting feedback to learn from the experience.

No formal assessment of participants' sustainability literacy: The researchers did not evaluate participants' sustainability literacy, and the decision to create tools to better align the engagement process with participants' sustainability literacy was based on direct observations and a heuristic process. Were more time available, critically assessing

participant capacities could have further informed the design of the engagement tools and procedures.

No interviews with participants outside of steering committee members: Because the evaluation took place so long after public visioning concluded, the authors chose to interview steering committee members out of convenience. Steering committee members were easy to contact because they are still involved in Reinvent Phoenix. Steering committee members are also representative of certain constituents in each district, and the authors felt that their perspectives would be valuable, and that they could speak on behalf of other participants.

The evaluation lacks quantitative data: Prior to the evaluation, the authors did not establish clear metrics for what would be negative or positive assessments of each criterion. Respondent interviews do, however, provide rich details about VESC and the experience of participants at Reinvent Phoenix visioning workshops.

7. Conclusions

One of the goals of the Visually Enhanced Sustainability Conversation (VESC) was to align a public participation process with participants' sustainability literacy in order to improve sustainability-oriented discussions at public visioning workshops. To achieve this goal, the tool would have to provide participants with information resources and structure decision making (Rowe and Frewer, 2000). Through an evaluation of VESC, the authors ask whether the tool effectively facilitated public deliberation about sustainability outcomes and whether through VESC public discussion about sustainability was better than in previous engagements during the Reinvent Phoenix public visioning process.

In general, all respondents had favorable opinions of VESC. Midtown District respondents thought the activity was successful as they experienced it, and Gateway District respondents thought the exercise would have been beneficial to visioning in their own district. Respondents thought VESC was strong because it stimulated conversation. By seeding participants with example ideas, participants were then able to think more creatively. In terms of meeting sustainability goals, presenting strategies that were already vetted as sustainable steered the conversation towards additional ideas that were more likely to lead to sustainability outcomes.

VESC did have some flaws. For instance, despite the presence of native Spanish speakers on the research team, the Spanish translations were not perfect, and some of the technical language should have been better translated. Terminology in English could have been simplified, yet all language was negotiated between project partners. More local examples of successful strategies could have inspired further support from participants, and additional images of each strategy could have made the options even more tangible. However, despite detailed research, few local examples of vision elements existed. These illustrate clear concerns regarding VESC, but the solutions for improving the tool are not simple.

There are some concerns regarding the evaluation of VESC, but the evaluation is transparent and provides a clear discussion of the tool's strengths and weaknesses. The evaluation describes the tool and highlights the aspects to be replicated as well as aspects to improve upon. VESC is a sophisticated tool that was created through rigorous work and significant human power. This study describes the intention, design process, implementation, and outcome of the tool to support participatory researchers and

planning professionals in utilizing similar engagement tools to align public participation processes to the local context.

Misalignments between the public participation process and local context, like low sustainability literacy of participants, can undermine sustainability outcomes in public participation processes in urban development projects. Facilitation and deliberation tools can improve discussions amongst members of the public. In Reinvent Phoenix, researchers developed VESC as a tool to serve such a purpose, and participant and project partner interviews show that the tool did help align the public participation process to the participants' sustainability literacy. This study presents insights from which planners and experts can learn when designing their own public participation activities and materials.

CHAPTER 5

Citizenship Education through Participatory Budgeting – the Case of Bioscience High School in Phoenix, Arizona

Abstract

Public participation in local decision-making processes has numerous purported benefits. Yet, realizing these benefits requires a citizenry that is able and willing to participate in meaningful ways. High schools are ideal venues for civic education but rarely teach local collective action, citizen engagement, and self-governance, focusing instead on personal responsibility, knowledge of political institutions, and information on electoral processes. This article reports on a citizenship education project in a high school in Phoenix, Arizona. The program engaged students from all grade levels in a participatory budgeting (PB) process – to our knowledge, the first School PB in the U.S. The study asked to what extent student engagement in PB develops the competencies necessary to actively engage in public debates and decision-making processes. The findings suggest that deliberative processes that engage students in decision making can develop civic competencies, and among available strategies, PB is particularly effective. The study also found that the impact of informal democratic learning through PB increases significantly when it is paired with formal learning in the classroom.

1. Introduction

Expanding upon the Archbishop of York's assertion that the main purpose of education is to produce citizens, Eleanor Roosevelt (1930) argued that the true purpose of education is to produce good citizens. In a democracy, good citizens are expected to be actively engaged in public debates and decision-making processes.

One of the best ways to learn how to become an engaged citizen is by experiencing it. Students do not necessarily learn to become engaged citizens by memorizing articles of the Constitution, the number of judges in the Supreme Court, or the names of all state capitals. While this knowledge is important, it is equally critical that students actually experience democracy, explore expectations, and form their behavior. Dewey (1938) argued that public schools should train students for democratic life through experiential learning. Likewise, Freire (1998) contended that public schools should prepare critical and engaged citizens and should allow students to live the tense experience of democracy in everyday interactions.

Hence, in this article we explore citizenship education lived through a democratic process of deliberation and decision making. We argue that hands-on experience with self-governance has great potential to develop democratic knowledge, attitudes, skills and practices among students. This potential is even higher when students have the opportunity to connect these experiences to curricular and extracurricular learning activities that address democratic theories and practices. This educational philosophy guided the leadership and teachers of Bioscience High School (Bioscience), a public school in Phoenix, Arizona, to implement the first student-centered participatory budgeting in the United States (US) during the 2013-2014 academic year.

Participatory budgeting (PB) is a democratic process of deliberation and decision making on budget allocations. After its inception in Porto Alegre, Brazil in 1989, PB became popular throughout Brazil, spread to other countries, and currently is implemented in over 2,000 cities around the world. PB is most often applied to municipal budgets and neighborhood-scale infrastructure projects, but it has also been used in

counties, states, public housing units, coalitions and universities. In the U.S., the first municipal PB experiment took place in 2009 in one district of Chicago and later expanded to more Chicago districts and to other cities including New York, Boston, San Francisco, Vallejo, Long Beach, St. Louis, Rochester, and San Juan (Puerto Rico).

