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Bridging the Gap Between Theory and Practice in the Urban Design Process: Towards a Multi-disciplinary Approach

Moureen Asaad¹, Marwa Khalifa², Ahmed S. Abd Elrahman³¹*BSc, Urban design and planning Department, Ain Shams University*²*Professor Dr. , Urban design and planning Department, Ain Shams University*³*Associate Professor Dr. , Urban design and planning Department, Ain Shams University*

Abstract

The city is a complex living organism mostly affected by decisions taken whether they are political, organizational, or design decisions. Such decisions vary in scale starting with planning, urban design, and architectural scales.

Urban design has been commonly agreed to occupy a hypothetical intersection between planning and architecture. It emerged to bridge the disciplinary gap between architecture and planning. Since 1960s urban design literature attempted to define what good urban design and good city form is, and the process to achieve it; yet in practice the endproduct doesn't always achieve high quality in terms of urban design initial objectives.

Over the last decades, the gap between disciplinary dreams in theory and real outcomes translated as urban design product of different practices has been growing in the field of urban planning and urban design. Since the urban design product does not meet its expected objectives in theory then something must be wrong with it, and a thorough investigation must come in order to perceive such gap.

The Research aims to answer two main questions regarding urban design through examining the Urban Design Process; the first is whether the urban design process is capable to bridge the multidisciplinary gap? And the second question is with the little knowledge and lack of success criteria for the urban design process; how can the success of urban design be measured?

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Keywords

Urban Design Process; Gap; Multi-disciplinary; Success criteria

1. Introduction

Urban design has been commonly agreed in literature as the bridge between architecture and urban planning (Lang, 2005) yet literatures has recently been discussing the many problems faced in practices of urban design, and mentioned the existing gap between theories and practices of urban design and planning that affects the form of the city (UN-Habitat, 2013; Ghonimi, El zamly, Khairy, & Soliman, 2010; Palermo & Ponzini, 2012; Palermo, 2014). The urban design product in the city has fallen behind the disciplinary theoretical dreams of its own objectives, appearing in disconnected cities, and cities which lack livability. Literature is filled with many cases and discussions about low quality of the urban product which leads to questioning the reasons behind this. (Steino,

2003)

If urban design is incapable of achieving its own objectives then we cannot blame it on the city, but something must be wrong with it. *“if a car cannot drive, we do not blame it on the road. And if urban design cannot design cities we should not blame it on the city”* (Steino, 2003, p. 2)

The paper discusses two main questions; the first is whether the urban design process can bridge the multidisciplinary gap -which was the main purpose for urban design's emergence-? This question requires a background and theoretical overview on urban design term, its objectives, process and how it is viewed as a bridge to the multidisciplinary gap between various disciplines in literature. The second section of the paper is a practical check and a critique to the theoretical expectations, through a literature review to the expectations and reality of the relationship between urban design status and relationship with other disciplines, and whether literature agrees that urban design in practice has satisfied the purpose of its emergence yet. The final section provides answers to the second question: what can be considered good urban design regardless of the multidisciplinary gap?

Whether the gap still exists according to some literature, or not, how can we evaluate a city in terms of good urban design; and how can we reach a city able to overcome the multi-disciplinary gap. The following will be done through an examination of literature to extrapolate some considerations that ensure quality urban design in practice; as well as some considerations developed by the UN-Habitat which ensures high quality urban design, and finally verifying these developed considerations with 2 successful cities in terms of urban design and its relationship with other disciplines of urban development.

2. Defining the Urban Design Process: a literature review

Cities have always been the focus of design theory and practices; the different design practices have been labeled into disciplines according to the scope of design including architecture, landscape design, urban planning, civil engineering and recently urban design as a new discipline. (Kreiger, Territories of Urban design, 2006; Meadows, 1980; Lang, 2005). The term “Urban Design” became popularized during the 20th century in 1956 Chicago international conference. (Kreiger, Territories of Urban design 2006)

Urban design is concerned with a few aspects that characterizes towns and cities such as culture, environment, scale of activities, functions, spaces and building types and their privacy; hence it can be theoretically considered the design field with the highest impact on the nature of the cities. (Shahreen, 2010)

Defining and evaluating any process -including the Urban Design process- to evaluate its success factors requires an agreement to some aspects of the process; first is defining the term of the process itself, as in defining urban design as a term. Second, to evaluate a process it is required to understand what type of product it should produce, what is the expected end-product of this process. This can be defined through the urban design objectives, which leads to the evaluation of the process according to such objectives. Third, is the human factor involved in such a process, in terms of involved actors and stakeholders and finally, defining the process taken to produce any urban product.

2.1. Urban Design “Term”

Urban Design term has originated from the Latin word ‘urbs’ meaning ‘city’ (Cuthbert, 2006; Elshater, 2014). It was first identified in the Harvard conference of 1956. Urban design was commonly agreed as a discipline that occupies a hypothetical intersection between architecture and planning; thus, bridging any perceived gaps between those two disciplines. However, urban design has held various definitions by theorists and practitioners according to their different backgrounds, contexts, profession, practices and perception. (Kreiger, Territories of urban design, 2006; Lang, 2005; Steino, 2003)

The first definition agreed upon in the proceedings of Chicago international conference urban design as the part of city planning concerned with the physical form of the city. It also described urban design as a wider scope with

common basis of three professions; architecture, landscape architecture and city planning. (Kreiger, Territories of Urban design, 2006; Mumford, 2002). Other approaches to defining urban design have been taken afterwards. To mention some names with different approaches: Luis Sert (Cuthbert, 2006), John Levy (Levy, 2009), Michael C. Cunningham (Cunningham, 1972), and Francis Tibbalds (Tibbalds, 1988) have agreed upon the initial approach of urban design as a bridge between architecture and planning that concerns the physical aspect in the city.

