

SENSORY URBAN BELONGING

Audio Walk Study in Copenhagen



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Sensory and Embodied Urban Belonging:

A Design-Based Study of an Audio Walk for
International Students in Copenhagen

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Abstract This thesis examines how belonging is experienced through embodied and sensory engagement in urban environments, focusing on international students in Copenhagen within the context of Aalborg University Copenhagen. It explores how everyday movement, perception, and sensory attention contribute to emergent experiences of belonging in unfamiliar urban settings. The study adopts a Design-Based Research methodology involving iterative cycles of design, testing, and reflection, through which an audio walk was developed as an intervention. Using guided prompts, the intervention redirects participants’ attention toward bodily movement and sensory engagement with the environment, encouraging a shift away from habitual, task-oriented modes of mobility. The findings suggest that belonging may emerge not only through social and cultural connections, but also through sensory attention, embodied movement, and the relational encounter between body and place. Rather than offering a solution, the study demonstrates how design can create conditions for experiences of belonging to emerge.	
Keywords belonging, embodied experience, design-based research, audio walk, sensory engagement	

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Photo by Yiyi Cai
Nyhavn, Copenhagen

1.Introduction

This thesis grows out of a long-standing personal interest in urban culture and the experience of navigating new cultures. Over the past decade, I have lived in several countries, moving from China to the United Kingdom, then to Finland, and finally to Denmark. Living in different cities has shaped a particular way of paying attention: observing urban environments and reflecting on the relationship between people and the places they inhabit. Each move brought a familiar set of experiences – the disorientation of arrival, the slow process of learning a city’s rhythms, and the feeling of being present somewhere without yet fully belonging to it. It is these recurring experiences, and the questions they raised, that form the starting point of this project.

International mobility has become an increasingly common part of contemporary life, particularly for those who study and build lives across different cultures. Copenhagen, as a city with a large international student community, offers a meaningful context for exploring these questions. As a student at Aalborg University (AAU) Copenhagen, and through conversations with staff from the AAU International Office, it became clear that the experiences I carried with me – the uncertainty of arrival and the challenge of building a connection to a new city – were not simply personal. They were widely shared.

However, the relationship international students develop with the city itself, beyond the university and classroom, has received relatively little attention at an institutional level. Many people who move to a new city experience a similar process: the unfamiliarity of arrival, the effort of finding one’s footing, and the gradual search for

connection. International students, in particular, often arrive for a limited period of time, with little prior connection to the place and no certainty of staying long term. Their relationship with the city is often fragile and temporary, and may lack a deeper sense of rootedness. These relationships unfold in everyday urban life, through repeated contact with streets, public spaces, sounds, and daily routines.

Urban environments are not simply physical settings, but cultural and sensory worlds that are experienced through everyday life. Becoming familiar with a city is a gradual process through which space takes on meaning and becomes personally significant. As Tuan (1977) argues, *space* becomes *place* through lived and embodied experience. This process is not only cognitive, but also sensory and physical, shaped by the way the body moves through and learns an environment (Merleau-Ponty, 1962). Under these conditions of temporary living, this project asks how people develop a connection to the places they inhabit, and what kinds of experiences might support that process.

Questions of belonging and emotional attachment have continued to return throughout my life and studies. In sociological and political theory, belonging is often discussed in relation to legal status, national identity, and the long-term processes through which migrants become part of a new society (Yuval-Davis, 2006). However, belonging is not only about institutional integration or social inclusion. It is also an everyday sensory and spatial experience, encountered in streets, neighbourhoods, and public spaces. Antonsich (2010) makes a useful distinction between the politics of belonging, which concerns structures of inclusion and exclusion, and place-belongingness, which describes the more personal feeling of being at home in a place. This project is mainly concerned with this second dimension of belonging: the lived and everyday experience of feeling connected to a place.

During my studies in the NoVA programme, I became increasingly interested in the relationship between tangible and intangible experience, and in how people perceive environments through their senses. This opened up a different kind of question: what if belonging does not always need to be understood as a fixed or long-term state? What if it can also exist in smaller and more temporary moments – a sound, a street, or a brief feeling of ease in a place? These moments cannot be measured or guaranteed, but they remain meaningful. Recent work on sensory experience

and mobility suggests that belonging can emerge through these kinds of sensory encounters, where the body engages with an environment in ways that evoke memory, recognition, and emotional connection (Mata-Codesal, 2023; Nikielska-Sekuła, 2026).

At the centre of this understanding is the relationship between the body and the environment. Feeling connected to a place begins with physical presence: the body moving through space and responding to its textures, sounds, and rhythms. Of all the ways people engage with a city, walking is perhaps the most direct and accessible. It requires no equipment, no special knowledge, and no particular access. It is simply the act of being in the city, moving through its streets at its pace, open to what the environment offers. Walking is also, as de Certeau (1984) argues, a practice through which urban space becomes meaningful through movement and experience. It is through walking that a city gradually becomes familiar, understandable, and eventually, one's own.

Therefore, this study investigates how embodied experiences in urban environments can support international students' sense of belonging. To explore this, the study adopts a Design-Based Research (DBR) approach, using design both as a method of inquiry and as a way of generating knowledge. An audio walk is developed as the primary design intervention and experiential medium through which participants engage with urban space.

Guided by this aim, the study is framed around the following research question:

How do international students in Copenhagen experience urban space through an audio walk, and how does this relate to their sense of belonging?

2. State of the Art

Over the past decades, social sciences have undergone several theoretical shifts that reshape understandings of space, experience, and mobility. The spatial turn foregrounds space as socially produced, structured, and lived rather than as a neutral backdrop (Lefebvre, 1991). This challenges the idea of space as a passive container and highlights its relational and experiential dimensions. Closely related, the sensory turn critiques the dominance of vision and emphasizes multisensory and embodied forms of engagement with urban environments (Howes, 2003; Low, 2013; Thibaud, 2015). Together, these perspectives shift attention toward how meaning and attachment emerge through everyday embodied encounters with space.

Migration studies have similarly been reshaped by the transnational turn, which moves beyond nation-state frameworks to examine how migrants maintain connections, practices, and identities across borders (Levitt & Jaworsky, 2007). Mobility is therefore understood not only as physical movement but as a condition of living across multiple spatial and social contexts. Recent work extends this perspective by foregrounding sensory and experiential dimensions of migration, showing how movement is lived through the body and the senses. Concepts such as “transnational sensescapes” (Low & Kalekin-Fishman, 2016) and “migrant sensescapes” (Mata-Codesal, 2023) illustrate how sensory perception shapes experiences of place, belonging, and dislocation.

These perspectives collectively suggest that urban experience emerges at the intersection of spatial, sensory, and transnational processes. Within this intersection, sensory and embodied encounters with urban space become central to how individuals

orient themselves in new environments and develop forms of attachment. Belonging in this context is not a fixed relation to place, but an ongoing, embodied process. The following sections review existing scholarship at this intersection, focusing on how mobility, sensory engagement, belonging, and mediated urban experiences have been conceptualized across different strands of research.

2.1 Embodied and Sensory Experience of Place

2.1.1 From Space to Lived Place

The distinction between space and place offers a foundational starting point for understanding how individuals develop relationships with their environments. Building on the spatial turn outlined above, one of the most influential accounts is provided by Yi-Fu Tuan, whose work remains a key reference in urban and human geography. Tuan (1997) describes lived-in space as “a calm center of established values” (p. 54), suggesting that places gain meaning as they are inhabited and experienced over time. Through repeated engagement, space can gradually become familiar and emotionally significant.

While Tuan focuses on the conceptual distinction between space and place, Edward Relph (1976) develops a phenomenological account of how place is experienced. Central to his argument is the concept of “insideness”, which describes the extent to which individuals feel immersed in and connected to a place. Insideness refers to a sense of belonging that arises through active engagement with surroundings, rather than passive occupation. In contrast, when such engagement is limited, environments may be experienced as “placeless”, lacking meaning or attachment. This framework has been widely used in studies of urban experience and mobility to understand how people gradually form relationships with unfamiliar environments.

Phenomenological approaches further extend this discussion by shifting attention from conceptual definitions of place to the role of perception in its formation. Maurice Merleau-Ponty’s (1945) work has been particularly influential in this regard. He argues that perception is not a detached cognitive process but an embodied one, in which the body functions as the primary medium through which the world is experienced. From this perspective, place is not only cognitively recognised but constituted through ongoing bodily engagement with the environment.

This emphasis on embodiment has informed a wide range of studies in urban geography, anthropology, and environmental psychology. It highlights how sensory engagement, such as touch, sound, and spatial orientation, contributes to the formation of place experience. Research in this area shows that place attachment often develops gradually through accumulated sensory encounters in everyday life (Altman & Low, 1992; Lewicka, 2011). Extending this line of thought, Farman (2020) conceptualizes embodied space as co-produced through the interaction between body, perception, and sociocultural context, describing it as a “sensory-inscribed” form of embodiment. In this sense, place is understood not as a fixed container, but as something continuously produced through embodied and sensory engagement.

2.1.2 Sensory Engagement with Urban Space

If place is understood as emerging through embodied perception, then sensory engagement becomes central to how urban environments are experienced. Traditional approaches in urban studies have often privileged vision as the dominant mode of perceiving the city, which has been widely critiqued for overlooking other sensory modalities (Howes, 2003; Low, 2013; Thibaud, 2015). Howes (2003) argues that urban experience involves multiple senses, including smell, touch, sound, and taste. Thibaud (2015) develops this further through the concept of urban “ambiances,” referring to the subtle sensory qualities of everyday environments such as light, temperature, sound, and texture. These ambient conditions have been examined as key components of how urban spaces are experienced in situ.

Rudolf Steiner proposed an expanded model of human perception that includes twelve distinct senses (Steiner, 1996/1916; Edmunds, 2013). In this framework, sensory experience is not limited to passive reception but is associated with processes of self-awareness, social orientation, and relational understanding. Although developed in a different intellectual context, this work has been referenced in discussions of multisensory perception as a way of expanding understandings of sensory experience beyond vision-centred approaches.

Contemporary empirical studies have further developed multisensory approaches by examining how sensory engagement operates in specific urban and social contexts. Low (2013) introduces the concept of “sensescape” to describe how migrant communities engage with urban environments through touch, smell, and sound.

Diaconu (2011) focuses on olfactory experience, showing how smell is closely linked to memory and affective responses to place. In relation to sound, Paquette and McCartney (2012) conceptualize listening as an active bodily practice rather than passive reception, emphasising its role in shaping spatial awareness.

Research in migration studies has extended these insights by examining how sensory experience is shaped under conditions of mobility. Studies in this field explore processes such as sensory adaptation, disorientation, and reorientation in transnational contexts (Bascuñán-Wiley, 2015). Empirical examples, including studies on food practices, illustrate how taste and smell mediate experiences of cultural transition, linking sensory perception to memory and identity formation. These studies collectively highlight the role of sensory practices in shaping everyday experiences of mobility.

At the same time, research also emphasizes that sensory experience is not abstract but situated in specific material and environmental conditions. DeFazio (2011) argues that sensory engagement is shaped by the textures, spatial arrangements, and material properties of urban environments, as well as their cultural and historical contexts. This line of research has been used to stress the importance of context-specific analysis in understanding how sensory experience is formed in urban space.

Place attachment studies have further examined how such sensory engagements contribute to longer-term relationships with place. Scannell and Gifford (2010) conceptualize place attachment as a multidimensional process involving affective, cognitive, and behavioural components. Giuliani (2003) and Lewicka (2011) similarly emphasize that attachment develops gradually through repeated interaction with environments. These perspectives collectively highlight that sensory experience is not only embodied, but also shaped by material and environmental conditions that configure how urban spaces are encountered (Sheller & Urry, 2006; Thibaud, 2015).

2.2 Belonging in Contexts of Mobility

Belonging has been widely discussed across sociology, human geography, and migration studies as a central concept for understanding how individuals relate to place and social environments. Rather than being a stable or singular condition, belonging is generally understood as a relational and dynamic process shaped by both affective and socio-political dimensions. Yuval-Davis (2006) conceptualizes belonging as emotional attachment and a sense of feeling “at home,” while also highlighting its political dimensions, including processes of inclusion and exclusion. In a similar way, Antonsich (2010) distinguishes between place-belongingness, referring to the intimate and experiential feeling of being at home, and the politics of belonging, which concerns the broader structural conditions that shape who is included or excluded from belonging.