The adoption of PB has three main justifications. The first relates to political justice: people have a fundamental right to have a say in decisions that affect them. The second addresses effectiveness: when the decision-making process includes people who are affected by an issue, the quality of the decisions and their implementation tend to be better. The third is that participation is an important element of human development, as it enables democratic learning and nurtures agency among participants.

This article focuses on the third justification and examines an intervention to design and implement PB as a citizenship education program at Bioscience. The goal of the project was to create an experience through which students acquire democratic competencies by actively participating in an authentic decision-making process.

The article is organized in five sections. The next section discusses models of citizenship education. Section 3 describes the participatory budgeting process at Bioscience. Section 4 presents findings about the learning acquired by students through their active involvement in PB. Section 5 provides some conclusions, makes recommendations for future practice, and suggests areas for further research.

2. Citizenship Education

Citizenship education is expected to cultivate engaged, skilled, and knowledgeable citizens that actively participate in civic and social life in their communities. Dewey (1916) envisioned a society that fosters participation by all

members, and called for educational systems to develop the interests and habits of mind to take part in creating social change. This section provides a brief discussion of the literature on citizenship education, paying particular attention to the connections between participatory democracy and citizenship learning.

2.1. Learning Democracy by Doing: Citizenship Learning and Participatory Democracy

Many democratic theorists, from Aristotle to Rousseau to Mill, Cole, and Pateman, have argued that the central function of participatory democracy is educative. Moreover, the more people participate, the better able they are to participate and the more inclined they will be to continue participating in the future (Levine, 2007; Tranter and Malone, 2008; Lopes et al, 2009; Lang 2010). Along the same lines, Kaufman (1960), who coined the term ‘participatory democracy’, argued that its main function is not to stabilize communities, but to contribute to the development of human powers of thought, feeling, and action.

The literature on the developmental impact of participatory democracy tends to support Kaufman’s argument. In a meta-study, Berry et al (1993) concluded that when participatory democracy provides meaningful opportunities for people to make decisions about the allocation of goods and services in their neighborhoods, they become more knowledgeable, more tolerant, more efficacious, and more confident in government. Marshall (1993) found that direct democracy practices in village meetings in Mozambique helped participants to think together the transforming of their circumstances and themselves. In a study on women who participated in the management of neighborhood centers in Australia, Foley (1999) found that participants acquired a variety of values, worldviews, and skills, including budgeting and accounting, collective

planning, and decision making. Similar findings were reported in a study on public land management in three American Midwest communities (Halvorsen 2003). Among other things, participants became more tolerant of different opinions, valued the inclusion of diverse viewpoints, and increased their expectations of government accountability.

2.2. Citizenship Education in Schools

In the U.S., civic education has become deemphasized as public schools shifted their focus to areas prioritized by standardized testing like reading, mathematics, and science. Moreover, teaching citizenship for testing expectations requires primary attention to information and knowledge acquisition, at the expense of the skills, attitudes, and behaviors needed to engage in democratic processes (Levine, 2006, Panah 2010, McCowan 2011). Indeed, whereas schools can be powerful venues for developing an engaged citizenry, participatory values and skills are typically excluded from civics courses, which often emphasize voting and personal responsibility (Palmer and Standerfer, 2004; Westheimer and Kahne, 2004; Levine, 2014). This is unfortunate, because meaningful democratic participation requires interested citizens to hold certain competencies. For instance, participants must understand how formal procedures and concepts translate into the practice of democracy, and they need the skills to solve conflicts and communicate in deliberative settings. For this to occur, schools should prepare well-rounded citizens capable of engaging in civil, political, and problem-solving activities, both individually and collectively (McIntosh and Muñoz 2009:6).

While the U.S. civics curriculum does not adequately groom participatory citizens, there are opportunities to nurture citizenship learning through extracurricular activities. Participation in extracurricular activities such as student councils positively impacts

students' citizenship behavior as adults: they are more likely to register to vote, to be involved in political campaigns, to contact public officials, and to become members of political organizations. Interestingly, participation in other extracurricular activities such as music groups, journalism clubs, or sports teams, seems to have no effects on citizenship behavior (McFarland and Thomas 2006; Geboers et al 2013). In line with the reported benefits of participating in student councils, the Citizenship Educational Longitudinal Study, the largest and longest-running study about the impact of citizenship education anywhere in the world, found that one of the key factors for successful citizenship education is the presence of teachers who encourage the active participation of young people and the development of 'student voice' (Keating et al 2010).

One strategy to encourage student participation is to integrate democratic processes into school governance. Democratic school governance that includes students in decision making has been shown to build political efficacy among students and develop their civic knowledge (Mosher et al, 1994; Pasek et al, 2008, Schulz et al, 2010). A tradition of student participation in school affairs can be traced to Summerhill, a democratic, self-governing school founded in 1921 in the UK that inspired the Sudbury Valley School, founded in 1968 in Massachusetts. In this tradition, self-governance requires, among other things, engaging in a process of shared learning about commonly identified issues, questions, and problems, and the development of projects around issues identified by community members. This model constitutes learning democracy by practicing democracy (Boyte and Kari, 1996, Ostrander 2004). Additionally, experiential education theories stress that such learning can be enhanced if the experience is integrated into the academic curriculum (Colby and Ehrlich 2000; Ostrander 2004).

Presently, the free-democratic school movement includes hundreds of schools around the world, in which students have the freedom to organize their daily activities, and there is equality and democratic decision making among students, teachers and staff. Many schools that provide opportunities for student voice are part of the Alternative Education Resource Organization (AERO). However, at least in the U.S., most of these schools are in the private system. Due to policies, regulations and traditions, this model is less common in public schools.

2.3. Participatory Budgeting in Municipalities and Schools

Participatory budgeting (PB) is a process of deliberation and decision making over resource allocations, typically implemented at a municipal level. Normally, the PB process initiates with residents identifying local needs, brainstorming potential responses to these needs, and electing delegates to represent individual communities in citywide deliberations. Delegates discuss their communities' priorities and propose projects to address these concerns. The delegates then take their proposals back to the residents they represent, and the residents vote for the projects they prefer to fund. Community voting informs the delegates and city staff as they develop a final budget. The process concludes with the municipality executing the selected projects while residents monitor implementation (Baiocchi and Lerner, 2007).