Richard Marshall (Marshall, 2009), Willo von Moltke (Kreiger and William, Urban Design 2009), UDG (Urban Design group, 2011) Marion Roberts and Clara Greed (Greed & Roberts, 2014) defined urban design as an even wider scope process, in terms of a multidisciplinary complex process that confines more than architecture and planning only. Others like Peter Buchanan, DETR defined urban design in terms of the relationship between built and unbuilt space; while Peter Webber, Doug Paterson, Rafael Cuesta, Cliff Moughtini, Christine Sarris and Paola Signoretta had a more aesthetic approach to define urban design; they defined it as the art and qualities of the city form and values.

Another human scale approach was by Carmona, Heath, O,c and Tiesdell, Alex Krieger, Jerry Spencer, DETR & CABE, Jonny Mc, and David prichard, who defined urban design as the art of making places for people in the public life. A more generic and ambiguous approach was the definition given by Peter Batchelor, Richard Marshall (Marshall, 2009) and David Lewis who defined it as a way of thinking. Others have gone to the approach of defining urban design as only the spaces between buildings.

The attempts to define Urban design can possibly be as many as the number of urban design writers and practitioners; (Frey, 1999; Madanipour, 1997; Mumford, 2002; Levy, 2009; Marshall, 2009; Carmona M. , 2010; Steino, 2003; Kreiger, Territories of Urban design, 2006; Bahrainy & Bakhtiar, 2016) which makes urban design a very confusing and wide term (Lang, 2014; Lang, 2005); yet an urban design process' success should be evaluated through fulfilling its own definition according to each context.

2.2. Stakeholders

The Urban Design stakeholders have been categorized in various models; one of which was by (Madanipour, 2006) who categorized them into 3 groups by order of the process.

The first group are the regulators: those are the bodies involved on much higher levels than urban design itself but are responsible for regulating urban design, all those who are involved within the institutional framework, governmental bodies, economy and planning. They regulate the process in terms of decisions taken that should be put to action.

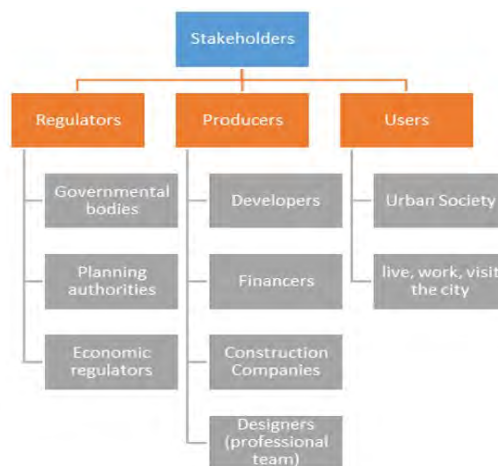


Figure 1. Stakeholders according to type (Madanipour, 2006)

The second group are producers; who are mainly responsible for the implementation phase of the urban design

process. They follow the regulations and produce what we can call the urban design product. Those can be identified as developers, financiers, construction companies and professional team of designers.

The Third and final group are the users of the product; within the urban society, and everyone who lives, works or visits the city. They are the main target for the entire process and the product assessment is done through the users' satisfaction of the urban product.

Other factors that can be identified from the above categorization of urban design stakeholders is how they can be contributors to urban design success through the amount of involvement of users, interaction between different stakeholders, and the degree by which regulators ensure that producers work on users' satisfaction to ensure a successful process.

2.3. Objectives and Principles

Most writings on urban design identify a number of basic objectives that are most commonly embedded within any new development plan of a city. (Lang, 2005)

Kevin Lynch (Lynch, 1981), Hamid Shirvani (Shirvani, 1985), Allan Jacobs and Donald Appleyard (Jacobs & Appleyard, 1987), Francis Tibbalds (Tibbalds 1992), CABE (Carmona M. , 2010), Alex Kreiger (Kreiger, Territories of Urban design 2006), and Jon Lang (Lang, 2005) ,as well as many others identified the basic objectives of urban design in different terminologies, but they can all be summarized as 8 major objectives that urban design aims to achieve in the city: Livability, sense of community and quality of public realm; Suitability for human scale; Efficient, durable and adaptable; has identity, character and Aesthetics in terms of city; diversity of activities and mix use; control; accessibility and connectivity; and Environmental sustainability

Such objectives are then translated into principles and design guidelines for different cities according to the city's context and own interpretation to these objectives, how to achieve them, as well as priorities to achieve them.

The objectives of Urban design can be considered a second base point to evaluate whether the process has fulfilled its purpose.

2.4. The Urban Design Process

The urban design process has been under development throughout the past years, where many efforts have been exerted to model the process by different theorists and writers. This section is going to present a review to a few models which have been theorized in urban design literature about the process; reaching a generic model that can be commonly agreed upon as what most literature presents.