Across this literature, belonging is not treated as a fixed state but as something that is continuously produced through relations between individuals, places, and social structures. This understanding has led to increasing attention to how belonging is shaped under conditions of mobility. Studies in migration and mobility research argue that movement across space complicates traditional notions of rootedness, suggesting that belonging may be fragmented, partial, or continuously negotiated across different contexts (Jensen, 2009; Savage et al., 2005). In transnational contexts in particular, belonging is understood as extending across multiple places rather than being anchored in a single location (Antonsich, 2010).

Within this body of work, some studies also emphasize that mobility is not only spatial but is shaped by unequal structures of inclusion and exclusion (Yuval-Davis, 2006; Antonsich, 2010). These conditions are closely tied to how belonging is produced and negotiated in everyday life. Urban space is therefore not experienced in a neutral way, but is produced through socio-material relations that connect bodies, movement, and material environments (Sheller & Urry, 2006; Lefebvre, 1991; Massey 2005).

Everyday encounters in urban environments can reveal how certain bodies are oriented, recognised, or restricted in different ways, highlighting how urban space is shaped through broader socio-spatial relations and everyday practices (de Certeau, 1984). In this sense, belonging emerges as a relational process, formed through the

ongoing interactions between bodies, space, and institutional structures.

Alongside these mobility-oriented approaches, a growing body of research has increasingly emphasized the embodied and sensory dimensions of belonging. Belonging is not only understood as a cognitive or symbolic relation to place, but also as something that is experienced through the body and the senses. Recent work introduces the concept of “embodied transnational belonging” to describe how migrants experience attachment through sensory engagement with both familiar and unfamiliar environments (Nikielska-Sekuła, 2026). This includes processes such as sensory familiarization, memory activation, and the reproduction of everyday practices associated with home, suggesting that the body plays an active role in negotiating belonging across changing environments. This emphasis on embodied and sensory engagement highlights the potential of exploring belonging through situated, experiential and practice-based approaches.

Sensory-oriented studies emphasize how belonging is shaped through everyday perceptual and affective experience. Rather than treating belonging as purely cognitive or representational, these studies highlight how sensory engagement with environments contributes to the formation of familiarity and emotional connection through repeated exposure and embodied perception (Bascuñán-Wiley, 2021; Mata-Codesal, 2023). This includes everyday practices such as cooking, listening, or engaging with familiar material and sensory environments, which can evoke memory and reinforce attachment to place. These works suggest that belonging is not only socially and spatially constructed, but also mediated through sensory and embodied experience.

Complementing this perspective, urban and environmental studies focus on how belonging is produced through spatial practice and everyday movement (Cresswell, 2006; Massey, 2005). Rather than emerging solely through identity or reflection, belonging is understood as gradually formed through repeated interaction with urban environments. Familiarity with place develops over time through bodily movement, orientation, and habitual engagement with the city, linking spatial experience to the formation of place-based attachment (Massey, 2005; Altman & Low, 1992).

2.3 Walking, Listening, and Making Meaning

2.3.1 Walking as a Meaning-Making Practice

Relational geography perspectives emphasize that urban space is continuously produced through movement, social interaction, and networks rather than existing as a fixed container (Massey, 2005; Jensen, 2010). From this perspective, walking is not simply a form of mobility but a situated practice through which space is actively experienced and constituted. It links bodily movement with perception and interpretation, making it a key site where meaning is formed in relation to the urban environment.

Among the most influential discussions of walking, de Certeau (1984) describes walking as an everyday practice through which people engage with and experience the city. Walking is not simply a way of moving through urban space, but also a way of forming a personal relationship with the environment through movement and everyday spatial experience. Jensen (2009, 2010) uses the term “mobile sense-making” to describe how people make sense of urban space through movement and embodied experience. As they walk, individuals continuously respond to their surroundings, adjusting their attention and perception in relation to the environment around them. Movement, in this sense, is not only about getting from one place to another, but also about experiencing and interpreting the city in an ongoing way.

Walking has also been explored as an exploratory and experimental practice beyond everyday routines. The Situationist concept of the *dérive* (Debord, 1958) describes drifting through urban space without a fixed destination, allowing attention to be guided by the atmosphere, sensations, and encounters of the environment. Building on this, Careri (2001) understands walking as an aesthetic and artistic practice in which movement itself becomes a tool for re-reading and re-mapping the city. These perspectives highlight walking as a practice that can disrupt habitual ways of seeing and open alternative ways of experiencing urban environments.

Importantly, walking is always embodied and multisensory. It unfolds through changing relations between the body, the environment, and other people, shaped by sensory experiences such as sound, rhythm, texture, and atmosphere (Degen & Rose, 2012; Larsen, 2025). Through repeated engagement, walking can also contribute to

the gradual development of familiarity and emotional connection to place, as sensory impressions accumulate over time.

Artistic and practice-based approaches to walking further extend these possibilities. O'Rourke (2016), for example, describes walking as an artistic method through which urban experiences can be observed, interpreted, and re-expressed. This perspective suggests that walking is not only a way of moving through the city, but also a way of paying attention to and reflecting on urban experience. Such approaches also open up possibilities for mediated forms of walking, including audio walks, which can guide attention and shape how urban environments are experienced.

2.3.2 Audio Walks as Mediated and Designed Experience

Building on the conceptualization of walking as a sensory and meaning-making practice, audio walks have been widely discussed as practices that mediate urban experience through sound. Rather than functioning as simple navigation tools, they structure attention, modulate perception, and introduce narrative or affective layers that reshape how urban space is encountered. In this sense, existing research on audio walks positions them as a form of mediated walking in which sound becomes an active interface between body and environment (Larsen, 2025).

Soundwalking studies similarly highlight how curated listening practices can intensify sensory awareness and shift attention toward otherwise overlooked urban atmospheres (Adams et al., 2008; Paquette & McCartney, 2012; Butler, 2006). While soundwalking often emphasizes attunement to existing environmental soundscapes, audio walks tend to foreground sound as a designed and directional medium that actively organizes walking experience.

Within the existing literature, Janet Cardiff's *The Missing Voice* (1999/2005) is often discussed as a key example of audio walk practice. In the work, participants walk through the city while listening to a pre-recorded narrative that combines personal storytelling, fictional elements, environmental sound, and walking instructions. The audio unfolds alongside the surrounding urban environment, creating moments where the recorded narrative and everyday reality overlap. As Gorman (2003) notes, the work demonstrates how sound can shape perception and redirect attention during walking, making familiar urban spaces feel unfamiliar or newly noticeable.

Locative media projects such as Rimini Protokoll's *The Walks* extend audio walk practices into site-specific performance. In these works, audio instructions not only shape how participants perceive the city, but also guide what they do as they move through it. Participants are asked to carry out specific tasks in urban space, which turns walking into a more active and task-oriented form of engagement. The city becomes a setting for guided action, where movement is organised through instructions as well as perception (Primavesi, 2018). Compared to Cardiff's focus on guiding attention and perception, this approach places more emphasis on movement and action, treating the urban environment as something that is temporarily structured through participation.

Across these different examples, audio walks in existing research can be understood as mediating devices that reorganize the relationship between body, sound, and urban space. They do not simply accompany walking, but actively shape how movement is perceived, structured, and experienced. Depending on the design orientation, they may emphasize perceptual ambiguity, sensory attunement, or performative reconfiguration of urban space. What connects these approaches is the role of sound as a mediating layer that connects embodied movement with the sensory and spatial qualities of the city.

2.4 Knowledge Gap

First, studies on embodiment and sensory perception have significantly advanced our understanding of how place is experienced through the body. At the same time, these perspectives are often kept separate from studies on belonging in mobility contexts. Similarly, belonging in migration studies is frequently discussed in relation to social structures or identity. Less attention is given to how it develops through everyday sensory experience in the city. This creates a need to better connect sensory experience with the ways people gradually form a sense of belonging in unfamiliar environments.

Second, walking is widely recognised as an important way of engaging with urban space. Much of the literature on walking and audio walk practices tends to focus on structured or designed forms of experience. Similarly, research on audio walks and locative media tends to emphasise their role as narrative or performative devices that structure perception and experience. What is less often addressed is walking as an ordinary everyday activity shaped by attention, perception, and lived experience in the city.

Third, research on sensory experience has provided detailed accounts of how people perceive cities through multiple senses. These insights are valuable, but they are not always developed in relation to practice-based or design-led approaches. Therefore, there is room to explore how sensory understanding can be brought into interventions that work with movement and situated experience in the real-life contexts.

These gaps point to a need for approaches that connect sensory experience, movement, and belonging more directly through situated and practice-based engagement. This study responds to that need by exploring how audio-guided walking may support new ways of perceiving and relating to urban space in contexts of temporary mobility.

3.Theoretical Framework

Building on the literature and the gaps identified above, the framework of this study is organised around three interconnected dimensions: space, movement, and belonging. In this study, space is approached as something that is experienced and perceived through bodily engagement. Movement is treated as the condition through which perception is shaped. Belonging is understood as something that emerges through sensory and affective engagement over time. Across these dimensions, perception and attention are treated as key mediating processes. Audio is included as a mediating layer that can influence how these relations unfold during walking.

In this framework, space is not treated as a fixed or neutral setting. Instead, it is approached as something that becomes meaningful through lived and embodied experience (Lefebvre, 1991; Tuan, 1977; Relph, 1976). This study draws on phenomenological thinking to treat perception as grounded in bodily experience, where the senses are the primary way in which space is encountered (Merleau-Ponty, 1945). From this perspective, walking is used as a way to examine how spatial meaning is formed through movement and situated experience.

As people move through the city, perception is constantly adjusted. Attention is understood here as a situated process rather than a fixed cognitive filter. It develops through engagement with changing environmental conditions (Ingold, 2021). During walking, some sensory elements become more noticeable while others fade, depending on movement and context. This shifting attention is important for understanding how people orient themselves and make sense of urban environments in real time.

Urban experience is understood as multisensory. It is not limited to vision but involves sound, touch, rhythm, and spatial awareness (Howes, 2003; Thibaud, 2015; Low, 2013). These sensory experiences are shaped by both the environment and the act of moving through it. This means that sensory perception is not stable but changes as people move through different urban situations.

In this study, belonging is approached as a process rather than a fixed state, emerging through everyday engagements with place. This perspective draws on work in sensory and embodied approaches to place-making (Pink, 2015), as well as studies of belonging in migration and mobility contexts (Lewicka, 2011; Mata-Codesal, 2021). Over time, these encounters can produce familiarity and orientation. In contexts of mobility, belonging often appears in subtle, everyday sensory moments rather than through explicit reflection or articulation.

Mobility research is used here to support the idea that urban experience emerges through the relation between bodily action and environmental conditions. Movement and perception are understood as closely connected, and meaning is formed through this interaction rather than existing in advance (Jensen, 2026). This supports an approach that focuses on experience as something that unfolds in situ.

Within this framework, audio is treated as an active mediating element in the walking experience. It does not simply accompany movement but can guide attention and shape perception. In audio walks, sound creates a layered perceptual field where the environment is experienced in both direct and mediated ways. This allows the study to explore how listening influences sensory engagement and orientation in urban space.

Overall, this framework proposes a continuous process in which movement through space shapes perception. Perception then guides attention, attention influences sensory engagement, and sensory engagement contributes to the emergence of belonging. This provides an analytical basis for examining how walking-based and audio-mediated practices shape how urban space is experienced in contexts of mobility.

4. Methodology

4.1 Research Orientation

This research is grounded in a pragmatic philosophy of science, understood as an inquiry-oriented approach in which knowledge emerges through action, experience, and engagement with real-world situations (Dewey, 1938; Goldkuhl, 2011). Rather than treating knowledge as a fixed representation of reality or as an indicator of immediate problem-solving effectiveness, pragmatism is here understood as a situated and iterative process of inquiry, where understanding is continuously developed and refined through cycles of action and reflection.

This orientation aligns with Design-Based Research (DBR), which conceptualises knowledge production as emerging through the iterative design, implementation, and refinement of real-world interventions. In this study, design is therefore not only an output but also a mode of inquiry.

Within this framework, the study adopts an interpretive and phenomenological epistemological stance, in which urban belonging is understood as something experienced and enacted through embodied, sensory engagement with place (Merleau-Ponty, 1962; Schutz, 1967; Crotty, 1998). Meaning is not predetermined but emerges through situated encounters with the urban environment.

Building on this, walking is employed as both method and medium of inquiry. The audio walk functions as a situated design intervention that enables participants to engage with urban space through embodied movement, sensory attention, and reflection, thereby generating experiential data on perception and belonging.