PB not only yields budgetary decisions, but it also produces learning outcomes amongst participants. Recent studies on participatory budgeting and cooperative housing in Latin America and Canada found that participants learn democratic capacities, dispositions, skills and practices as a result of their participation. A key dimension is the development of agency among participants, which is related to the development of

political efficacy, i.e., the confidence in one's capacity to make a difference in political processes (Schugurensky 2004; Schugurensky et al, 2006; Lerner and Schugurensky 2007; Pinnington and Schugurensky 2010). For this reason, participatory budgeting has been called “a school of citizenship” and “a school of democracy”.

These educational outcomes make PB an intriguing tool for *youth* civic education. While PB is predominantly used as a tool for adults to make municipal-level decisions, there are also cases of youth PB in cities as well as in K-12 education systems. “School PB” has been practiced in schools in several countries, including Brazil, Portugal, Perú, Argentina, and France. In Brazil, School PB has been implemented in different cities, including Sao Paulo, Porto Alegre and Recife. In Recife, children are included in municipal PB in over 200 schools (Best et al, 2011). The City of Boston involved its youth in a PB process in 2014 that allocated \$1 million of the City's capital budget. The City organized a Mayor's Youth Council to govern a process in which 1,500 participants age 12-25 voted on 14 projects (City of Boston, 2014; Levine, 2014). The Région Poitou-Charentes in France implemented School PB in 93 public high schools, allowing students to determine priorities for a portion of the school budget, sometimes by themselves, and sometimes as part of a larger process that also includes parents, teachers and employees (Röcke, 2014). At Ridgeview Elementary School in West Vancouver, Canada, a teacher organized a PB process in 2005 with support from the school's Parent Advisory Council (Participatory Budgeting Project, 2014). Despite evidence of PB's contribution to citizenship education and the record of youth and School PB around the world, there had been no School PB initiative in the U.S. until the Bioscience project in 2014.

3. The Study: Participatory Budgeting at Bioscience High School

In the academic year 2013-14, Bioscience implemented the first School PB process in the U.S. The goal was to develop in students some of the competencies necessary to actively engage in public debates and democratic decision-making processes. This section describes the research methods employed in the study as well as the School PB process from its inception through its completion.

3.1. Research Design

PB was introduced to Bioscience by this article's lead author. The lead researcher engaged in participatory action research, employed direct observation, interviewed students, distributed pre- and post-questionnaires, and mentored the student steering committee (described in Section 3.3).

To explore the learning and change experienced by participating students, we adopted an instrument designed by Schugurensky (2002, 2006) and applied in several studies on informal democratic learning (e.g. Schugurensky et al, 2006; Lerner and Schugurensky 2007; Schugurensky and Myers 2008). Those studies explored to what extent participation in democratic processes contributed to the development of democratic competencies and dispositions. The instrument consists of 55 indicators of learning and change organized into four categories: knowledge, attitudes, skills, and practices. For this study, we selected 20 indicators that best represented potential learning outcomes in a U.S. high school. We then adapted the wording of the indicators (which were originally developed for municipal PB processes) to be relevant to a school context.

When students voted at the end of the School PB process, they were invited to fill out a questionnaire that assessed their competency development. The questionnaire

asked students to rate themselves pre- and post-PB on a scale of one to five (1=low; 5=high) for the 20 selected indicators. We calculated the mean student rating for each indicator and compared pre- and post-means to determine the mean change for each indicator. We then tested for randomness through a paired samples *t*-test. We compared results for all students and also sorted data by grade level and other factors.

3.2. Bioscience High School

Bioscience High School is a STEM (science, technology, engineering, and math) specialty school in the Phoenix Union High School District. Located in downtown Phoenix, Arizona, Bioscience had 285 students at the end of the 2013-14 school year. The student body comprises diverse socioeconomic backgrounds: the student population is over 62% Hispanic, and roughly two-thirds of students qualify for the District's Free and Reduced Meals program. Bioscience teachers emphasize project-based, student-centered learning through exploration and inquiry (Kay et al, 2014). This atmosphere offered an advantageous environment for testing School PB because administrators, teachers, and students were already accustomed to experiential learning.

3.3. Overview of the Process

To initiate PB at Bioscience, the researcher first met with and received support from the school's principal, who pledged \$2,000 from his personal administrative budget. The principal then connected the researcher to the Student Government (STUGO) teacher-mentor hoping that PB would become a signature STUGO project.

In early March 2014, the researcher met with STUGO's eight-member board to ensure student buy-in and establish the project as student-driven. At that meeting, the researcher explained the basic rules of engagement: (1) students would allocate \$2,000,

(2) the funds could not be used for direct money or gifts, (3) the funds had to be used to benefit students, the school, or community, and (4) STUGO would help guide the process but have no decision-making authority. The entire student population, through a voting procedure, would be responsible for making the final decision.

The STUGO board was excited about the project and decided to organize a steering committee to design the participatory process. The board decided that the PB steering committee would be comprised of the eight STUGO board members and eight representatives from the student body (two students from each grade level). From the start, it was clear that the students were both shocked that their principal would entrust them with what was to them a large sum of money, and motivated to make good use of those funds. It also became clear that it would be challenging for students to govern a participatory process when they were not raised in a culture that valued direct participation in decision making. Some board members had trouble accepting that the steering committee should be selected through a democratic process. Two board members thought the board should hand-select the committee to make sure that they get “serious” students. Another board member, a male sophomore responded, “if this is about democracy, then shouldn’t we let them vote?” The tension between appointed and elected representatives, as well as the tension between representative and participatory decision making, would arise throughout the process.

At a subsequent meeting, the STUGO board set the process for forming the steering committee. They decided to introduce PB and the steering committee to the student body at a school-wide assembly. STUGO representatives would then run steering committee elections at each grade level. To prepare for the assembly, two female junior

students drafted a speech with one of their teachers. One of the students delivered the speech at the assembly, which was attended by the majority of students.