The urban design method as a process in practice can be described as a series of linked decisions forming a sequence of analysis, synthesis, appraisal and decision. this series is mostly explained in other literature as well that covers urban design process. the process is repeated for more detailed levels of design. (Moughtin, Cuesta, Sarris, & Paola, 1999)

Analysis includes some basic information gathering on local planning scope, visual survey, and functional analysis including classifications of goals and objectives and information patterns. Synthesis is the analysis of constrains, potentials, problems leading to idea generation stages, followed by appraisal which is an evaluation to the solution against initial objectives and goals, costs and other constrains, and finally a decision is made based upon evaluation findings for implementation. The decision taken is not a linear process, but it holds many return loops between different stages. It is very crucial to view the process as iterative, and not only within the single process of urban design, but between what precedes it and follows it as well. (Moughtin, Cuesta, Sarris, & Paola, 1999)

The following collective urban design processes presents different literature concerning the steps of the urban design process, it appears that according to Lawson (2005) urban design is expected to follow a systematic process connecting knowledge through data analysis to actions to be implemented through steps of concept generation and

developing options guiding the entire process into realization.

Table 1. Urban Design Process according to various writers and theorists Authors based on(Palazzo & Steiner, 2011; Shirvani, 1985; Levy, 2009; Urban Design group, 2011; Greed & Roberts, 2014)

| | | | | | | | | |
|---|--|---|--|--|---------------------------------------|--|--|--|
| RIBA practice (Palazzo & Steiner, 2011) | Hamid Shirvani (synoptic) (Shirvani, 1985) | Hamid Shirvani (Incremental) (Shirvani, 1985) | Hamid Shirvani (Fragmental) (Shirvani, 1985) | John M. Levy (Levy 2009) | Barry Young (Urban Design group 2011) | Clara Greed & Martin Roberts (Greed & Roberts, 2014) | Tony Lloyd Jones (Palazzo & Steiner, 2011) | Resulting process (Authors' Conclusion) |
| Data Collection | Data Collection | Decisions and Objectives | Data Collection | Data Collection & analysis | | | Problem Definition | 1.Data Collection |
| Problem Analysis (General study) | Data Analysis | Data Analysis | Data Analysis | | | Data Analysis | Rationale development (Analysis) | 2.Data analysis |
| | Goals & objectives | Goals & objectives | Goals & objectives | Synthesis (Problem analysis and develop options) | Define Physical design principals | Vision, goals and objectives | Potentials & constrains | 3.Setting Vision, goals & objectives |
| Develop options | Concept Generation | Concept Generation | Concept Generation | | Performance criteria | Strategies | Conceptualization & Evaluation | 4.Concept generation and strategies |
| | Elaborate Concepts to solutions | Elaborate Concepts to solutions | Translate to plans | | Design options | | | 5.Develop options (from concepts to solutions) |
| | Evaluate | Evaluate | | | Evaluate | | | 6.Evaluation |
| Present options | Transfer to plans | Transfer to plans | | Details to Implement | | Guidelines Briefs | | 7.Transfer to plans/ implementation |

The above processes show that various literature describes the same process only with different terminologies and sometimes merged parts of the process.

The design process maps explored for different practices such as industries, town planning, engineering, architecture and even urban design tend to show similar agreement in terms of the process steps; which suggests that perhaps the design process is the same in all fields. The famous process maps include similar steps to the traditional problem-solving technique (Lawson, 2005).

When the RIBA Architectural design process is inspected compared to all the previous urban design process steps; it is found that the similarity is very high with any given urban design process with regards to the existing iterative

loops.



Figure 2. a map of the design process according to RIBA Architectural practices (Moughtin, Cuesta, Sarris, & Paola, 1999)

The process of translating plans and goals into designs should be interactive rather than linear; where the urban design informs both the architecture and planning which should not be fixed unless the physical aspect is considered (Creiger 2006). The linear presentation of the urban design process never meant for it to actually work in a linear manner; but within the process itself there are many iterative loops the more it gets informed, which might update its goals and objectives or affect its evaluation criteria and so on. Decisions at higher scales should inform the design process at lower scales; from regional to town planning, to urban design and to buildings. It would make more sense when all components fit within the framework of the higher order.

buildings are designed to fit within the urban design scheme of higher order, however, it is not a one-way process from large to smaller scale. It is argued that an individual building could have an impact on the larger scale of urban design scheme; which could as well inform the planning of the city as a whole; hence iterative loops of design process between planning, urban design, architecture, and different scales is a key element to successful process of design (Moughtin, Cuesta, Sarris, & Paola, 1999)

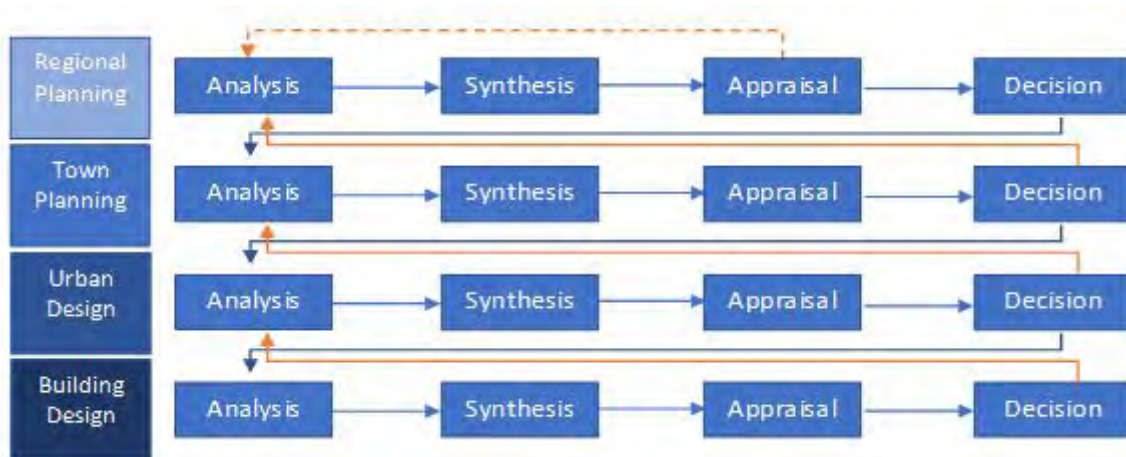


Figure 3. The Design Process for Urban Development (Moughtin, Cuesta, Sarris, & Paola, 1999)

3. The truth about urban design; the unbridged gap

Over the last decades, the urban design literature has been filled with criticism towards urban design; the gap between the disciplinary dreams and real outcomes translated in the urban design product has been widely discussed (Palermo, 2014). The theories, and principles promote various ways and objectives to achieve good urban design; yet this doesn't always ensure that the end-product achieves high urban design quality (Steino, 2003). This section discusses the criticism urban design has faced concerning its theoretical literature and practices outcomes to understand the reality of what literature of urban design presents.