4.2 Design-Based Research as Inquiry

This study adopts DBR as its primary methodological framework, offering a structured yet flexible approach to developing and investigating design interventions in real-world contexts. DBR is characterised by iterative cycles of design, implementation, and reflection, where knowledge emerges through the continuous interaction between theory, practice, and context (Buhl et al., 2022; Baumgartner et al., 2003).

Within this approach, design is not treated as a final outcome, but as an ongoing process of inquiry through which understanding is developed and refined over time. This iterative logic aligns with the pragmatic orientation of this study, in which knowledge is understood as emerging through situated action and reflection rather than as a fixed representation of reality.

From this perspective, DBR can be seen as an enactment of Dewey’s (1938/2018) concept of inquiry, where research unfolds through cycles of engagement with evolving situations. Ejning-Duun and Skovbjerg (2019) further describe DBR as grounded in pragmatism, where knowledge is valued for its situated and emergent qualities rather than for its correspondence to fixed or abstract truths.

Within this framing, the design process itself becomes a site of inquiry. Design ideas are developed as provisional and evolving propositions, and knowledge emerges through their enactment and consequences in context. In this sense, designing is understood as a way of engaging with and understanding situations through intervention and reflection, rather than as a process aimed at producing definitive solutions (see Table 1).

While DBR provides the primary methodological structure, this study also draws on insights from Artistic Research (AR), particularly its sensitivity to embodied and sensory experience. AR contributes an experiential orientation that foregrounds perception, movement, and lived engagement as sources of knowledge (Varto, 2018; Kallio-Tavin & Hernández-Hernández, 2017). This informs how the design process is approached within DBR, especially in relation to the qualitative and experiential dimensions of urban belonging.

TABLE 1 Three modes of design inquiry

	1. Mode: Process (Reflective practioner)	2. Mode: Research (Design-Based Research)	3. Mode: Politics (Critical design)
Indeterminate situation <i>What kinds of questions can be asked?</i>	<u>Starts with:</u> -Clients' problems -Users' practice -Designers' own practice	<u>Starts with:</u> -Lack of knowledge on domain -Questions about domain	<u>Starts with:</u> -Designers identification of issue -Non-awareness of/carelessness about a political issue amongst citizens
Controlled/directed transformation <i>What does the inquiry aim to change?</i>	<u>Aims to:</u> -Solve issues for the target users -Solves the client's problem -Improve practice for the designer	<u>Aims to:</u> -Gain knowledge about domain -Solve issues for the users	<u>Aims to:</u> -Raise awareness of structures -Make the issue actionable -Look like a real design
Assumptions/knowledge <i>What does design build upon?</i>	<u>Assumptions are made based on:</u> -Experience -Empirical observations -and possibly theory	<u>Assumptions are made based on:</u> -Theories about the domain and empirical knowledge	<u>Assumptions are made based on:</u> -Research knowledge about (tech) development for the future -or Knowledge about consequences of past choices
Methods applied <i>How does design determinate its constituents, distinctions and relations?</i>	<u>Approach to problem:</u> -Naming and framing -Generative metaphors	<u>Approach to problem:</u> -Iterative process going from knowledge of the domain to lab, to intervention, to reflection that leads to new insights about the domain	<u>Approach to problem:</u> -Tracing and projection tactics (both analytical and synthesising)
The mode's objective <i>What is regarded as a determinate/stable situation?</i>	<u>Goal:</u> -Designer solves the issue -...and become a better designer	<u>Goal:</u> -Design knowledge and principles are found and tested -The intervention is implemented	<u>Goal:</u> -Publics are raised in relation to the issue

Table 1. DBR as a mode of design inquiry (Ejning-Duun & Skovbjerg, 2019)

Urban belonging is understood in this study as a situated and evolving phenomenon that cannot be fully defined in advance. In this sense, it shares characteristics with a “wicked problem” (Rittel & Webber, 1973), where the problem itself is reshaped through attempts to engage with it. Ejning-Duun and Skovbjerg (2019) argue, drawing on Buchanan (1992), that design problems are not merely unclear but emerge and take shape through the design process itself.

This understanding strengthens the rationale for DBR in this study. Because the phenomenon under investigation is open-ended and context-dependent, the research process must allow for its gradual articulation through iterative engagement. Prototypes therefore function as generative tools for inquiry, enabling both researcher and participants to engage with situated experiences, reflect on them, and develop understanding over time.

4.3 Research Design

Within the framework of DBR, the research process is organised through four interrelated phases: problem identification, design and prototyping, testing, and reflection. These phases are not understood as linear steps, but as interconnected and iterative moments through which the design intervention and research inquiry evolve in parallel.

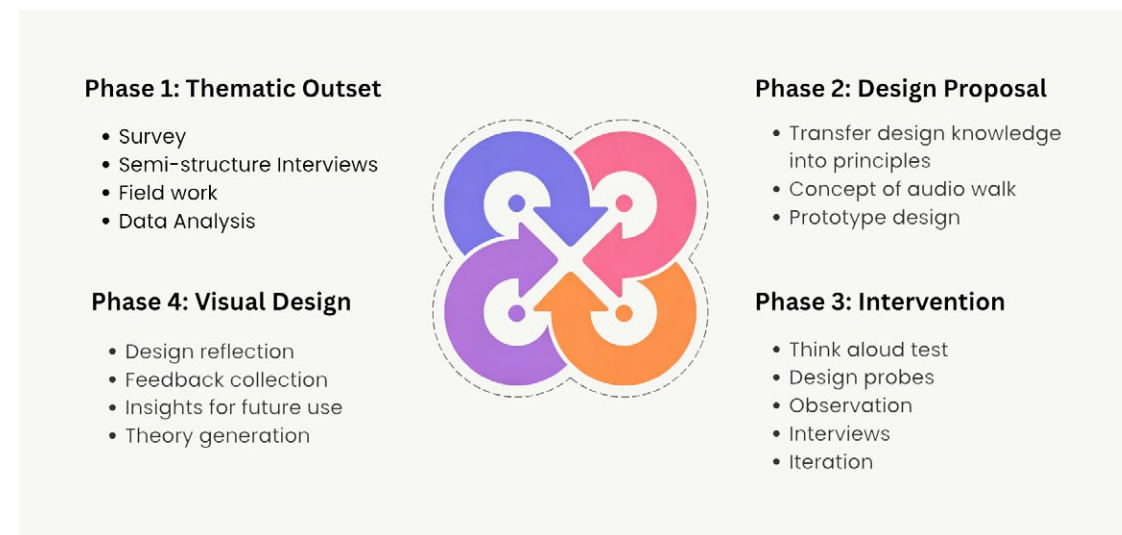


Figure 1. The Four Phases of the DBR Process

Phase 1: Problem Identification

The first phase aimed to develop an initial understanding of international students' experiences of urban belonging in Copenhagen. This was initiated through questionnaires and official data provided by the AAU International Office, which offered a broad overview of common challenges and patterns.

Semi-structured interviews were conducted as the primary qualitative method in this phase. This approach is widely used in qualitative research for exploring lived and situated experience, as it allows participants to articulate their perspectives in their own terms while maintaining a guiding structure (Mason, 2002; Bryman, 2016). The aim was to gain an understanding of how belonging is shaped through their early and ongoing engagement with urban life.

The interview data was analysed using thematic analysis (Braun & Clarke, 2006; 2019;

Gilbert, 2015). Through systematic coding, patterns relating to belonging, perception, and urban experience were identified. These findings informed the design of the audio walk, shaping its concept and structure.

The researcher also conducted walking-based field observation in selected urban locations in Copenhagen. The purpose of these observations was not to position the researcher's own walking experience as the primary basis for the intervention design, but rather to complement and contextualise insights from participant interviews.

Phase 2: Designing and Ideation

In line with DBR, the intervention is developed as part of an iterative process in which design and context continuously inform each other (Brown, 1992; Collins, 1992).

Walking in this study is treated as a research methodology: a structured yet open-ended practice through which knowledge about urban experience is generated (O'Neill & Roberts, 2020; Ingold, 2021).

Within this framework, the audio walk does not simply guide participants through space, but structures the conditions under which attention, perception, and embodied experience can unfold as part of the research process. Participants are not positioned as passive users, but as active contributors to the co-creation of the experience (Sanders & Stappers, 2008)..

Phase 3: Intervention and Testing

This phase combined two complementary methods of data generation: think-aloud protocol and design probes. Think-aloud protocol (Ericsson & Simon, 1993; Nielsen, 1994) was used to evaluate the usability and interaction design of the audio walk. Participants were asked to verbalise their thoughts while engaging with the prototype in real time. This method is widely used in usability testing and is grounded in cognitive science approaches to protocol analysis.

In the testing phase, design probes were used to explore participants' sensory and affective responses to the audio walk. Drawing on cultural probe methodology (Gaver et al., 1999), the probes were introduced as complementary tools alongside the walk, including photography, drawing exercises, and inspiration cards. Following approaches to intuitive mapping in artistic research (Aksu, 2026), the visual and spatial probe materials were understood not simply as records of participants'

movements or observations, but as ways of externalising subjective, affective, and sensory relations to place.

Phase 4: Iteration and Reflection

The final phase involves a synthesis of findings across the design process. Data from interviews, thematic analysis, and design probe outputs are brought together to examine how the audio walk shaped participants' sensory engagement with the city. This reflective phase considers how embodied interaction, movement, and attention contribute to the formation of urban belonging. Feedback from stakeholder is also incorporated in this phase to support further iteration and to consider how the audio walk could potentially be applied in the future.

Through iterative cycles of design, testing, and reflection, the study generates insights into how belonging is experienced and mediated through situated sensory engagement. The audio walk thus operates not only as a design outcome, but as a research instrument embedded within the DBR process.

4.4 Ethical Considerations

Ethical considerations were addressed throughout all stages of the research process. In the initial survey, participants were provided with a clear statement outlining the purpose of the study, the voluntary nature of participation, and how the data would be used. For both the semi-structured interviews and the prototype testing, informed consent was obtained prior to participation (see Appendix F). Participants were informed of their right to withdraw at any time without consequence. All interview data were transcribed anonymously, and identifying information was removed to ensure confidentiality. Photographic documentation was conducted from a distance and avoided capturing identifiable features of the participants, such as clear facial views or other recognisable personal characteristics. All collected data were securely stored and used solely for the purposes of this research.

As the intervention took place in public urban spaces, care was taken to minimise potential discomfort or feelings of self-consciousness during participation. Participants were informed in advance that they could engage with the activity freely and according to their own preferences. The intervention was designed as an open and

exploratory experience rather than a fixed set of tasks, allowing participants to adapt their level of engagement according to their comfort and surroundings.

In addition, sensitivity was maintained throughout the research process, as discussions of belonging and urban experience could involve personal reflections on adaptation, isolation, or familiarity within the city. To minimise potential emotional discomfort, the interviews were conducted in a supportive and flexible manner that allowed participants to decide how much they wish to share.

4.5 Positionality and Reflexivity

In addition to these ethical considerations, the researcher's positionality plays an active role in shaping the study. This research is conducted from the position of a researcher–practitioner, in which designing and researching are closely interconnected rather than separate activities. As discussed by Bartunek and Rynes (2014), the relationship between academic inquiry and practice involves both alignment and tension, since the two operate through different forms of knowledge production and engagement. In this study, the researcher's dual position goes beyond observation and analysis. It also involves actively shaping the conditions under which participants experience and engage with the intervention.

The audio walk is understood as a designed relational intervention rather than a neutral research instrument. It is not simply a passive tool for collecting data. Instead, it structures how participants move through, pay attention to, and emotionally engage with the urban environment. The study does not only document experience, but also participates in creating the conditions that make certain experiences possible. In this sense, the research can be understood as a form of relational practice (Diatta et al., 2022), where knowledge emerges through the interaction between participants, designed material conditions, and the researcher's situated design decisions.

Therefore, participants in this study are not understood as users of a designed system, but as whole persons whose embodied, emotional, and situated responses are integral to the unfolding of the relational experience (Diatta et al., 2022). Their engagement with the audio walk is not predetermined, but emerges through their active bodily and sensory participation. Accordingly, what is generated in this study is not “data” in a conventional sense, but co-produced experiential knowledge that arises through the

interaction between bodies, space, and design mediation. This knowledge is situated, embodied, and contingent, as participants' sensory and affective responses emerge in ways that are not fully predictable or controllable.