Bioscience's size and structure facilitated grade-level nominations. Each grade is small, ranging from roughly 50 to 100 students. Also, teachers at Bioscience team-teach, and each grade has a large common area. Following the assembly, each grade level held a meeting to nominate potential steering committee members. STUGO board members led the nomination process, which required that a student be nominated and each nomination be seconded. STUGO recorded all nominees and created a ballot for each grade. The next day, each grade elected two students to represent them on the steering committee.

The initial steering committee consisted of 16 students: the eight STUGO board members and two representatives from each grade level. Over the course of the project, 12 of the 16 steering committee members engaged regularly, as four students were unable to maintain their commitment. The steering committee met weekly with guidance from the STUGO teacher-mentor and the researcher. From the beginning it was explained to the students that this was their project and that the adults would only assist or intervene if needed. The steering committee began by setting ground rules for itself, which included drafting a charter, rules of order, and a project timeline.

The steering committee designed the process through which the student body would participate in budgeting. The committee created a project proposal form, and the grade level representatives distributed the applications to their peers in class. The experience at each grade level was unique. The freshman teachers created class time for students to discuss potential projects, talk to their steering committee representatives,

research project budgets, and complete project forms. At the sophomore level, little in-class time was devoted to PB, and the junior and senior grade levels fell in the middle of this spectrum.

3.4. Proposed Projects and Decision Making

A total of 45 students collaborated on 32 proposal submissions, totaling \$15,462.14. During the initial review of project proposals, the steering committee eliminated seven proposals that were incomplete, were unfeasible, or proposed a service that the school already offered for free. Of the 25 approved proposals, 15 requested funding for recreational purposes, seven proposed facilities improvements, and three were for academic purposes. The steering committee reviewed the proposals a second time to consolidate redundant projects and settled on 18 final projects on which the student body would deliberate and vote. Table 5.1 lists the final 18 projects and their budgets.

Table 5.1

Steering Committee-Approved Projects

Proposed Projects and Descriptions	Budget
*Bioscience outdoor pavilion - Education display in school's courtyard	\$1,510.00
*Ink for the 3D printer - Color ink spools for the school's 3D printer	\$266.00
*Microscope camera adapter - Attaches digital camera to microscopes	\$763.20
ROTC program - Start-up funding to create an ROTC program	\$2,000.00
School garden - Large scale garden in front of school	\$217.16
More recycling bins - Increase number of recycling bins in Town Hall	\$150.00
Power outlet extension - For students to charge laptops in class rooms	\$150.00
Big umbrellas - Nine shade umbrellas for tables in school's courtyard	\$740.00
Shade for outside area - A triangle shade structure for school's courtyard	\$129.00
Sports equipment – Basketball hoop and assorted sports balls	\$555.00
Music Club - Instruments for a new music club	\$999.97
Fun Swings - Swing for school campus	\$149.99
Gaga pit - Build a court for students to play the game 'gaga'	\$500.00
New basketball hoop and backboard – For the school's courtyard	\$263.04
Volleyball equipment - To set up a second volleyball court on campus	\$157.99
Soccer goal - Two small goals for students to play during lunch	\$169.88
Painted basketball court - Latex paint to mark a basketball court	\$36.44
Scents, glowing plants, and fence of love - Modeled after fence in Paris	\$203.20

*Winning projects from the final student vote

The steering committee spent the next week creating promotional materials to educate their peers about the proposed projects. They created a poster for each project that included the project title, a brief description, and the total budget. The steering committee hung the posters in Town Hall, the school's multifunctional cafeteria/assembly space/entry hall. They also posted project descriptions on the school's internal social media site. Each grade level held a forum for the steering committee to present the projects and allow the students to ask questions and discuss the merits and shortcomings of each project. At the freshman grade level, teachers helped structure a format in which the students debated and collectively identified their top three projects. At the other grade levels, the teachers were not involved, and the steering committee representatives led less formal discussions.

A few days after the forums, teachers allocated class time for the final vote, and the steering committee distributed ballots to all students. Students were asked to rank their three favorite projects. Later, the representatives for each grade level tallied their peers' votes and weighted the results by their first, second, and third place rankings. The three most popular projects were the Bioscience Outdoor Pavilion (BOP), ink for the 3D printer, and the microscope camera adapters. BOP and the ink for the 3D printer were directly tied to student projects from the school's project-based curriculum, and the microscope camera adapters were intended for use in school science classes. These three projects slightly exceeded the \$2,000 budget, but the principal was so pleased to learn that students voted to support academic pursuits that he decided to fund all three projects.

The School PB process ended in May 2014. As Bioscience was nearing the end of the academic year, plans were made to implement the projects when students returned

from summer vacation. The school community was pleased with the process and its outcomes. The underclassmen on the steering committee all expressed interest in participating again, and the principal committed to supporting a second round of PB the following year. The process was refined and implemented again in the 2014-15 school year.

4. Findings

Because PB was conceived as a citizenship education program, we collected data from students to assess learning and determine whether students developed some competencies required of engaged citizens. This section presents students' motivations for participating in the activity and their self-reported learning outcomes.

4.1. Motivation to Participate

The PB experiment at Bioscience was guided by the premise that students would learn basic democratic competencies by participating in an authentic participatory process. A precondition for the implementation of this process is that students actually show interest and participate in the experience. Nearly all students at Bioscience participated in the PB program, and they reported diverse motivations for their willingness to participate

Part of PB's effectiveness as a learning tool was its ability to motivate students to participate in an *informal* learning process. While students offhandedly marveled that they were trusted to spend their principal's money, in fact, students identified numerous other reasons for their participation: 44% of responding students wanted to take ownership of decision making at their school, and 20% actively sought to improve their school community. 18% acknowledged that PB motivated them to participate in a

collective decision-making process. Table 5.2 presents the most common reasons reported by students, with some quotes that illustrate those reasons.