In theory; the attempts to define urban design as mentioned previously have been too many; maybe even as many as those who wrote in the urban design literature; this caused a confusion in the term itself, and its main purpose. The term is very poorly defined to the point that it seems it was intentional that urban design remains undefined (Lang, 2014); it is also very inaccurate to try and define urban design as one term and a set of specifications (Arida,

2002; Madanipour, 1997; Cuthbert, 2006).

Richard Marshall states that “*Urban design has always had no clear role, territory, and authority. . . . In this context, perhaps urban design’s unique value stems from its vagueness or rather from its provision of an overarching framework that can bridge more specialized design efforts.*” (Marshall, 2009, p. 55)

When it comes to the urban design process in practice; although literature is filled with writings on how cities should be, it doesn’t have enough to provide information on how it should come into being (Steino, 2003). The history of urban design provides many examples that have changed during the implementation, or even left uncompleted. It has been relatively common that urban design projects may not turn out as intended. (Steino, 2003; Moor, 2006)

Urban design literature promotes the idea of urban designers being the “shapers of the city” which in citizens’ minds is not the case. Although Urban designers are viewed as those concerned with daily needs and tangible problem solving, they are still not perceived as the decision makers, yet planners are; since their profession operates in the broader spheres of policy formulation (Kreiger, Territories of urban design, 2006; Steino, 2003). Urban design and planning are in theory strictly separated disciplines; in which there is hardly any feedback from the design process to the planning process despite the fact that in practice both disciplines operate and cannot be separated from the same physical public realm (Devries, Tabak, & Achten, 2005; Steino, 2003). The ambiguous relationship between urban design, and urban planning, policies, regulations etc. . . has caused more concerns and clamps which hinder urban design than it has already presented in its theories. (Carmona 2010).

Different practices especially in developing countries shows a lack of proper urban planning and design strategies capable of facing the challenges in the growing cities; the evidence to such poor strategies shows in ineffective urban policies, poor connectivity, excessive zoning, insufficient accessibility and lack of appropriate urban design. Such state for cities is not satisfactory for users neither their well-being which is considered the core value for urban design objectives (UN-Habitat, 2013).

The above criticism directed to urban design, and its relationship with other disciplines hints out that the multidisciplinary gap has not been bridged by urban design’s emergence; since urban design itself is still a confusing term that has no clear connections to the planning and policy processes, either in theory or in many practices.

4. What makes a successful urban design Process?

4.1. Considerations from Literature Review:

The above interpretation to the urban design process is not the only issue of question; but the main question is how to evaluate a good urban design process in the light of all the criticism directed towards urban design theory and practice. Understanding successful urban design requires an assessment to the previous theoretical understanding of what the urban design process is in terms of definition and achieving its purpose, objectives, stakeholders’ relationships and following the process itself. Yet literature had a lot to say about what makes good urban design in practice as well -since theoretical application to urban design alone cannot achieve successful urban design- and every presented factor to what constitutes successful urban design can be extrapolated as a consideration for success.

From a theoretical perspective; Urban Design’s ambiguous nature as a term, and a discipline as described in literature makes it very challenging to set clear cut boundaries to evaluate what is “good urban design” (Lang, 2005). Our knowledge is still primitive and disorganized when it comes to implementation and urban design practice, (George, 1997; Steino, 2003). The lack of awareness to tactics influencing the urban design decisions leads to uninformed urban designers to construct proper solutions, which explains why successful urban places are rarely created (George, 1997).

Extrapolating some criteria for success through what literature has presented leads to answering the main question; What can be considered Good urban Design? The question of “Good” urban design is a very subjective matter; it

can't be addressed as an abstract ideal (CABE, 2003; Lang, 2005). The city is defined as "good" by some from a merely aesthetic view,- regardless that aesthetics are valued differently by people-; others may value the city from a more functional perspective, in terms of the city capacity to maintain a specific kind of business; others may prioritize how a city meets their social, economic or cultural everyday requirements (Steino, 2004). Another interpretation; it is a matter of creating the right conditions for a place to function well. Achieving this aim can't be done in a separate process from the planning system (CABE 2003).