In this study, knowledge is co-produced through the interaction between researcher, participants, and the designed intervention (Sanders & Stappers, 2008). Both researcher and participants are involved within a shared relational research context through which experience and meaning emerge. This reflects an understanding of design practice as embodied and relational, where users are approached as situated human beings and knowledge is generated through the research process itself (Diatta et al., 2022).

5. Design-Based Research Process

This chapter presents the DBR process through which this study was conducted. The research is structured around four iterative phases: problem identification, design and development, intervention and testing, reflection and refinement. Rather than following a linear sequence, these phases are interconnected and cyclical, allowing insights from each stage to inform subsequent iterations of the design. The following sections outline each phase of the process, including the methods used, key findings, and how these informed the ongoing development of the design.

5.1 Problem Identification

The first phase of the DBR process focuses on identifying and framing the problem within its specific context. Existing research has highlighted the relationship between embodied urban experience, mobility, and belonging, suggesting that individuals develop connections to place not only through social participation, but also through sensory and perceptual engagement with their surroundings. At the same time, studies on transnational mobility indicate that for international students living between multiple cultural and spatial contexts, experiences of belonging are often unstable, negotiated, and continuously evolving.

However, while previous research emphasizes the importance of movement, perception, and sensory engagement in shaping urban experience, less attention has been paid to how these processes might be supported within everyday urban life.

In particular, there remains limited understanding of how ordinary practices such as walking may encourage more attentive and reflective forms of engagement with unfamiliar environments, especially for people who have not yet developed strong social attachments to the city.

This study focuses on international students living in Copenhagen. It explores belonging not only in terms of social integration, but also through embodied and sensory encounters with the city. The aim of this phase is to understand how international students experience and navigate Copenhagen in everyday life, and to identify tensions that can inform the subsequent design process..

5.1.1 Context: International Students in AAU Copenhagen

or international students, arriving in a new city involves more than relocation. It is a gradual process of becoming familiar with everyday environments and routines, and developing a sense of comfort in an unfamiliar urban setting over time. As an international student at AAU Copenhagen campus, I have experienced these processes firsthand, and I have also observed that they are shared by others in similar situations. This project is therefore situated in this context.

AAU Copenhagen hosts a relatively small proportion of international students, concentrated mainly at the master's level due to Danish-taught bachelor programmes. Master's programmes run for two years, with the second year largely devoted to internships and thesis work. Engagement with campus life is therefore short and career-oriented, and unlike the Aalborg campus, there is no "buddy programme" for international students in Copenhagen.

Within this context, the AAU International Office plays a key role in supporting international students during their arrival and transition into studying. As the main institutional point of contact, it is often the first place students turn to when encountering challenges related to settling in Copenhagen and navigating university life. After my conversations with the International Office coordinator, Deborah. I developed a more situated understanding of both the challenges students face and how institutional support is experienced and implemented in the AAU context. The full transcript of this interview is included in Appendix B1.

These structural conditions shape a particular form of urban experience. Upon arrival,

students face intensive practical demands that compress the initial months into a period of functional settlement rather than city engagement. The university also organises a range of offline integration activities, such as bike tours and welcome events. However, participation in these activities tends to be relatively low, and most events are concentrated in the first month of the academic year. In practice, students are often preoccupied with academic and everyday adjustments during this period. By the time these immediate concerns begin to stabilise, autumn has usually set in, with reduced daylight hours and less favourable conditions for spontaneous outdoor activities.

Analysis of the university's official survey (102 responses, Copenhagen campus) and the Survival Guide reveals that institutional support tends to prioritise practical information needs. In the Survival Guide in particular, belonging is explicitly addressed, but is framed in social and cultural terms, such as understanding Danish social norms, participating in organised events, and meeting new people. While these aspects are important, the emphasis is primarily placed on social integration through interaction. Information about Copenhagen city is mainly provided through events or activities, rather than through guidance on how to explore or experience the city in everyday life.

This points to a structural gap: once practical matters are resolved, students may still experience a subtle distance from their surroundings. The city functions, but does not yet feel familiar. It is within this gap that the present project locates its focus.

5.1.2 Thematic Analysis

Building on the contextual understanding of international students at AAU Copenhagen and the institutional perspective from the International Office, this section moves from a descriptive overview to a focus on students' lived experiences in the city.

A short online survey was distributed among AAU international students to gain a preliminary understanding of their experiences of Copenhagen. Although only eight responses were collected, the survey helped identify recurring topics that were later explored in the interviews. Overall, the findings of survey suggest that belonging develops gradually and is shaped by both social connections and repeated engagement

with everyday urban spaces such as cafés, parks, and waterfront areas. Participants commonly reported feelings of partial connection during their initial months in the city, with loneliness and practical pressures limiting opportunities for urban exploration. At the same time, sensory aspects of the city played an important role in shaping experience, with respondents highlighting lively streets, human presence, and everyday sounds such as conversations, bicycles, and birds as particularly meaningful. The survey questions and full results are provided in Appendix A.

Seven semi-structured interviews were then conducted with international students in Copenhagen. The interview data was analysed using thematic analysis. Participants are referred to as P1–P7, while participants in the user testing sessions are referred to as U1–U4. Four main themes were identified from the interviews. These themes help to understand students' experiences of Copenhagen and inform the later design process. The coding table and full interview transcripts are provided in Appendix C and Appendix G.

Theme 1: Tension between physical presence and social belonging

A consistent pattern emerged across the interviews: students felt physically present in Copenhagen but struggled to become socially integrated into Danish society. This sense of distance was not only linked to limited contact with local residents, but also to broader features of Danish social life. Danish society was often described as relatively closed or “bubble-like”, where established social networks can be difficult for newcomers to access. This is reflected in one participant's experience of primarily interacting with other international students, while not feeling integrated into local communities (P3). Similar tensions between physical presence and difficulties accessing local social networks have also been discussed in studies of international student belonging and integration (Yuval-Davis, 2006).

Across the interviews, a clear tension emerged between participants' strong desire to connect with local people and their limited opportunities to develop such relationships in practice. This mismatch reflects a gap between social aspirations and the everyday social reality encountered in Copenhagen. At the same time, it suggests that belonging may not be fully dependent on local social integration alone, but may involve other forms of attachment to the city. This finding resonates with discussions of belonging as more than physical presence, emphasizing emotional attachment and social recognition (Yuval-Davis, 2006).

Theme 2: Different ways of moving create different urban experiences

Copenhagen is widely experienced as a cycling city rather than a car city. This is not simply a transport characteristic, but something that shapes how the city is encountered in everyday life. Cycling is described as efficient and goal-oriented, supporting continuous movement through designated routes with limited interaction with the surrounding environment. For many participants, cycling also functions as the dominant form of everyday mobility, with one participant noting, *“I would say 95% when I leave the house, I take my bike”* (P6). Most participants owned bicycles, which served as their primary mode of commuting. This supports mobilities research suggesting that different modes of movement shape distinct forms of urban perception and engagement (Sheller & Urry, 2006).

Walking, by contrast, plays a different role in everyday mobility. While cycling and public transport are mainly used for functional travel, walking is more often associated with leisure and informal activities such as spending free time outside or meeting friends. Several participants also described Copenhagen as an expensive city, particularly in relation to public transport and everyday living costs. In this context, walking was often perceived as a more accessible and low-cost way of moving through and exploring the city.

However, walking experiences are not homogeneous, as they are also shaped by the social context in which movement takes place. A distinction also appears between walking alone and walking with others. When walking alone, participants describe being more attentive to their surroundings. As one participant explained, *“When you're alone, you can actually observe more about the city. Because you don't have anyone to talk with. So you just kind of like look at the people on the street”* (P5). Another participant similarly noted engaging more with details such as birds and taking photographs when walking alone (P7).

These accounts suggest that everyday mobility is not only shaped by transport mode, but also by social context, which influences the degree of engagement with the urban environment. In this sense, walking can be understood as an embodied spatial practice that shapes how the city is perceived and experienced (de Certeau, 1984).

Theme 3: Exploration does not happen spontaneously

Most participants reported that they rarely went out without a specific reason. Social events, practical errands, or organised activities often functioned as triggers for going outside. As one participant explained, *“I think overall I don’t have the motivation to go outside, which is why I often go with friends because that’s my motivation”* (P4). This suggests that exploration is not primarily driven by individual motivation, but is shaped by social and situational conditions that structure when and how students engage with the city.

Exploration is unevenly distributed across time. The early stage is often experienced as overwhelming and busy, while later periods may offer fewer structured opportunities for engagement. As one participant noted, *“A bit too much at the beginning and then I had more time in October, but there were no tour bike tours organized in October”* (P6). This indicates that opportunities for exploration are not only shaped by individual readiness, but also by the availability of environmental and institutional affordances.

These findings suggest that urban exploration is not a spontaneous practice, but a socially and materially structured process. The ability to engage with the city depends on the alignment between personal circumstances, social relations, and the availability of opportunities for movement, highlighting how urban experience is shaped through situated and context-dependent conditions (Cresswell, 2006).

Theme 4: Urban qualities that shape impressions of Copenhagen

Copenhagen is often experienced through a small set of repeated everyday features, mainly related to how easy it is to move through the city, how the city looks, and its proximity to water and green areas. A key aspect of this experience is walkability. The city is widely described as easy to move through on foot, especially because many areas have no cars and everyday places such as cafés and restaurants are close by. This makes walking not only a way of getting around, but also part of how the city is experienced in daily life. As one participant put it, *“it’s just really easy to walk because there’s no cars allowed there. And then if you walk more towards the lake, it’s also a really nice place to just explore. There’s a lot of cafes and restaurants”* (P5). This reflects understandings of human-scale and pedestrian-oriented urban environments, where everyday public life is shaped through walkable and accessible

urban design (Gehl, 2010).

Another important aspect is how the city looks in everyday life. The built environment, including architecture and streets, is often described in positive terms, especially in contrast to more monotonous urban environments. One participant noted, *“Every building you look at is like good looking, let’s say. It’s not like an ugly gray block”* (P2). These aesthetic impressions can be understood as part of urban atmospheres, where the sensory and material qualities of the built environment contribute to affective and embodied experiences of place (Böhme, 1993; Anderson, 2009).

In addition, proximity to water and green spaces appears as an important part of daily experience, with one participant highlighting how meaningful it is to live close to the sea and have it as part of everyday life (P3). Overall, the everyday experience of Copenhagen can be understood as a combination of walkability, visual quality, and access to natural elements, which together contribute to a generally positive perception of the city. These findings from the interviews show how specific urban materialities and design qualities shape everyday experiences of the city through repeated encounters (Massey, 2005).

5.1.3 Field Observations

Field observations were conducted as a complementary and iterative component of the research design. The field observations were used together with the interviews to help make sense of how different urban environments are experienced in everyday life.

Following the interview phase, additional observations were conducted in locations that were frequently mentioned by participants through the interview phase, including *Nyhavn and Inner Harbour (Ofelia Plads), Sydhavnen, Nørreport, and Nørrebro*. Observations focused on how people moved through and used these spaces, as well as the sensory qualities of each environment, including sounds, visual impressions, and overall atmosphere. Ambient, human, and sounds were documented alongside detailed field notes.

Each location had a different atmosphere and rhythm. Nyhavn was busy and highly tourist-oriented, with crowded waterfront areas, restaurants, and constant movement. Sydhavnen felt quieter and more open, shaped by the presence of water, wind, and

fewer people. Nørreport was dominated by fast movement, with continuous flows of bicycles, pedestrians, and metro traffic, while nearby green spaces offered brief moments of calm. In contrast, Nørrebro reflected a more everyday urban environment, with local cafés, people spending time outside, and a strong sense of neighbourhood life.