Table 5.2

Students' Motives for Participating in the PB Program (n=61)

Reason	Per cent of Responses	Selected Student Quotes
Wanted a say in the investments	44%	<p>"I thought it would be great if I could have a voice that could benefit my school (Freshman Female)"</p> <p>"I wanted a say in what happens in the school I am attending. If I don't say something I can't complain (Freshman)"</p> <p>"I'd like to have a say in what happens at my school (Senior Female)"</p>
Wanted to improve school	20%	<p>"I wanted to help out the school (Freshman Male)"</p> <p>"I think it's fun to be able to have a positive impact on our [school] (Senior Female)"</p>
Motivated by the collective decision-making process	18%	<p>"It was cool to see the money spent in a smart fashion (Sophomore Male)"</p> <p>I like the idea of this because everyone participates (Freshman Female)"</p> <p>"Because it was easy (Senior Male)"</p>
Motivated by an issue	12%	<p>"I thought the basketball courts could be updated (Freshman Male)"</p> <p>"Because I want a school garden (Freshman)"</p>
Were given an opportunity	3%	<p>"Because I was given the opportunity to do so (Junior Male)"</p>
Motivated by the money	3%	<p>"\$2000 is a lot of money and I wanted to be involved in the final decision (Freshman Male)"</p> <p>"Because we've never had the opportunity to spend that much money before (Sophomore Female)"</p>

4.2. Learning and Change

A questionnaire was distributed to all students with the final project ballot. A total of 217 students from the four grade levels (86 freshman, 50 sophomores, 42 juniors, and 39 seniors) responded to the questionnaire. These students ranked themselves pre- and post-PB for 20 indicators of democratic participation. Table 5.3 presents the questionnaire results aggregated across all grade levels. The table shows the pre- and post-PB means for each indicator as well as the mean change. Indicators are organized by competency domain (knowledge, attitudes, skills, practices).

Table 5.3

Student Questionnaire Results for All Grade Levels (n=217)

Indicator	Pre-Process Mean	Post-Process Mean	Mean Change*	<i>t</i>	df
Knowledge needs of classmates	2.90 (.93)	3.75 (.84)	.85 (.93)	13.50	215
needs of other grade levels	2.15 (1.00)	3.05 (1.11)	.90 (1.01)	13.13	215
how decisions are made at school	3.02 (1.15)	3.95 (.93)	.93 (1.12)	12.21	215
Attitudes					
self-confidence	3.39 (1.22)	3.77 (1.09)	.38 (.78)	7.03	213
tolerance and respect for others	3.88 (1.06)	4.17 (.89)	.29 (.69)	6.03	213
trust in school administration	3.56 (1.06)	3.88 (.98)	.32 (.77)	6.04	213
confidence in own ability to influence school decisions	3.03 (1.17)	3.51 (1.13)	.48 (.80)	8.83	213
interest in community participation	3.37 (1.22)	3.86 (1.10)	.49 (.81)	8.69	213
concern for school community	3.36 (1.13)	3.87 (1.06)	.51 (.81)	9.07	213

Notes: * $p < 0.01$. Standard Deviations appear in parentheses after the means

Table 5.3 continued

Student Questionnaire Results for All Grade Levels (n=217)

Indicator	Pre-Process Mean	Post-Process Mean	Mean Change*	<i>t</i>	df
Skills					
public speaking	3.15 (1.35)	3.72 (1.08)	.57 (.92)	9.07	212
listening carefully to others	3.72 (1.11)	4.18 (.83)	.46 (.80)	8.34	213
proposal development and persuasion	3.06 (1.18)	3.53 (1.10)	.47 (.79)	8.60	213
teamwork and cooperation	3.69 (1.07)	4.17 (.84)	.48 (.91)	7.69	213
conflict resolution	3.31 (1.12)	3.79 (.96)	.48 (.85)	8.29	213
decision making with peers	3.45 (1.11)	4.00 (.93)	.55 (.89)	9.03	213
leadership and group coordination	3.20 (1.25)	3.69 (1.12)	.49 (.93)	7.66	213

Notes: * $p < 0.01$. Standard Deviations appear in parentheses after the means

Table 5.3 continued

Student Questionnaire Results for All Grade Levels (n=217)

Indicator	Pre-Process Mean	Post-Process Mean	Mean Change*	<i>t</i>	df
Practices					
talk with classmates about problems at school	3.22 (1.23)	3.85 (1.02)	.63 (.95)	9.84	215
think up ideas and solutions to these problems	2.74 (1.11)	3.43 (1.06)	.69 (.89)	11.52	215
propose these ideas and solutions to others	2.40 (1.13)	3.15 (1.12)	.75 (.98)	11.33	214
talk to the principal and other school administrators	1.96 (1.17)	2.42 (1.29)	.46 (.84)	8.14	214

Notes: * $p < 0.01$. Standard Deviations appear in parentheses after the means

The results for every indicator are statistically significant. While the mean changes across all indicators are net positive, we consider only indicators for which students identify a mean change of at least 0.50 points as positive growth. Through this lens, indicators of knowledge and practices were most impacted by the PB process, while students reported that their attitudes were least impacted. Growth in knowledge and practices is logical, as students altered their practices to participate in PB, and the process prompted them to learn about issues in their school. The reason for low change of attitudes is less clear, but it is possible that a longer and more involved experience might be necessary to significantly alter someone's values.

We sorted the data by different variables, including gender, grade level, and level of participation. Gender did not indicate a measurable impact on the results. While we anticipated the amount a student participated would impact results, it surprisingly had little effect, and students that participated in every opportunity did not report much more growth than students that participated minimally. We had expected the steering committee members to report the most growth, but these students tended to rate themselves very high pre-process, leaving little room to report growth. It is possible that STUGO students and those who joined the steering committee as grade representatives already had above average experience in democratic processes. Interestingly, the variable that accounted for the most noticeable discrepancies in the results was grade level. Table 5.4 presents the questionnaire results by grade level.