In terms of working scope, Urban design works in a much larger sphere than its own sphere of work, due to the responsibility of shaping cities, towns and villages. Being a multidisciplinary practice, it involves many stakeholders as presented earlier. The variation of stakeholders controlling, designing, managing or using the urban development always gives different perceptions and motives resulting in a different perception for urban design as a whole for planners, politicians, architects, developers, and the users; such variation leads to different evaluation of what is "good" for each stakeholder (Carmona, de Magalhães, Edwards, Awor, & Aminossehe, 2001); yet it seems that the success of the product outcome depends on the effective efforts of all the involved stakeholders through understanding the variety of agents mentioned. as hard as that may seem, it can be viewed as a kind of success required for good urban design. (CABE, 2003; Knox & Ozolins, 2000)

Finding a balance for conflicting interests and objectives can be solved through policies set out by central and local governments; which plays a great role in terms of its power to set the roadmap for developers and clearly identify the government's aspirations for quality urban design (Washburn, 2013). The same factor was also discussed as a current clamp of urban design; which is the inconsistent relationship with planning and lack of legislative framework on national and sub-national scale (Carmona M. , 2010). Supportive policy and regulations can influence urban design at different scales, they contribute to sustainable urban design, while non-supportive policies, regulations and process make it almost impossible to achieve. (Macdonald 2016) Urban design needs to reach an awareness of the context in which the process operates including political, economic and social factors. (Sternberg 2000).

Promoting for quality urban design can be better controlled through design and planning guidance for different scales starting local plans level, planning briefs, frameworks, guidelines, etc. . . . The more structured the guidance, the better are the chances to achieve required qualities and the less possibility for developers to produce less quality than expected. (Jones, 2006; Moughtin, Cuesta, Sarris, & Paola, 1999)

4.2. Success considerations according to the UN Habitat

The UN-Habitat has been working on developing a National Urban Policy framework for developed and developing countries; in its document (*Habitat III Policy paper: National Urban policy*) presented in Habitat III conference (UN-Habitat, 2016) it presented some challenges to consider for designing urban policies; which included urban design. (Habitat III policy unit, 2016)

Urban and physical design are suffering insufficient public understanding of its critical role in people's lives in many cities around the world. Few cities take on urban design considerations on a larger scope than short term investments, to include it in their local or national policies or plans. This is often a result to the lack of adequate resources or professionals at city level. The New Urban Agenda of the UN-Habitat promotes for National Urban policy and sets a high priority to quality urban design, which should satisfy the demands of people living in urban areas (Habitat III policy unit, 2016)

The strategy for promoting urban design and planning according to the UN-Habitat document on national urban policy has been reviewed to find that the overall objectives of the UN-Habitat guidance to urban planning and urban design is to improve policies, plans and designs for better connected and integrated cities at all levels; national, regional and city levels. The strategies provided by the UN-Habitat are evidence based from best practices and experiences. (UN-Habitat, 2013)

Another document developed by the UN-Habitat was the toolkit for public space by the UN-Habitat provides

General policies and guidelines for cities to overcome the challenges of quality public space (which is an integral part of urban design, and maybe the most neglected). These Policies included a 10-point policy to follow in order to achieve high quality public space; along with the recommendations concerning the urban policy documents by the UN-Habitat, they can be extrapolated as consideration for urban design success which will be represented in the following collective criteria table.(UN-Habitat, 2016)

4.3. Developing Success considerations for verification:

The following table presents both, the criteria derived from literature as mentioned earlier, and the UN-Habitat criteria for urban design and public space from its various documents. The analysis to such criteria shall be categorized, summarized and further verified through 2 successful case studies.

Table 2. Categorizing and Summerizing the Urban Design success criteria from literature, and UN-HabitatAuthors based on (Habitat III policy unit, 2016; UN-Habitat, 2016; UN-Habitat, 2013; Steino, 2003; CABE, 2003; Carmona, de Magalhães, Edwards, Awor, & Aminossehe, 2001; Carmona M. , 2010; Sternberg, 2000; Macdonald, 2016; Moughtin, Cuesta, Sarris, & Paola, 1999) (Jones, 2006; Knox & Ozolins, 2000; Lang, 2005; Washburn, 2013)

| Categorization | From Literature | UN-Habitat Criteria | Measuring criteria Author’s concluding criteria | |
|---|--|--|--|---|
| Functional and context related considerations | | Surveying the existing situation for public space | Ability to assess the existing situation and measurement tools for better future evaluation | 1 |
| | Fulfils its own aim and definition according to each context | | Fulfilling its own definition, objectives, functionality and aesthetics with response to context | 2 |
| | Fulfil its context/ city objectives | Planning Public space as a system within policy; with specific objectives for high quality Public space objectives | | |
| | Aesthetics | Ability to Measure the quality/ functionality of public space through a measurement tool | | |
| | Functioning space and activities | | | |
| Responsive and adequate to context requirements | | | | |
| Stakeholders and users’ considerations | Stakeholders’ role: participation, relationship | Participation of various stakeholders | Stakeholders’ participation and satisfaction | 3 |
| | Meets aspirations of users and different stakeholders | Satisfying the Demands of users | | |

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Table 2 continued

| | | | | |
|---|--|--|---|---|
| | Understanding the interconnected relations and powers of stakeholders through a framework | Anchoring public space within national urban policy and seeking synergies within governmental bodies | Synergy within various stakeholders and governmental bodies | 4 |
| Governance and multidisciplinary Considerations | Guided by informed urban policies | | Inclusion within the National urban policy | 5 |
| | Follow the process in an iterative manner (work well within the planning and urban development framework) | | | 6 |
| | Connected to the planning process | Guided urban planning & urban design to improve policies, plans, & designs for better connected & integrated cities at all levels; national, regional, & city levels. | The presence of iterative loops in the process of urban design | 7 |
| | Its ability to bridge the gap between various disciplines | | Urban design relationship with planning, and other disciplines and levels | |
| | The Presence of Urban design guides, frameworks, etc on local, city, or even higher levels of governance, with clear expectations to the urban quality objectives. | Political commitment through a national vision in the national urban policy, local government and planning policies, national building codes, development and housing frameworks | Political commitment level (National., regional, city, local, etc...) The Presence of Urban Design documents (guides, policies, codes and frameworks) on several levels (national urban policy, regional, city, and local government levels) | 8 |
| | | The legislations should be able to provide a secure public space; regulate its use; protect and maintain the public space from being misused. | 10. Inclusion in Legislation (definition, protection and management) | 9 |
| Urban development considerations | | Using Public Space as a leader to Development Strategies | 11. Urban design leadership to urban development | |
| | | Funding through Leveraging Public Space as Resource Multiplier | 12. Economic aspect to urban development: funding | |

5. Case studies:

The case studies in the following section will focus on the criteria which may have contributed to success of urban design in 2 countries as a verification step of the previous criteria analysis. According to (Palermo, 2014), UK, Australia, and Netherlands are considered some of the countries successful in urban design.