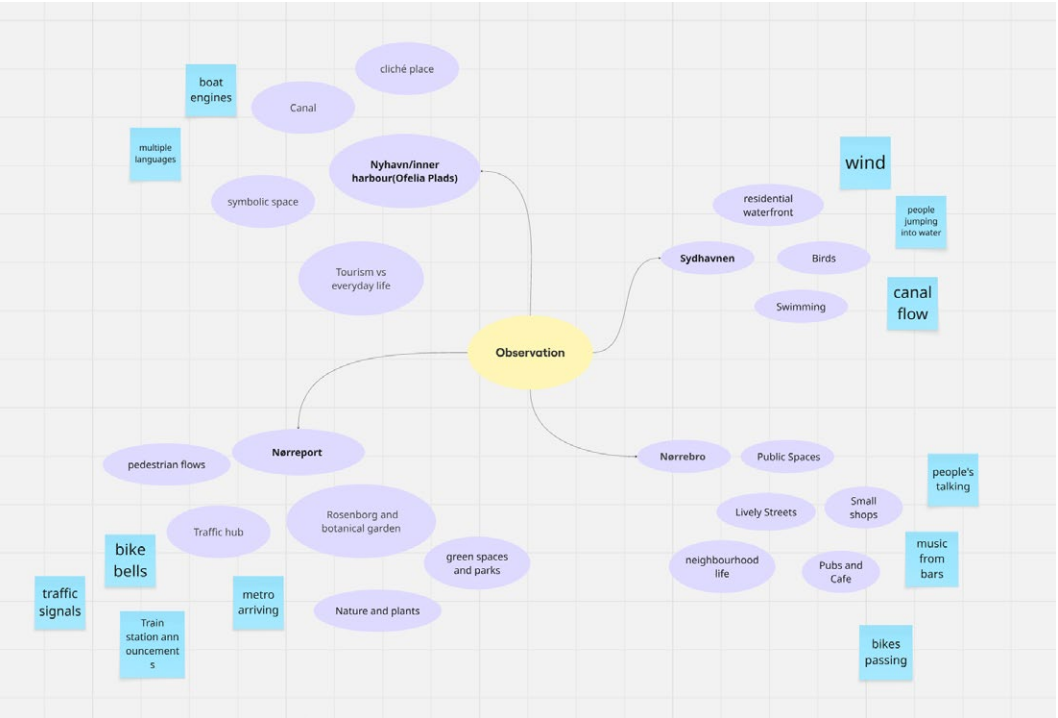


Figure 2. Miro diagram of field observations across multiple locations and their key environmental elements.

Across all locations, the observations showed how attention changed in different urban settings. Places with heavy traffic and continuous movement, such as Nørreport, often encouraged people to keep moving rather than stay and observe their surroundings. Waterfront and residential areas, by comparison, made it easier to slow down and notice sensory details in the environment. This suggests that urban experience is shaped by different rhythms of movement, spatial conditions, and levels of activity.

Sound also played an important role across all locations. The sound of bicycles was a constant presence throughout the city, mixed with water sounds near the harbour, metro noise around transport hubs, and more varied everyday sounds in residential areas. These observations highlight how sensory perception contributes to the experience of urban environments.



These photographs were taken during my initial fieldwork in Nørrebro, Copenhagen. This area was one of the earliest sites that informed this research. Through walking in this neighbourhood, I explored and observed everyday urban life and began to develop an understanding of how embodied and sensory engagement with the city could inform the design of this study.

5.2 Designing and Ideation

The findings from Phase 1 reveal a consistent gap between international students’ physical mobility in Copenhagen and their experiential engagement with the city. While students move through the city on a daily basis, their movement is often task-oriented and functional, with sensory and atmospheric qualities remaining largely in the background. Over time, repeated exposure to urban environments does not automatically translate into familiarity, attachment, or a developed sense of belonging.

The design challenge in this study is to understand how to shift goal-directed mobility into a more attentive and perceptual mode of engagement with the urban environment. This involves creating conditions that support sensory awareness within existing routines, rather than requiring changes to mobility itself.

The selection of an audio walk as the central design medium is informed by both the empirical findings and the theoretical discussion in the literature review. As discussed in the literature, audio-based approaches support situated attention and embodied listening in urban space (Thibaud, 2015). Compared to visual or screen-based interventions, audio allows attention to be guided while still preserving the openness and continuity of walking. Audio is therefore adopted as a medium that can subtly guide attention while remaining embedded in everyday walking practices, offering an immersive but non-intrusive way of engaging with the city.

5.2.1 Design Principles

Design principles function as an intermediate form of knowledge that connects theoretical understanding with concrete design decisions (Hanghøj et al., 2022). They translate conceptual insights into context-sensitive design directions, while remaining provisional and open to revision as they are tested and refined in practice (Baumgartner & Bell, 2002; Wang & Hannafin, 2005; Ejsing-Duun & Skovbjerg, 2019). In this study, design principles are derived from both the contextual findings and the theoretical framework, particularly embodied perception (Merleau-Ponty, 2012), sensory engagement (Low, 2013; Low & Kalekin-Fishman, 2016), and belonging as a socio-spatial and affective process (Antonsich, 2010). They serve as a bridge between analysis and design, guiding how the problem of belonging is re-framed in design terms.

In DBR, such empirical insights are not treated as final conclusions, but are translated into iterative design principles that inform the development of interventions (Buhl et al., 2022; Baumgartner et al., 2003). Their development reflects the iterative logic of DBR, where design knowledge emerges through continuous movement between theory, empirical engagement, and practical constraints (Buhl et al., 2022; Hanghøj et al., 2022).

This study develops four design principles that translate the identified design problem into directions for the audio walk. Figure 3 shows how each principle is linked to specific theoretical concepts and empirical themes.

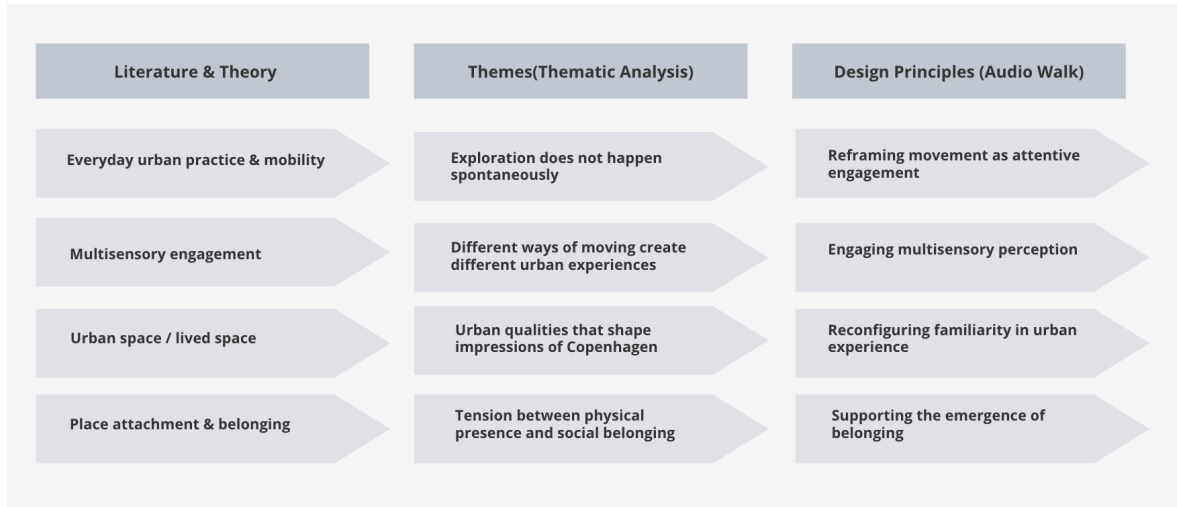


Figure 3. Mapping between theory, themes, and design principles in DBR process

Principle 1: Reframing movement as attentive engagement

This design does not introduce new forms of mobility, but reconfigures existing everyday movement. While international students already navigate the city frequently, their movement is often task-oriented and goal-driven, limiting opportunities for perceptual engagement. Drawing on theories of embodied perception and attention as a process of attunement (Merleau-Ponty, 1945; Ingold, 2021), this principle shifts walking from a mode of navigation to a mode of perception, encouraging participants to engage with their surroundings through attentive presence rather than functional movement.

Principle 2: Engaging multisensory perception

Urban experience is approached as fundamentally multisensory rather than visually dominated. Research on the sensory turn highlights how sound, smell, texture, and atmosphere shape how environments are perceived and inhabited (Howes, 2003; Thibaud, 2015). This is reinforced by the empirical findings, where participants frequently identified auditory cues and atmospheric qualities as central to their experience of Copenhagen. By foregrounding sound and atmosphere, the design aims to reorient attention toward sensory engagement, creating conditions through which familiarity with place can begin to develop.

Principle 3: Reconfiguring familiarity in urban experience

Drawing on Ejsing-Duun's (2016) concept of participatory urbanism, this principle considers how mediated interventions can "make the familiar strange and the strange familiar," thereby reshaping how participants relate to their surroundings. In this study, the audio walk subtly disrupts routine perception by directing attention toward overlooked details, atmospheres, and spatial relations, while also creating moments of recognition within unfamiliar environments. Through this process, participants are supported in gradually reorienting themselves in the city, transforming estrangement into familiarity through situated and embodied experience.

Principle 4: Supporting the emergence of belonging

Belonging is not treated as a predefined outcome, but as something that gradually emerges through embodied and sensory interaction with place (Yuval-Davis, 2006; Antonsich, 2010). Rather than directly addressing social integration, this design focuses on creating conditions for connection through perception and experience. The audio walk therefore guides participants to notice, interpret, and relate to their surroundings, supporting the gradual development of a sense of connection with urban space.

5.2.2 Prototype

The prototype takes the form of an audio walk designed for international students at AAU Copenhagen. It represents an initial design iteration within the DBR process, developed to explore how the design principles can be translated into an experiential format. The current version consists of eleven segments, including opening and closing instructions, with a total duration of approximately 8 minutes. The full script is included in Appendix D.

The design deliberately avoids structuring movement, instead using audio as a guiding layer that shapes attention while preserving the openness and unpredictability of everyday urban walking.

Design of the Audio Prompts

This prototype is structured as a sequence of shifting attentional registers. These registers correspond to the design principles developed in Phase 2, particularly the reframing of walking as perceptual engagement, the activation of multisensory awareness, and the gradual emergence of belonging. The prompts are therefore not designed to "tell" participants how to interpret the city, but to create conditions that encourage greater attention to perception, memory, and spatial awareness during everyday movement.

A central starting point is the reorientation of bodily presence in space. The opening prompt establishes this by suspending immediate direction and allowing participants to enter the experience on their own terms:

"Take a moment to arrive. Look around you. You can start walking in any direction you like. Or not choose at all. Just follow what feels right. I won't guide you from here."

This prompt responds to the observation from Phase 1 that movement in the city is often shaped by clear goals and routines. By avoiding directional instructions at the beginning, it creates a short pause in participants' usual patterns of movement and encourages them to become more aware of their surroundings before continuing to walk. From this point, attention is directed toward the material and sensory qualities of the environment:

"As you walk, notice the surfaces around you. The pavement beneath your feet. Brick, concrete, or maybe wood near the water. If you can, gently touch something nearby."

This prompt translates embodied engagement into practice by responding to the visually focused and efficiency-driven ways of moving. Instead of treating walking simply as a way of getting from one place to another, the prompt encourages participants to experience movement as a bodily and sensory encounter. The focus on touch is particularly important, as the findings suggested that sensory experiences beyond vision often remain in the background.

A further prompt introduces a disruption of habitual movement patterns:

"Choose a direction you wouldn't normally take. Turn where you usually wouldn't. Let your body explore a slightly unfamiliar path."

The prompt works through defamiliarisation, making familiar routes feel slightly new and opening up unfamiliar ones as possible paths. This helps loosen routine movement patterns and allows the city to be experienced in a less fixed and more open way.

In parallel, other prompts work through memory and association as a way of addressing the relational complexity of place experience:

"As you continue, notice if something here reminds you of somewhere else. Maybe not exactly the same – but something similar."

This prompt builds on the finding that belonging can emerge not only through local integration, but also through sensory and affective connections. By drawing on associative memory, it allows familiarity to develop through connections between past and present experiences of place.

A related prompt addresses the social dimension of belonging:

"Being with others is something many people associate with belonging here."

This prompt reframes belonging as something that can be experienced through awareness of co-presence. It shifts attention from inclusion to perception, allowing belonging to emerge as a reflective awareness of being among others rather than being

socially integrated with them.

Finally, the prototype incorporates a design probe element. Its function is not simply to document experience, but to interrupt continuous movement and create a micro-space for reflection.

"Choose something that caught your attention. You can take a photo, or simply stay with it."

In relation to the Phase 1 finding that exploration is often incidental or externally triggered, this prompt a simple structure that encourages participants to pause and notice their surroundings more intentionally.

Design of the Narration

The mode of narration was carefully considered as part of the overall experience design. Early in the process, different options were considered, including using the researcher's own voice or working with a voice actor. However, practical limitations related to time and resources influenced the decision to explore AI-generated narration. At the same time, recent developments in synthetic voice technology made it possible to select from a wide range of voices with relatively natural qualities.