Table 5.4

Student Questionnaire Results by Grade Level

Indicator	Grade Level											
	Freshman (n=86)				Sophomore (n=50)				Junior (n=42)			
	Mean Change	<i>t</i>	df		Mean Change	<i>t</i>	df		Mean Change	<i>t</i>	df	
Knowledge												
needs of classmates	.92** (1.01)	8.44	85		.72** (.73)	6.70	49		1.07** (1.05)	6.64	41	
									.62** (.75)	5.10	37	
needs of other grade levels	.89** (1.00)	8.29	85		.74** (.80)	6.51	49		1.15** (1.31)	5.72	41	
									.84** (.86)	6.07	37	
how decisions are made at school	1.16** (1.34)	7.98	85		.90** (1.02)	6.27	49		.83** (.96)	5.62	41	
									.58** (.72)	4.95	37	
Attitudes												
self-confidence	.53** (.89)	5.52	85		.26* (.69)	2.65	49		.29* (.81)	2.28	38	
									.26** (.50)	3.21	38	
tolerance and respect for others	.39** (.78)	4.65	85		.18* (.56)	2.27	49		.28* (.76)	2.32	38	
									.18* (.51)	2.21	38	

Notes: * $p < 0.05$; ** $p < 0.01$. Standard Deviations appear in parentheses after the means

Table 5.4 continued

Student Questionnaire Results by Grade Level

Indicator	Grade Level											
	Freshman (n=86)				Sophomore (n=50)				Junior (n=42)			
	Mean Change	<i>t</i>	df		Mean Change	<i>t</i>	df		Mean Change	<i>t</i>	df	
Attitudes												
trust in school administration	.49** (.86)	5.31	85		.18* (.56)	2.27	49		.18 (.94)	1.19	38	
									.24** (.48)	3.14	38	
confidence in own ability to influence school decisions	.62** (.84)	6.78	85		.36** (.56)	4.52	49		.33* (.81)	2.58	38	
									.49** (.91)	3.33	38	
interest in community participation	.63** (.88)	6.60	85		.37** (.72)	3.63	49		.44** (.85)	3.20	38	
									.36** (.71)	3.17	38	
concern for school community	.72** (.90)	7.40	85		.41** (.70)	4.16	49		.47** (.91)	3.26	38	
									.18* (.45)	2.48	38	
Skills												
public speaking	.76** (1.11)	6.31	84		.48** (.74)	4.62	49		.47** (.83)	3.55	38	
									.37** (.67)	3.49	38	

Notes: * $p < 0.05$; ** $p < 0.01$. Standard Deviations appear in parentheses after the means

Table 5.4 continued

Student Questionnaire Results by Grade Level

Indicator	Grade Level											
	Freshman (n=86)				Sophomore (n=50)				Junior (n=42)			
	Mean Change	<i>t</i>	df	Mean Change	Mean Change	<i>t</i>	df	Mean Change	Mean Change	<i>t</i>	df	Mean Change
Skills												
listening carefully to others	.58** (.87)	6.17	85	.40** (.78)	3.62	49	.49** (.88)	3.44	.23** (.48)	2.97	38	.23** (.48)
proposal development and persuasion	.64** (.87)	6.82	85	.36** (.53)	4.85	49	.36** (.81)	2.77	.31* (.80)	2.40	38	.31* (.80)
teamwork and cooperation	.63** (1.13)	5.22	85	.36** (.69)	3.67	49	.46** (.82)	3.51	.29** (.60)	3.05	38	.29** (.60)
conflict resolution	.66** (.94)	6.46	85	.46** (.91)	3.58	49	.37** (.78)	3.00	.23** (.48)	2.97	38	.23** (.48)
decision making with peers	.73** (1.05)	6.50	85	.36** (.75)	3.40	49	.62** (.81)	4.72	.31** (.61)	3.13	38	.31** (.61)

Notes: * $p < 0.05$; ** $p < 0.01$. Standard Deviations appear in parentheses after the means

Table 5.4 continued

Student Questionnaire Results by Grade Level

Indicator	Grade Level											
	Freshman (n=86)				Sophomore (n=50)				Junior (n=42)			
	Mean Change	<i>t</i>	df		Mean Change	<i>t</i>	df		Mean Change	<i>t</i>	df	
Skills												
leadership and group coordination	.54** (1.08)	4.63	85		.42** (.78)	3.78	49		.56** (.91)	3.86	38	
									.37** (.74)	3.13	38	
Practices												
talk with classmates about problems at school	.95** (1.07)	8.23	85		.59** (.91)	4.55	48		.33* (.85)	2.55	41	
									.32** (.52)	3.86	38	
think up ideas and solutions to these problems	.90** (.98)	8.51	85		.61** (.81)	5.28	48		.57** (.89)	4.17	41	
									.49** (.68)	4.45	38	
propose these ideas and solutions to others	.91** (1.00)	8.37	85		.63** (.91)	4.74	47		.83** (1.15)	4.71	41	
									.51** (.76)	4.23	38	

Notes: * $p < 0.05$; ** $p < 0.01$. Standard Deviations appear in parentheses after the means

Table 5.4 continued

Student Questionnaire Results by Grade Level

Indicator	Grade Level											
	Freshman (n=86)			Sophomore (n=50)			Junior (n=42)			Senior (n=39)		
	Mean Change	<i>t</i>	df	Mean Change	<i>t</i>	df	Mean Change	<i>t</i>	df	Mean Change	<i>t</i>	df
Practices talk to the principal and other school administrators	.58** (.94)	5.74	85	.38** (.73)	3.55	47	.57** (.97)	3.81	41	.21** (.41)	3.13	38

Notes: * $p < 0.05$; ** $p < 0.01$. Standard Deviations appear in parentheses after the means

As can be observed in Table 5.4, freshman students reported the highest impact, while sophomores and seniors reported the lowest impact. The limited growth experienced by seniors can be explained by process timing. PB occurred at the end of the school year, when seniors were preparing to graduate. Seniors expressed interest in their school's legacy, and during a grade-level forum, they discussed the importance of projects that focused on education to strengthen learning experiences for future students. At the same time, seniors admitted they were more focused on graduating and preparing for college. One female senior student suggested that in the future PB would need to take place during the first semester to gain full buy-in from the senior class. Although they valued PB, seniors knew the outcome would not impact them and this might explain why they engaged less than other grade levels.