The focus on the case studies shall be on the previously discussed success criteria that shall be further verified through the case studies

5.1. Australia:

Australia’s Urban Design Protocol is the main guiding document for urban design in Australia, which has been well known and established since 2011; it has been a product of the action plan produced by the national urban policy principles.

The National urban policy included 10 principles for Australian cities; one of which was the aim for livability within Australian cities. This could be achieved by supporting the community wellbeing, and improving the public domain quality. The action plan for such objectives was to develop an urban design protocol which acts as a guiding document to all Australian states and territories. The protocol is developed by the federal government level on a national scale; yet the application of urban design practices on the local government scale is regulated through each state specific guidelines and strategic planning approaches.

Various urban design guides exist for different states adopting the same principles from urban design protocol, with a focus for enhancing the Australian cities relative to their context. For example, to mention some and not exclusive to:

- New South Wales: Beyond The Pavement – RTA urban design policy, procedures and design principles
- Victoria: The urban design charter for Victoria
- South Australia: Public realm: urban design guidelines: by local government association of south Australia
- West Australia: Livable neighborhoods by western Australian planning commission
- Queensland: Next Generation Planning – A handbook for planners, designers and developers in South East Queensland (ASBEC, 2017)

The following table offers an explanation to some of the success criteria contributes to urban design in Australian cities.

Table 3. Australian case study evaluation upon urban design success criteria. Authors based on (Department of Infrastructure and Transport, 2011; Palich & Edmonds, 2013; Australian Government, 2011; Australian Government, 2015; Jensen Planning & Design, 2014; ASBEC, 2017)

| Categorization | Success criteria | Australian Case Study |
|---|--|--|
| Governance and multidisciplinary Considerations | 1. The Presence of Urban Design documents: (guides, policies, codes and frameworks) on several levels (national urban policy, regional, city, and local government levels) | - National Urban policy guide: Our cities, Our future -National level (urban design policy): Places for people: urban design protocol for Australian cities -Regional and Local government: Various urban design guides and planning guides on local government scale of cities, and regional scales for states and territories which follow the urban design protocol as a guiding roadmap, and has their own context specifications and principles. (ASBEC, 2017; Australian Government, 2011) |

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Table 3 continued

| | | |
|--|---|---|
| | 2.Inclusion within the National urban policy | <p>Urban Design Protocol, and liveability issue are included on the National Urban policy scale.</p> <p>The national urban policy framework for Australia presented in the guide “<i>Our Cities, Our Future</i>” constitutes 3 main goals translated into 10 principles and a set of objectives guiding the decision-making process and translated into action plans.</p> <p>One of those principles is “Liveability” which has been translated in the action plan into the “Urban design protocol” prepared on the national urban policy scale, (federal government level) (Department of Infrastructure and Transport 2011)</p> |
| | 3.Political commitment level (National, regional, city, local, etc. . .) | <p>High political commitment due to inclusion of urban design as a protocol on federal (national) government level, and national urban policy guides with flexibility to each state to the detail of guidelines and legislative context. (Department of Infrastructure and Transport, 2011) (Jensen Planning & Design, 2014)</p> |
| | 4.Urban design relationship with planning, and other disciplines and levels | <p>Urban planning is not a direct responsibility to the federal government (policy level), the national urban policy includes guidance for urban planning and some legislations that impact national scale (Australian Government 2011). Urban design is included within the local government guidelines, and guided by the urban design protocol on National Urban policy level. Local governments are responsible to ensure projects delivery in accordance with the specified guides.</p> |
| | 5.The presence of iterative loops in the process of urban design | <p>One of the key principles of the urban design protocol is “engagement” which allows providing input and feedback at different key stages of the process including the vision generation, design options feedback, and giving feedback during the public exhibition</p> |
| | 6.Inclusion in Legislation (definition, protection and management) | <p>Variable according to each state since Australian government legislations are defined individually by each state. Urban design attracts little attention on legislative level; yet despite little legislative compulsion, urban design is regularly used in practice and guided by the protocol and documents of the local government. (Jensen Planning & Design, 2014)</p> |

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Table 3 continued

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| <p>Stakeholders and users' considerations</p> | <p>7.Stakeholders' participation and satisfaction</p> | <p>Encouraging stakeholders' participation and engagement is a key objective to the governance principle in the national urban policy for Australian cities; it promotes that engaging different stakeholders and end-users in the planning, delivery and management will achieve better outcomes for development. (Australian Government, 2011)</p> <p>One of the initiatives to engage them was creating an urban policy forum to advise on the national urban policy implementation. That Australian government aims to include stakeholders as well in the evaluation process of urban development. (Australian Government, 2011)</p> <p>Another community driven project is (ANDI) Australian National Development Index; which introduces a holistic progress measurement in Australia for more than 40 community organizations. (Palich & Edmonds, 2013)</p> |
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Table 3 continued