A synthetic AI-generated voice was therefore chosen as an experimental design decision. Rather than introducing a strong personal presence into the experience, the intention was to create a more neutral and unobtrusive form of narration that would direct participants' attention toward the prompts and surrounding environment, rather than toward the identity or personality of the speaker. This decision also reflects an open exploration of how non-human narration may shape embodied and spatial experience within the context of the audio walk.

See Figures 4-6 for an overview of the design logic of the audio prompts, the voice selection process. The final prototype was implemented as a web-based experience. See Figure 7-8 for the development of the prototype interface.

Figure 4.

Conceptual diagram illustrating the design logic of the audio prompts.

It guides a gradual shift in perceptual engagement, moving from sensing → relating → meaning-making → belonging.

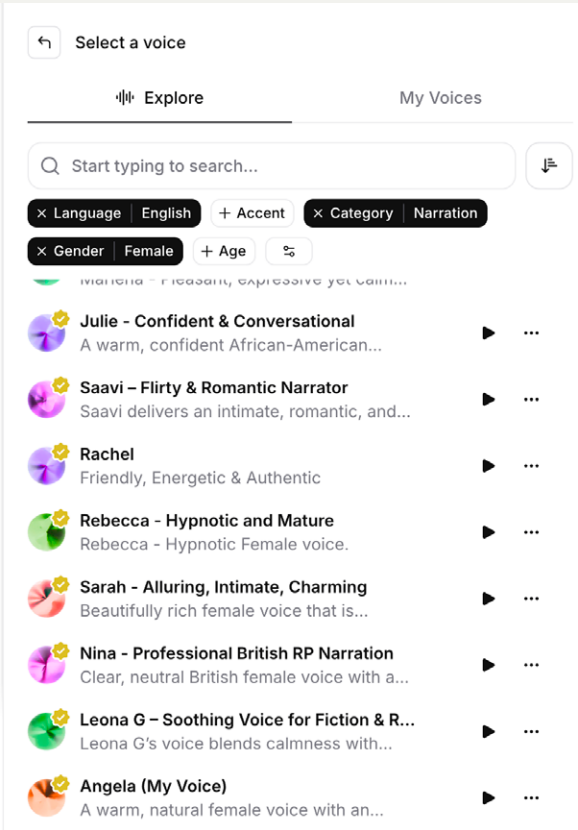
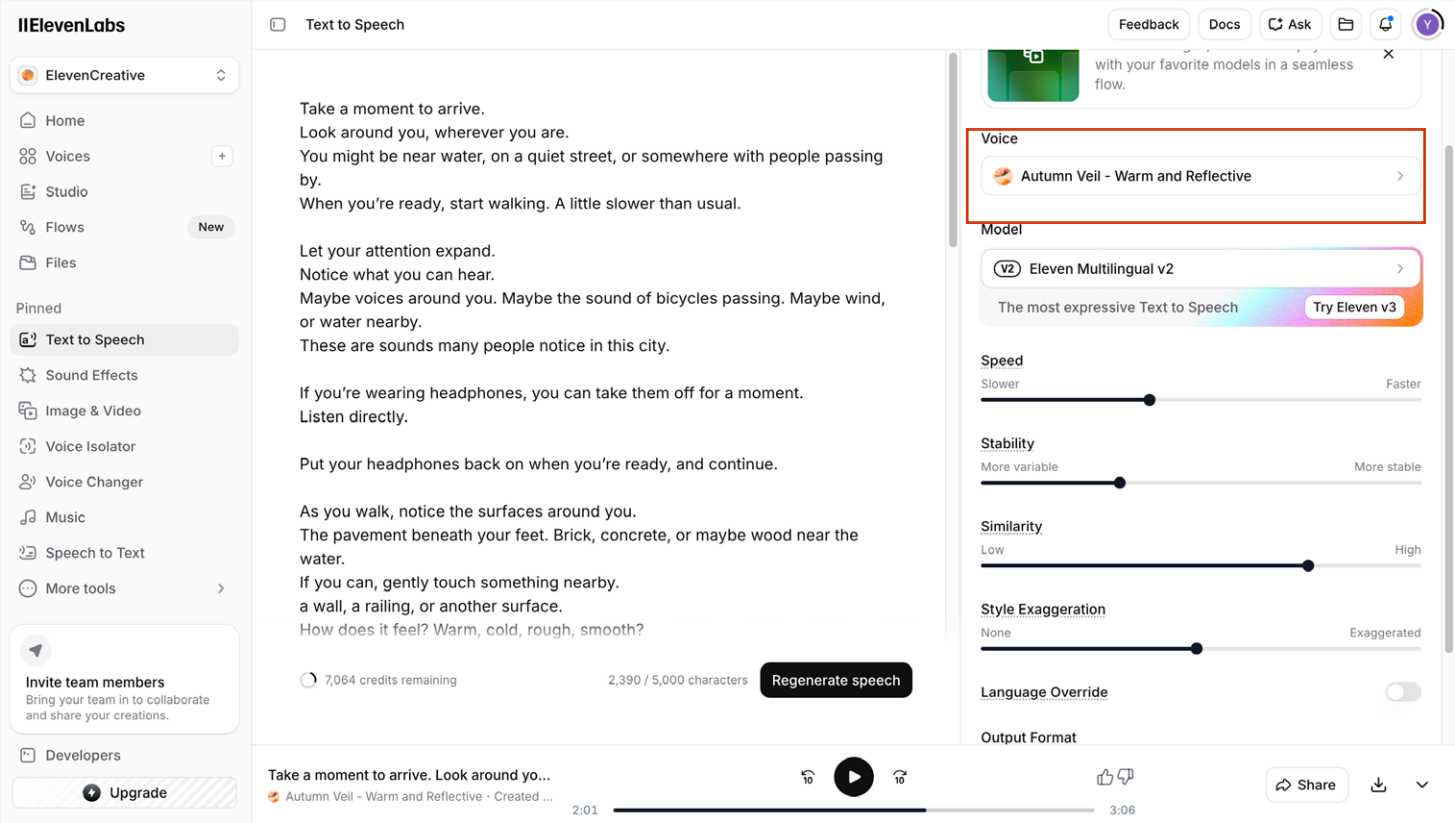
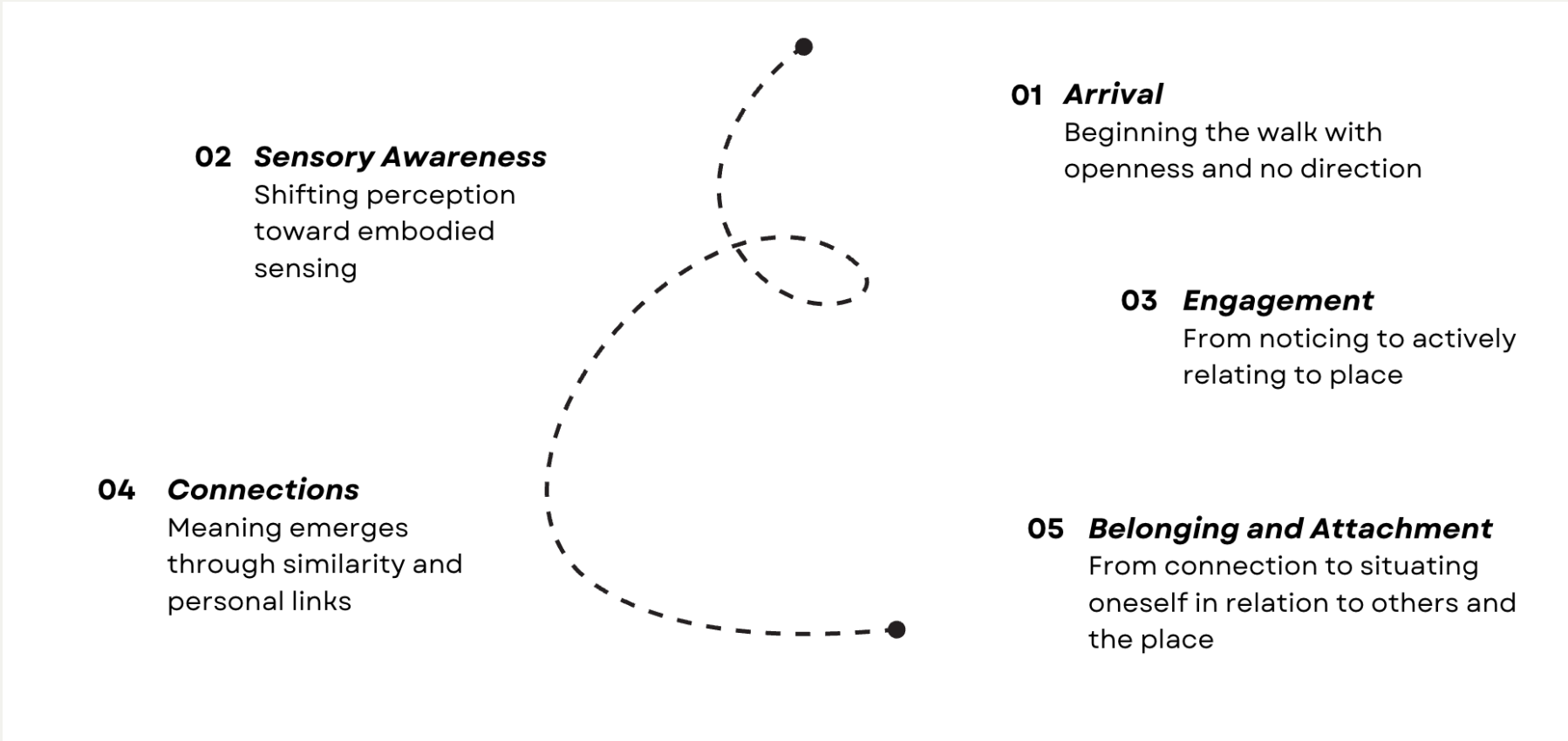


Figure 5-6.

Voice generation process using ElevenLabs, where the scripted audio walk content was uploaded and rendered through selected voice models.

Among all the voice options, a female voice with a calm and gentle tone “*Autumn Ville – Warm and Reflective*” was selected.

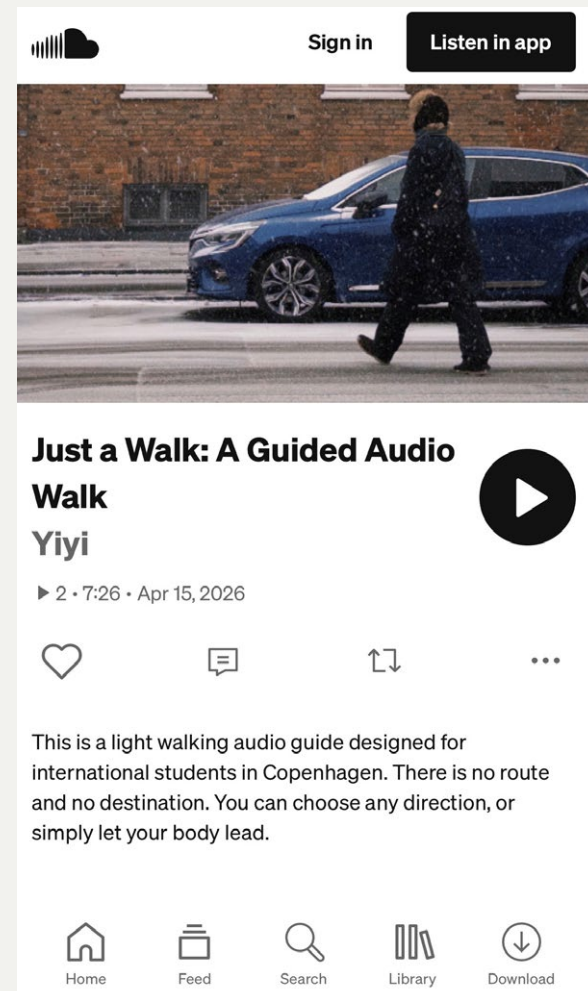
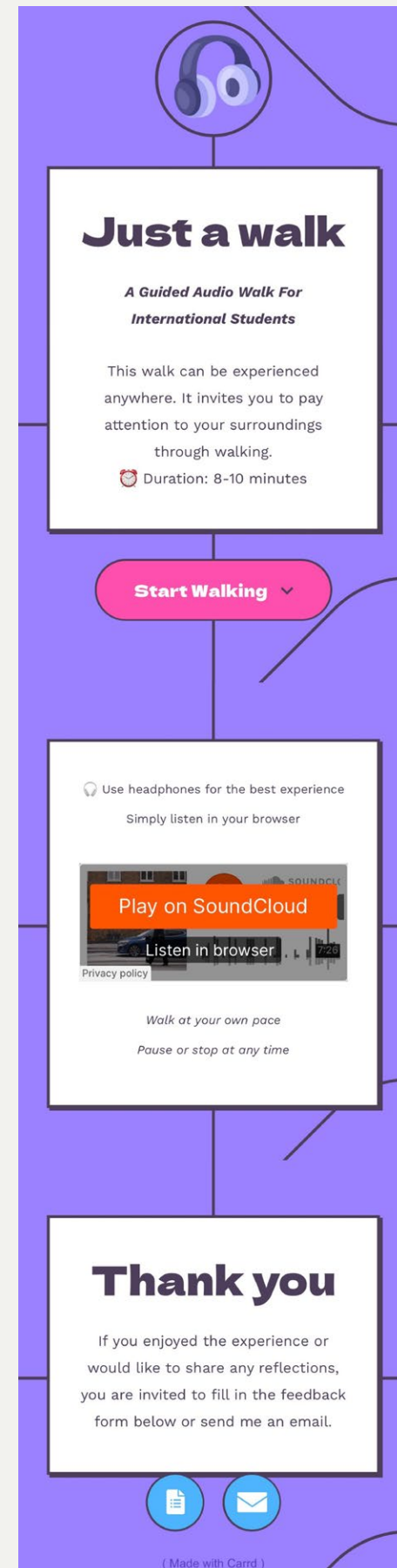


Figure 7.
SoundCloud serves as the original hosting platform for the audio prototype.