Comparing the freshman and sophomore experiences provides another important lesson for School PB: formal, in-class learning opportunities can contribute to maximize student informal learning acquired through PB. This was the case of freshman students. Earlier in the year, the freshman teachers conducted a weeklong governance unit. Throughout that week, students studied the spectrum from authoritarian to participatory governance, with teachers and students operating under a different governance structure each day. At the end of the week, students organized, led, and participated in a forum to redesign their grade's tutoring program. Moreover, the fact that PB at Bioscience was the result of a brainstorm between the researcher and a freshman teacher may explain why there was greater buy-in from the entire freshman teaching team, and why freshman teachers made more time for PB in their classrooms than any other grade level. Freshman teachers helped their student steering committee representatives plan

engagements, allocated class time for engagements, and made PB an explicit priority to their students. During in-class forums, freshman teachers engaged with their students and stressed the importance of the decision-making process. Teachers also related the PB experience back to the governance unit, emphasizing previous learning.

While the freshman grade level showed high student and teacher engagement in PB, the sophomore grade level featured the lowest levels of classroom engagement. Governance played a prominent role at the freshman level because the lead researcher had a strong working relationship with the freshman teaching team. One shortcoming of this project was the researcher's failure to establish the same relationship with the sophomore teaching team. As a result, although sophomore teachers were willing to make time for PB events, student engagement was minimal and little connection was made between the extracurricular PB process and classroom learning.

Barth et al (2007) discuss the importance of establishing both formal and informal learning settings for ensuring competency acquisition. The freshman and sophomore experiences would seem to support this assertion. Overall, PB at Bioscience predominantly occurred in an informal setting with little support in the classroom. The freshman grade level was the one exception in which PB was tied to classroom learning. Also, the high level of freshman teacher involvement paired with significant freshman student learning supports the assertion by Keating et al (2010) that the presence of teachers encouraging student participation is one of the biggest success factors in citizenship education.

5. Conclusions

The experience of Bioscience High School strongly suggests that School PB is a promising tool for citizenship education and for developing engaged citizens. Our findings show that there was positive growth across most competency indicators. At the same time, significant gains in student learning were not evenly distributed across the four competency domains (knowledge, attitudes, skills, and practices) or grade levels. Comparing the freshman and sophomore experiences, it becomes clear that connecting extracurricular PB processes to classroom learning presents an opportunity to further strengthen School PB as an educative tool.

This project's ability to promote civic learning underscores the importance of the school context. For School PB to be successful, school leadership must be supportive, as was the principal and student government mentor at Bioscience. Also, Bioscience features a flexible curriculum and schedule, which enabled the steering committee to secure class time to engage with their peers. The model described here may have to be adapted for a school with a more traditional class-period format. Student background and training also played a large role in the success of this project. As experiential learning was already a key element of Bioscience's curriculum, students were primed to participate in and learn through a nontraditional project. In other settings, more attention may need to be paid to steering committee structure and to the school's club protocols.

PB at Bioscience was a successful project, but it was not perfect. Some shortcomings of this process can be attributed to design. In this regard, the experience of this project generates three additional recommendations for designing future School PB processes:

1) Provide up-front capacity building: As the School PB process begins, it might be useful to discuss the background and justification of PB with students. This moment also provides an opportunity to teach about direct democracy, its importance, and the skills needed to participate at the local level.

2) Conduct a longer process: This project was implemented over an eight-week period at the end of the school year. A robust School PB process will require more time to maximize student learning. A longer process can provide more opportunity to build steering committee capacity to ensure the students design a meaningful process for their peers. A longer process also can provide the opportunity to build multiple forms of engagement into the schedule and to increase the level of student engagement.

3) Include educational programming for formal settings: It is easier to approach PB as an extra-curricular activity managed through student clubs than it is to gain class time from teachers. However, teacher buy-in is important, and as discussed above, pairing PB's informal educational experience with formal classroom education can improve student competency acquisition.

Future research should address two issues. The first relates to the medium and long-term impact of School PB, beyond the school setting. In other words, to what extent do students carry the learning and change acquired through School PB to civic life outside the specific context of School PB? Are they more likely to engage in other areas of school governance? Are they more respectful and open to other people's opinions inside and outside school? Are they more likely to participate in student government in college, to participate in democratic institutions in their communities, or to contribute to the democratization of their workplaces? Are they more likely to vote or to run for

office? Are they more confident and able to engage in deliberative and decision-making processes? Further research is needed to ascertain if students increase their agency and their capacity to participate outside of school and in processes other than budgeting. Furthermore, longitudinal studies can help to understand the changes experienced by high school students after four years of School PB (e.g. following a cohort from Grade 9 to Grade 12) and after graduation.

The second issue relates to the relevance of our findings to non-U.S. settings. There are many nations around the world that are both more and less participatory than the U.S. There are also states where popular participation in decision making does not exist. Also citizens in different locations experience varying development needs and have widely variable education levels. To what extent does this experience provide meaningful strategies to researchers and educators working in different contexts?

In closing, K-12 schools provide a powerful venue for citizenship education, and PB may be used to help students acquire some of the competencies required of engaged citizens. The case study of Bioscience High School suggests that School PB can add an effective dimension of experiential learning to the citizenship education curriculum. The lessons from this pilot experiment can be applied to future School PB projects to further strengthen student learning and solidify PB as a valid educational tool.

CHAPTER 6

Conclusion

1. Introduction

This dissertation carries research on public participation in urban development beyond theoretical debate and presents an approach to designing and implementing high quality public participation processes. Through literature review, case study research, expert interviews, and participatory research, this dissertation identifies common challenges to public participation in urban development projects and presents strategies for designing and implementing good participation. These challenges are conceptualized as instances in which the public participation process is misaligned with the local context.

2. Summary of Research

This research was conducted through four independent but interrelated studies. Chapter 2 answers this dissertation's first research question regarding common challenges to good public participation. Through a literature review of cases of public participation in urban development, the study identifies key misalignments between the public participation process and local context. These misalignments are presented as pitfalls to avoid when designing such decision-making processes. Considering the misalignments during process design also provides a framework for analyzing the local context of urban development projects.

Chapter 3 answers the second research question of the dissertation by identifying strategies for overcoming the misalignments. Expert interviews resulted in a series of recommendations for coping with each misalignment. These strategies present clear

directives for designing public participation processes that align with the local context. The study concludes with a call for empirical testing of the strategies.