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| | 8.Synergy within various stakeholders and governmental bodies | <p>Federal government (legislative, judiciary, executive) responsible for urban policy formation on higher levels of federal government; on such scale, the national urban policy handbook called “our cities, our future” is formulated, and includes a vision for the entire country, sets principles and objectives guiding the development process, and translated into an action plan. One of those objectives is Liveable cities; which was translated into an action plan on the national scale of urban policy to become translated into an urban design protocol for Australian cities.</p> <p>State and territory government: Australian six states and 2 territories have the power to form their own laws which doesn't bypass the federal law, yet they have their own legislations, executive and judiciary bodies. (Australian Government 2015) On the scale of state government, effective planning becomes the main responsibility, and they can directly work with local governments of each city, engage with the community, and different stakeholders. They can also engage with higher levels of federal government through COAG (council of Australian governments) (Palich and Edmonds 2013)</p> <p>Local Government: Its responsibilities lie within the state government; and their roles differ according to each state. They work on community input to be delivered to the strategic planning process, and ensures the projects delivery in accordance with adequate guidelines and recommendations of the government's policies.</p> |
| Functional and context related considerations | 9.Ability to assess the existing situation for better future evaluation | By review to the above-mentioned guides; each guideline on the regional and local levels as mentioned has its specific context criteria and principles of good design, which can be measurable and evaluated. |
| | 10.Fulfilling its own definition, objectives, functionality and aesthetics with response to context | Urban design objectives have been translated into 12 principles within the Urban design protocol entitled “Places for people”. The protocol has been a by-product of the action plan of the national urban policy liveability goal. (Department of Infrastructure and Transport, 2011) . |

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Table 3 continued

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| Urban development considerations | 11.Urban design leadership to urban development | The Urban Design Protocol acts as a guide, which promotes the concept of community participation and leadership to development. (Department of Infrastructure and Transport 2011) |
| | 12.Economic aspect to urban development: funding | Urban design according to the protocol has a great economic influence on success through enhancing productivity, encouraging local businesses and entrepreneurship, attracting people to live there, travel, give access to job opportunities, facilities and services. (Department of Infrastructure and Transport, 2011) |

5.2. UK:

The United Kingdom case study offers a successful example to urban design. Such success can be analyzed and verified through examining its status with regards to the above considerations.

The UK government consists of policies on 2 main scales and other supplementary scales; National, and local authorities are the mainly involved authorities with setting planning and urban design policies and principles.

The National scale offers a national urban policy which has been under development starting 2011-2016; its main aim was to empower the local authorities for each city to take control over their own development.

The UK government has adopted this approach of local authority empowerment ever since it started its national planning policy framework 2011; where the NPPF offers 12 core principles for planning across UK cities with special considerations mentioned for urban design and planning policies which address the local authorities, and empowers them to create their own planning policies and guidelines for each distinct context. Explained in

The Local planning authorities are mainly responsible for setting a vision for their cities, setting strategic planning policies, preparing local plans and supplementary planning guidance including urban design codes and framework; approving local proposals presented to them, and assessing projects in accordance with the higher planning, national policies of the country.

Table 4. UK case study evaluation upon urban design success criteria. Authors based on (CABE, 2003; Homes and Communities Agency; English Partnerships, 2007; UN-Habitat, 2016; UDG, 2012; Carmona M. , 2013; Department for Communities and Local Government, 2012)

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| Categorization | Success criteria | UK Case study |
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Table 4 continued

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| Governance and multidisciplinary Considerations | <p>1. The Presence of Urban Design documents, such as guides, policies, codes and frameworks on several levels starting national urban policy, regional, city, and local government levels</p> | <p>-Urban Design Compendium 1: English partnerships, 2000</p> <p>-By Design: better places to live, department for transport, local government and regions, 2001</p> <p>-PPS 1: delivering sustainable development office of the deputy prime minister, 2005</p> <p>-Building for life, English partnerships, 2005</p> <p>-PPS 3: housing, office of the deputy prime minister, 2006</p> <p>-Quality standards- Delivering Quality Places, English partnerships, 2007</p> <p>-Urban Design Compendium 2, English partnerships, 2007</p> <p>-World Class places- the government's strategy for improving quality of places, Department for communities and Local government, 2009</p> <p>-Design Council CABE 2011</p> <p>-National planning policy framework, Department for communities and Local government 2012 (Homes and Communities Agency; English Partnerships, 2007)</p> |
| | <p>2. Inclusion within the National urban policy</p> | <p>The National Urban policy of UK government has taken an approach since 2011 towards decentralization through an approach called "city deals" which aims at empowering local governments to take responsibility for their development, business strategies, and economic growth. (UN-Habitat, 2016)</p> <p>The National Urban policy doesn't address Urban Design, or planning directly; yet it empowers the local governments (which are responsible for urban design) to be in control of their cities' decisions and urban development, guided by the national planning policy. (UN-Habitat, 2016)</p> <p>The National planning policy sets 12 principles for local governments; where local governments are responsible for planning decisions for their cities.</p> <p>The 12 principles include one that ensures high quality of design; this can be translated through urban design codes that are generally formed for UK and specific codes by each local authority. (UDG, 2012; Department for Communities and Local Government, 2012)</p> |