Figure 8.
Landing page created using a Carrd template, integrating project information, an embedded SoundCloud player, and feedback channels.

The audio walk prototype is accessible online at: <https://audiowalk.carrd.co/>



5.3 Intervention and Testing

Phase 3 involved situated user testing of the prototype, focusing on both its usability and its capacity to support embodied engagement with urban space. The testing combined think-aloud, design probes, observation, and semi-structured interviews.

Five participants took part in this phase. Four participants completed the testing in person, while one participant completed the session remotely and provided written feedback. The group included three AAU students and two students from other universities. Some participants had also taken part in the interview phase, while others were new to this study phase.

Testing sessions were conducted in different urban locations in Copenhagen. Each audio walk lasted approximately 10 minutes, with full sessions ranging from 30 to 45 minutes, including introduction, usability testing, the walk itself, probes, and interview. Participants used different listening setups, including personal headphones, a portable speaker provided by the researcher, and direct playback.

5.3.1 Usability Testing

Usability testing was conducted to evaluate the interface and technical performance of the audio walk prototype, with a focus on identifying issues related to navigation, playback, and overall usability. The think-aloud protocol was used during the initial stage of testing to capture participants' immediate interpretations of the interface, drawing on established approaches in protocol analysis (Ericsson & Simon, 1993; Nielsen, 1994).

Prior to the walking experience, participants accessed the prototype on their own smartphones and were asked to verbalise their expectations and understanding while interacting with the landing page. This phase helped identify several issues related to clarity of use and technical stability.

During this stage, participants encountered a number of usability problems. Although the interface was designed to be minimal, difficulties arose in relation to audio playback and platform navigation. In some cases, the SoundCloud integration redirected users to external pages or prompted app downloads, which created uncertainty about how to start the experience. The playback bar was also easily

activated unintentionally, leading to accidental skipping of the audio. In addition, some participants tested whether the audio would continue when switching between applications, indicating uncertainty about playback stability during use.

These issues suggest the need for a more stable and simplified playback system, with clearer and more controlled audio interaction, particularly in relation to starting, pausing, and continuing the experience.

After participants completed the walking experience, additional feedback was collected. Here, two participants raised an issue related to the audio instructions. When asked to remove their headphones during the walk, they were unsure when to put them back on and expressed concern about missing the continuation of the audio. This indicates a lack of clarity in the temporal structure of certain instructions. One participant further suggested that vibration or haptic cues could be used to signal transitions, allowing users to stay aware of the progression of the experience without needing to constantly monitor the device.

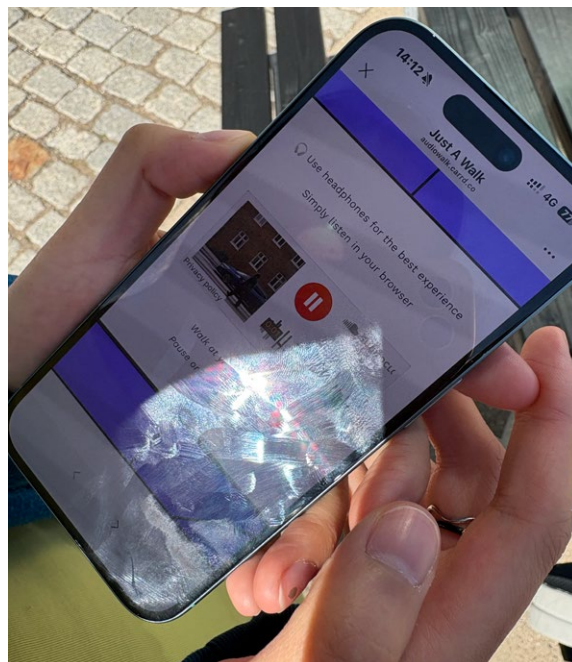


Figure 9. A participant testing the audio walk interface on a mobile device

5.3.2 Behavioral Observations

During the audio walk, participants were encouraged to move freely and determine their own routes while the researcher maintained an observational distance of approximately 20–30 meters. The researcher documented participants' movement patterns, pace, changes in direction, pauses, and moments of physical interaction with the surrounding environment prompted by the audio instructions.

A first recurring observation concerned participants' pace and patterns of movement during the walk. Compared to ordinary urban walking, participants generally moved more slowly and stayed within relatively small areas rather than continuously moving through the city. In locations such as the waterfront near AAU and nearby park environments, participants often paused for extended periods of time. One participant spent much of the experience sitting near the water instead of continuing to walk, which differed from the more movement-based experience originally anticipated in the design of the intervention.

Across all sessions, a clear pattern of spatial contraction emerged. Although the audio walk was designed as a mobile experience, participants generally did not traverse large distances. Instead, most remained within an estimated range of approximately one to two hundred meters over the course of the experience. This suggests that the intervention tended to localise movement rather than extend it across urban space.

A second pattern concerned movement directionality. Participants mainly followed linear and continuous routes during the walk, often maintaining their initial direction of movement. Changes in direction or deviations from the chosen route mostly occurred in response to audio prompts that encouraged participants to take alternative paths or explore unfamiliar areas. Outside of these moments, participants rarely altered their movement patterns on their own. This suggests that, without deliberate guidance, participants tended to rely on habitual ways of moving through the city rather than actively changing their behaviour. At the same time, the observations indicate that intentional guidance can support participants in engaging with the city in less routine and more exploratory ways.

A third observation related to tactile interaction with the environment. One of the audio prompts invited participants to touch nearby objects during the walk. In most cases, participants chose to interact with natural materials such as tree bark, leaves,



Figure 10.
A participant using visual cards to describe their feelings before and after the audio walk.

Figure 11.
A participant's drawing of their overall experience after completing the audio walk.

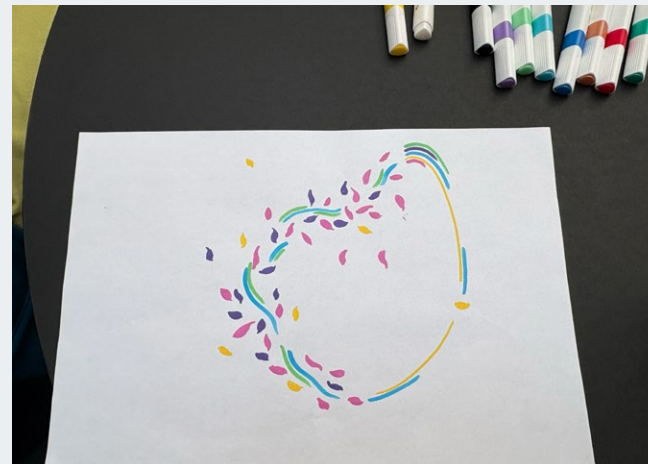


Figure 12-14.
Photographs taken by three participants during their audio walk in response to audio instructions, at Aalborg University and Frederiksberg Have.



or other vegetation. Only one participant engaged with a more urban and constructed object, touching a metal boat mooring along the waterfront. This suggests that when participants were encouraged to engage physically with their surroundings, they were generally more drawn to natural elements than to built urban materials. Some participants also showed brief hesitation before deciding what to touch, suggesting that this kind of tactile interaction is not usually part of their everyday movement through the city.

5.3.3 Design Probes and Interviews

Participants undertook the audio walk independently in a location of their choosing. Upon completion of the walk, a semi-structured interview built on both the lived experience and the probe materials, using participants' photographs and drawings as elicitation devices to support situated reflection.

Six key findings emerged across participants' accounts, each illuminating how the audio walk mediated embodied engagement with the urban environment.

Bodily awareness and engagement with the surrounding

Several participants described a heightened sense of physical presence during the walk, noting feelings of relaxation and increased focus that they did not typically associate with moving through the city. The quality of this experience led many to draw comparisons with practices such as meditation or yoga, where structured guidance is used to cultivate bodily awareness. However, there is a meaningful distinction to be drawn here. Meditation and yoga typically direct attention inward and away from the surrounding environment. The audio walk, by contrast, uses the body as a starting point for moving outward: bodily awareness is not the end goal but a condition for more open and attentive engagement with the urban environment. The body becomes, in Merleau-Ponty's (1945) terms, the medium through which the city is encountered rather than an object of attention in itself.

U2 suggested making this logic more explicit by adding a short body-oriented sequence at the opening of the walk, inviting participants to take several deep breaths or gently stretch before beginning to move, so that attention is first drawn inward toward the body before being gradually redirected outward toward the city. This suggestion is aligned with the design's underlying logic and will be considered as a concrete

direction in the next iteration of the prototype.

The shift in attention also manifested at the level of action. Participants performed physical actions they described as outside their everyday habits, including crouching to touch surfaces on the ground and stopping to observe strangers passing by.

These departures from habitual movement point to how the audio prompts were able to reshape not only perception but behaviour, shifting walking from a mode of navigation toward a more exploratory and tactile form of engagement. Several participants also highlighted the prompt inviting them to choose a direction they would not normally take as especially memorable. This small redirection led participants into less familiar corners of their surroundings, creating conditions for unexpected encounters. One participant noticed a letterbox they had never seen before and found themselves curious about the text written on it, a detail that would almost certainly have remained unnoticed on a routine walk. This example illustrates how a minor disruption to habitual movement patterns can open up new perceptual possibilities, connecting directly to the design principle of reconfiguring familiarity in urban experience.

Attentional redirection during the walk

Building on this bodily grounding, participants consistently described a shift in how their attention moved outward toward the surrounding environment. In everyday urban walking, attention is often absorbed by internal thoughts or fragmented distraction. The audio prompts did not simply add information to the walking experience; rather, they reorganised how participants oriented themselves within it. This shift can be understood through Ingold's account of attention as a situated process of attunement, in which perception emerges through embodied engagement with the environment rather than detached cognitive selection (Ingold, 2021). From this perspective, attention is not an internal resource but a relational mode of being-in-the-world that can be temporarily reconfigured.

U3 characterised her usual walking state as being “*very easily immersed in my own mental world,*” with limited awareness of external surroundings. Against this background, the audio prompts appeared to interrupt this inward drift by introducing an externally oriented attentional structure. As she noted, during the walk she was “*listening and following the instructions, and not thinking about other things,*” which



Figure 15.
A participant in Nørrebro touching roadside plants while following the instruction.

Figure 16.
A participant in Sydhavn touching an anchor by the waterfront following the instruction.



Figure 17-18.
A participant in Frederiksberg Have taking photographs and interacting with the surroundings following the instructions.

created a noticeably different attentional configuration compared to her habitual walking experience.

As a result of this reconfiguration, participants began to notice aspects of the urban environment that would normally remain outside conscious awareness. P4 became newly aware of the speed at which cyclists move through Copenhagen's streets; another described the park as visually more striking after the walk, as though sensitivity to light and shadow had been recalibrated. Attention here is therefore not only redirected outward but redistributed across sensory modalities, producing a heightened attunement to environmental variation.