Chapter 4 answers the call for empiricism and program evaluation in research on public participation in urban development. This study, through participatory research and stakeholder interviews, evaluates Reinvent Phoenix, a public participation process that resulted in sustainability visions for Phoenix, Arizona's light rail corridor. The evaluation assesses to what extent participatory methods employed in Reinvent Phoenix aligned the public participation process to participants' sustainability literacy. This study speaks to the dissertation's third research question regarding ways to design public participation processes to align with the local context.

This dissertation's final research question asks what societal qualities and conditions are necessary for meaningful participatory processes and whether these conditions can be cultivated. Chapter 5 presents an attempt to adjust the participant context to meet the demands of participation. Identifying public high school civic education as an intervention point for cultivating participatory citizens, the study builds the civic competence and collaborative capacity of high school students. A participatory budgeting experiment engaged students in an authentic decision-making process, transforming them into engaged stakeholders in their high school community. Chapter 3 differentiated between short-term solutions to participation challenges and long-term initiatives to address structural barriers. Developing participant capacity through citizenship education, as presented in Chapter 5, represents a generational approach to alignment.

3. Limitations

This research presents a robust analysis of public participation processes in urban development projects, but it is not without its limitations:

Myopic scope: Chapter 4 presents an evaluation of a public participation process, but this case only inspects one specific point within an urban development project. Studying one moment within the participatory process, the evaluation in this dissertation does not consider the greater participatory process or how it feeds into the urban development project and its ultimate outcomes. Longer-term perspectives would evaluate not only the quality of the public participation process that is aligned to the local context, but such an evaluation would also link alignment to process outputs and long-term outcomes.

Limited context: Studying additional processes would have the added benefit of evaluating cases from contexts other than Phoenix, Arizona. Both Chapter 4 and Chapter 5 present empirical cases from Phoenix. While the lessons from these studies are to an extent generalizable, one must ask how the findings may have changed under a different setting and context. The misalignments identified in Chapter 2 are based on a reading of literature from diverse contexts, and the further empirical study of the misalignments must span contexts as well.

Low relevance to crises: The design and implementation of well-aligned public participation processes requires significant time and resources. When planning for sustainability, one must consider the urgency of certain issues, manage dynamics like tipping points, and sometimes seek expedient solutions. High quality public participation processes can be tedious to design and implement; they require constant check-ins,

evaluations, and revisions. These demands might hinder the implementation of meaningful solutions to urgent crises. Streamlining public participation processes in some cases may be necessary when cases require quick decisions, but how might such concessions impact alignment between a public participation and the local context, and what impact might it have on the legitimacy of policy outcomes?

4. Areas for Future Research

This dissertation establishes opportunities for future research. To add further richness to the misalignment analysis, new research should seek additional misalignments and build more depth into the understanding of the misalignments identified in this document. More coping strategies should be sought, and strategies for achieving alignment should be empirically tested.

Much of these research needs can be accomplished through evaluative research. Evaluating public participation processes and their outcomes fills a substantial research gap. Through evaluations, researchers would build empirical evidence for the design and implementation of public participation processes for achieving sustainable urban development. However, it is worth cautioning against blindly testing theories of participation. Empirical study of public participation is limited because it is challenging to design experimental studies in real world settings. Therefore, results of evaluative studies of public participation are valuable, but their generalizability should be done with skepticism until a large enough body of research is can illuminate broader trends.

5. Contribution

Much of the research on public participation is theoretical, and there is need for more empirical evidence to support the general understandings of public participation in

the literature. This dissertation moves away from theoretical debates on the merit of participation, and it instead generates empirically supported directives for making public participation a meaningful input to guide sustainable urban development.

This concept of misalignments also provides a framework for analyzing the local context of urban development projects. The literature calls for public participation to be attuned to the local context, but little directives are provided. This dissertation presents a way forward. Also, the misalignment framework presented in this dissertation applies a systems perspective to understanding a social process like public participation, linking a sustainability science view with urban planning literature.

While this research offers a scholarly contribution by answering theoretical questions and calls for contextualization, it is also of use to urban development practitioners. As the literature on public participation is more often than not theoretical, academic research on the topic can be challenging to translate into practice. This dissertation provides clear instructions, from the identification of the misalignments to the practical strategies for overcoming these common challenges. The goal here is to further scholarship while strengthening practice. Therefore, the ultimate contribution presented in these pages is actionable knowledge for designing and implementing public participation processes to guide sustainable urban development.

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APPENDIX A

PERMISSION OF COAUTHORS TO PUBLISH WORK IN DISSERTATION

Dr. Arnim Wiek, and Dr. Daniel Schugurensky gave permission to publish previously coauthored work in this dissertation.

APPENDIX B

IRB APPROVALS FOR RESEARCH



EXEMPTION GRANTED

Arnim Wiek
Sustainability, School of
480/965-2387
Arnim.Wiek@asu.edu

Dear Arnim Wiek:

On 12/4/2014 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Coping with Misalignments Between Public Participation Process and Local Context in Urban Development: An Expert-Based Study
Investigator:	Arnim Wiek
IRB ID:	STUDY00001976
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none">• HRP-502c_Matthew Cohen_v2.pdf, Category: Consent Form;• HRP-503a_Matthew Cohen_v2.docx, Category: IRB Protocol;• Interview Questions, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);• Recruitment Email_Matthew Cohen.pdf, Category: Recruitment Materials;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 12/4/2014.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Matthew Cohen
Arnim Wiek
Matthew Cohen



EXEMPTION GRANTED

Arnim Wiek
Sustainability, School of
480/965-2387
Arnim.Wiek@asu.edu

Dear Arnim Wiek:

On 3/21/2014 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Developing competencies for an engaged citizenry through participatory budgeting in a Phoenix, Arizona high school
Investigator:	Arnim Wiek
IRB ID:	STUDY00000793
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none">• Consent Form_Matthew Cohen_Revised.pdf, Category: Consent Form;• HRP-503a_Matthew Cohen_Revised.pdf, Category: IRB Protocol;• Questionnaire_Matthew Cohen_Revised_V2.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);• School District Consent_Matthew Cohen_Revised.pdf, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc);

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (1) Educational settings on 3/21/2014.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Matthew Cohen
Matthew Cohen