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| | 3. Political commitment level (National, regional, city, local, etc. . .) | Political commitment can be evaluated through the ability of local planning authorities to direct development; which is highly promoted and empowered from higher national level. A research by Matthew Carmona about design codes effectiveness in UK showed very high and positive outcomes and commitment to urban design codes in practice. (Carmona M. , 2013) |
| | 4. Urban design relationship with planning, and other disciplines and levels | Urban design is included as a part of the national planning policy, and included in local planning, and neighborhood planning. (CABE, 2003) which builds very strong connections with planning. |
| | 5. The presence of iterative loops in the process of urban design | Developing the processes requires iterative dialogue with different stakeholders during several process phases. |
| | 6. Inclusion in Legislation (definition, protection and management) | The legislations involved in urban development are: planning acts 1990, 2004, 2008, 2011, 2013; National planning policy framework, National policy statements, and Building regulations. The Urban design codes are not directly addressed in detail in the above legislative documents; yet the national planning policy framework includes within its 12 core principles the necessity for high quality design on local scale; which includes urban design objectives and ensures its implementation. (Department for Communities and Local Government, 2012). However, the urban design guidance effectiveness depends on council officers of local planning authorities in each city, in developing their own urban design guidance and approval of development plans. (Carmona M. , 2013) |
| Stakeholders and users' considerations | 7. Stakeholders' participation and satisfaction | Stakeholder participation is highly promoted within all scales of urban development starting national scale within the 12 core principles of National planning policy framework; and within the local authorities. (Department for Communities and Local Government, 2012) |

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Table 4 continued

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| | 8.Synergy within various stakeholders and governmental bodies | <p>The scales for urban development start at national level (national planning policy framework), and then no regional scale authority for urban development, preceded by sub regional partnerships; and then local authorities each acting through their own local development framework, including area action plans, and a lower scale at neighborhood planning, and then site development controls. (UDG, 2012)</p> <p>The new National Urban policy (2011-2016) aims toward better synergy between different governmental bodies horizontally (among departments) and vertically (between higher national, and local authorities) through empowering the local authorities to become fully responsible for their cities, but through guiding principles for development. (UN-Habitat, 2016)</p> <p>Local authorities are responsible for setting out policies for development which should be targeted through a distinct vision for each city, but following the basic urban design principles, and urban planning principles. (CABE, 2003)</p> |
| Functional and context related considerations | 9.Ability to assess the existing situation for better future evaluation | In accordance to each urban design policy guide and framework on local scale. (Local assessment) |
| | 10.Fulfilling its own definition, objectives, functionality and aesthetics with response to context | Basic urban design objectives are set by “by design” and “urban design compendium” which local authorities must at least comply to. Further details are provided merely as guidance for development. The local authorities reserve the right to add urban design guides and details of their own, which is more appropriate to its given context, local community needs and requirements. (CABE, 2003) |
| Urban development considerations | 11.Urban design leadership to urban development | Urban planning is the discipline taking lead of the urban development; but includes within its principles on national and local scales urban design as an essential factor. (CABE, 2003) |
| | 12.Economic aspect to urban development: funding | Adopting the approach of “city deals” in the national urban policy promotes economic empowerment and development through incentives for cities to compete for better urban development, planning and urban design. (UN-Habitat, 2016) |

5.3. Findings:

Both case studies verify the criteria developed from literature and the UN-Habitat documents, in which it is found that all success criteria is present, with different context variations in each case study. Regarding governance and multidisciplinary considerations, the way of urban governance and how urban design is included in each case study

policy, it is noticed that Australia depends on national urban policy -higher level- empowerment to urban design through its protocol which is prepared on national scale and binding to all Australian cities; yet encouraging its states and territories to produce their own specific guides. While the case of UK presents a completely different approach, which is empowering the local planning authorities -local empowerment-, through allowing each city according to its context to set out the best scenario for its own development; including its planning and urban design guides; with a guidance on national planning scale for each city to create its own urban design guides, giving out a few documents as general guidelines to set the general principles for the entire country.

In terms of stakeholders and users' considerations; both case studies present different approaches in including stakeholders and providing techniques for feedback, yet it shows that it is very essential to the urban design and development process. Functional and context considerations are subjective to smaller scale on city level, yet the basic urban design objectives are always binding on the national scale whether in the case of Australia through the urban design protocol principles, or in the UK through the guides in national planning policy concerning urban design.

The Urban Development considerations were only promoted by the UN-Habitat; yet the importance of the economic aspect is highlighted in both case studies. As for urban design taking lead for development it doesn't apply to both cases but it seems like it still plays an important role in leading development along with planning.

6. Conclusion:

Answering the question of whether urban design was able to be a bridge to the multidisciplinary gap brings a necessity to assess its literature and theoretical aspect to the means of bridging such gap. The assessment of its objectives, process, stakeholders and other factors shows that urban design is still a discipline in progress, which promised more than it could achieve on its own; and literature is filled with criticism to urban design notions. These results lead to the necessity to answer the following question; how can we assess any successful urban design if the discipline in literature hasn't been able to achieve its own purpose and bridge on its own to the multidisciplinary gap?

The second question was analyzed through further literature about what successful urban design is, which turns out to be extremely subjective and had no specific criteria developed, yet some criteria can be extrapolated from literature and from the UN-Habitat's documents on urban design, and toolkit for successful public space. These criteria through verification by application on successful case studies like UK and Australian cities- which are known for high quality of urban design values- was able to give a general understanding to urban design success criteria. The verification by reviewing case studies reaches a final conclusion that urban design as a discipline in practice cannot fill all the gaps between various disciplines, yet its criteria of success can be broadly categorized to Governance and multidisciplinary considerations; stakeholders and users' involvement and empowerment; functional and context related considerations; and urban development considerations. These considerations include many criteria points as mentioned earlier and that still need further verification and development, but gives a basic guide to valuate and ensure urban design success.

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