This perceptual shift was particularly evident in auditory and multisensory experience. U3 reported that after briefly removing the headphones, she was suddenly able to distinguish layered soundscapes such as *“birdsong, fountain water, people talking, and sounds from the distant trees”*. Another participant noted engaging sensory channels that are typically under-attended during walking, *“I was breathing fine. And I was trying to smell something, and the wind was fresh”* (U1). These observations resonate with Thibaud's (2015) account of urban perception, in which many sensory qualities of the city remain in the background of ordinary experience until attentional conditions are altered, allowing previously unnoticed elements to emerge into awareness.

These findings suggest that the audio walk did not function by introducing new environmental content, but by reorganising the conditions under which existing sensory information becomes perceptible. In this sense, it temporarily reshaped the relationship between attention and the urban environment, enabling a shift from backgrounded sensory experience to foregrounded awareness.

Making the strange familiar

Perhaps the most direct connection to the study's core concern with belonging emerged through a different kind of noticing: moments in which something in the urban environment unexpectedly triggered a connection to a place or experience from elsewhere in participants' lives.

U2's experiential drawing makes this particularly visible. Her visualisation distinguishes between different layers of experience through colours: blue and green

refer to the immediate environment and seasonal atmosphere, while yellow marks moments that only became noticeable through following the audio instructions. What is significant is not only that these elements were newly noticed during the walk, but that they did not remain bound to that moment. She describes how they continued with her after the experience ended, noting that *“something new had already been added to my experience.”* The walk therefore does not simply redirect attention in real time; it leaves behind a residue of perception that accumulates. Experience here is not reset when the walk ends, but quietly extended, as what is noticed begins to reorganise what is subsequently available to notice.

This sense of accumulation is closely entangled with how familiarity is produced through memory. While walking, she encountered elements in the city – such as flowering trees – that immediately evoked associations with cherry blossoms in her hometown. Yet this connection did not produce distance or estrangement. Instead, it became part of how she experienced belonging in Copenhagen. She explained this through her everyday tendency to actively construct familiar environments, including arranging her living space in ways that resemble earlier homes. From this perspective, familiarity is not anchored in a single geographic context but arises through the ability to recognise continuity across different settings.

What this case makes visible is a subtle shift in how familiarity operates during the walk. It is neither something already contained in the city nor something simply projected onto it. Instead, it emerges through two processes that continuously interact during movement: perception that gradually accumulates over time, and memory that becomes activated through environmental resonance. The experience of walking becomes the site where these two processes meet, allowing the city to be experienced not as unfamiliar or familiar in advance, but as something that is continuously made familiar through engagement.

The materiality of the AI-generated voice

A final theme concerns the design medium itself. Since the audio walk is an embodied experience mediated through sound, the quality and character of the voice became an important aspect of the experience. A central tension emerged here: while the audio walk aims to encourage human attention, bodily presence, and sensory awareness, the prompts were delivered through a synthetically generated voice.

Most participants recognised the voice as AI-generated but reported that this did not significantly reduce their engagement with the experience. Some described the voice as emotionally flat, while others compared it to cinematic narration. Several participants described the voice less as an autonomous agent and more as a medium conveying instructions written by a human author. However, not all responses were positive. One online participant expressed a preference for a human voice, commenting: *“It sounded like an AI voice, and it felt like I’m interacting with a robot, that can’t actually understand humans. I wish it was a real human voice”* (U5).

Overall, the findings indicate that most participants were more focused on the prompts themselves and the actions they were invited to perform than on the specific qualities of the voice. At the same time, the responses also suggest that the voice still influences how the experience is perceived. Where possible, a human voice may be preferable to an AI-generated voice in supporting a stronger sense of connection and engagement during the experience.

5.3.4 Stakeholder Feedback

A feedback session was conducted with Deborah, the AAU International Office. Deborah completed the audio walk herself using headphones before the session, and the discussion focused both on her personal experience of the walk and on broader reflections from a stakeholder perspective.

One of the strongest impressions mentioned was that the audio walk felt “grounding” and calming. This feedback also aligned with the original intention of the project, which aimed to encourage slower observation, emotional reflection, and sensory engagement rather than providing informational guidance. Deborah also pointed out that the experience did not currently feel exclusively designed for international students. Instead, it could also work for local students, Danish residents, or people who simply wanted a more reflective way of experiencing the city. This reflects the initial design intention, which prioritized emotional and embodied experience over context-specific information, but also made the prototype less targeted toward a specific user group.

Another topic discussed was the relationship between emotional reflection and cultural specificity. Deborah noticed that a few moments in the narration referenced Danish

social culture. She suggested that these elements could be expanded further to connect with everyday cultural experiences in Denmark. However, it raised the concern that adding too much explanation or practical information could make the walk feel overly instructional. For this audio walk, maintaining a balance between reflection and contextual guidance was an important consideration for future iterations.

Similar to previous participant feedback, Deborah described some uncertainty about when users should remove or put their headphones back on. She also reflected on the pacing of the experience and mentioned that the eight-minute duration felt relatively short. According to her feedback, participants may need more time to gradually settle into the atmosphere and rhythm of the walk before fully engaging with the reflective prompts.

5.4 Iteration and Reflection

Interface Improvements

Feedback from user testing indicated issues related to usability and continuity of the listening experience, particularly in relation to interaction clarity and the embedded audio playback. In response, the updated interface prioritises a simplified structure designed specifically for the audio walk experience. It reduces visual and interactive complexity by focusing on essential information and minimal playback controls, such as play/pause and a basic progress indicator.

At the same time, the design ensures that audio playback can continue when users switch between phone functions (e.g. camera use) and can be paused at any point, supporting a more seamless listening experience. See Figure 19 for the redesigned interface prototype. At this stage, it functions as a conceptual model, which could be further developed into a lightweight web-based implementation in future iterations.

Prompt Re-design

The redesign of the prompts was guided by the original intention of the project, which was to prioritise embodied engagement, attentional awareness, and the temporal experience of moving through urban space, rather than the delivery of informational content. Based on insights from both user testing and stakeholder feedback, several aspects of the prompt structure were improved to better support this intention.

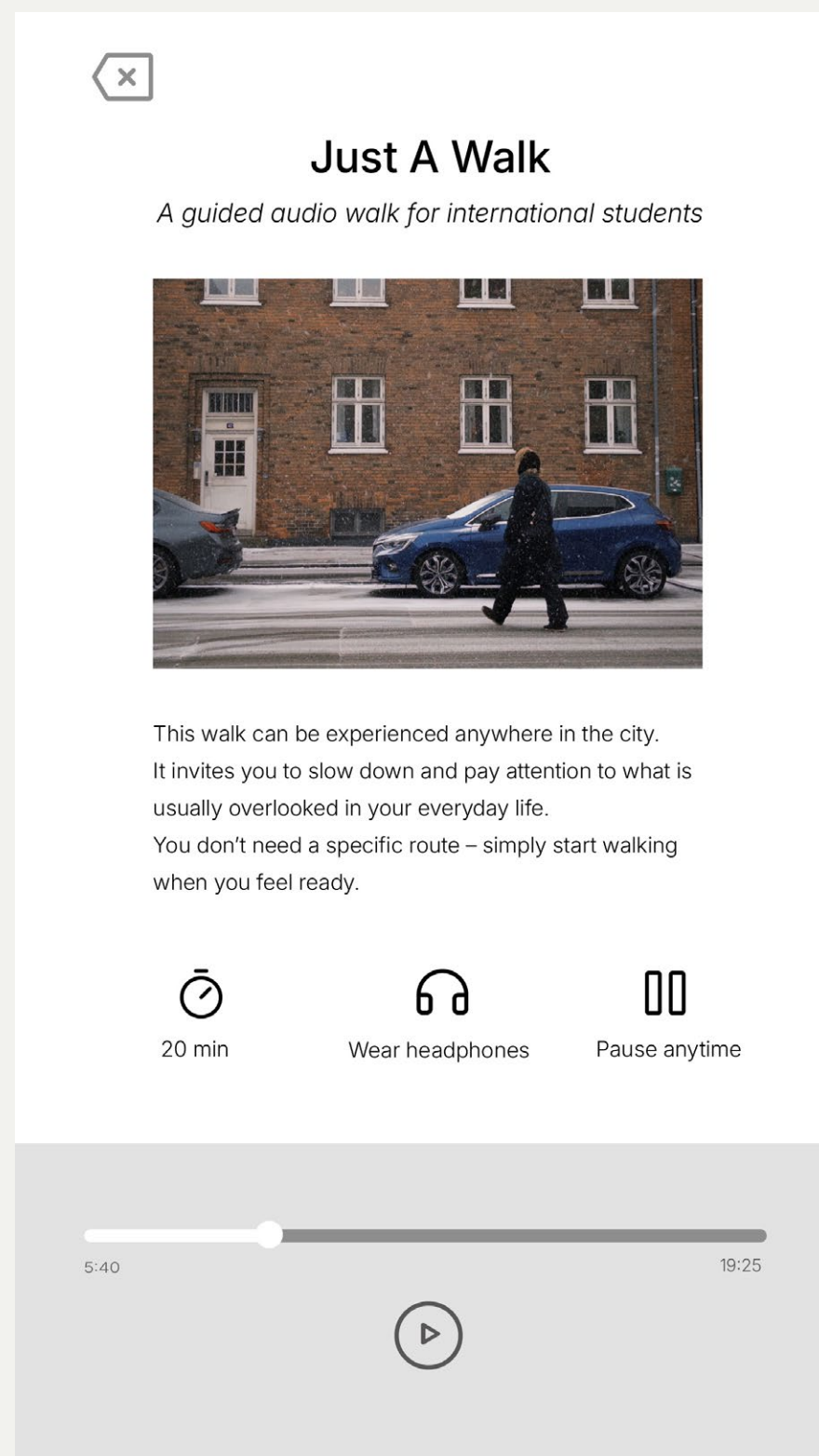


Figure 19. Iterative interface prototype for the audio walk (mobile preview)

One of the central changes concerns pacing and participant autonomy. In the revised design, the duration of embedded pauses has been extended, allowing more time for orientation within the experience. In addition, some prompts explicitly ask participants to pause the audio, engage with their surroundings (e.g. taking a photo or removing headphones), and resume playback when ready. This clarifies these moments and reduces uncertainty about their duration. The revised design gives participants greater control over pacing, supporting a more flexible and self-directed listening experience.

Several new prompts have also been introduced to strengthen the embodied dimension of the walk. A short bodily awareness section is added at the beginning, inviting participants to notice their physical state before starting to move. This is not only intended to support body awareness, but also to deliberately shift participants out of their habitual mode of everyday walking. It functions as a design choice to prepare participants for a more attentive and reflective mode of engagement with the city.

A further set of prompts addresses the specific urban context of the walk. These prompts do not provide direct cultural information about Copenhagen. Instead, they guide participants in noticing elements of the city that may feel unfamiliar or locally specific. The aim is to encourage a light, open-ended connection to place without adopting the instructional tone of a city guide.

These changes also affect the overall duration of the experience. The original prototype lasted approximately 7–8 minutes, while the revised version extends to around 20 minutes. This is achieved through expanded temporal spacing and a greater emphasis on reflection within each segment, not through additional content. The full script of the revised version can be found in the Appendix D2.

Not all feedback was directly incorporated into the redesign. While some users and stakeholders suggested including more informational or explanatory content about Copenhagen, this direction was not adopted, as it would shift the focus of the audio walk away from embodied attention. Instead, the revision prioritised changes that support pacing, bodily awareness, and sensory engagement.

Voice and Narrative

In a more developed version of the project, a human voice would likely serve the experience better. The quality and feel of narration has a direct effect on how participants relate to the walk. A human voice carries a different kind of warmth and nuance that is difficult to replicate through AI generation, particularly in an experience that asks participants to slow down and pay close attention to their surroundings.

The choice of narrator is itself a design decision that would require careful consideration. Factors such as gender, vocal quality, pacing, and affective tone all influence how guidance is perceived. These qualities are not fixed, and finding the right voice for this kind of experience would involve iteration and testing, much like any other design element. This remains an open area for future development.

6. Disucussion

The findings from the DBR iterative process invite a reflection that moves beyond usability and toward the more fundamental question at the heart of this study: how might embodied and sensory experiences shape international students' sense of belonging in urban environments.

Rather than answering this question directly, the testing phase revealed something more nuanced – that the audio walk did not produce belonging as an outcome, but created conditions under which belonging could begin to emerge. This distinction is central to understanding what the prototype contributes as a design intervention, and it provides the organising thread for the discussion that follows.

6.1 Reflections on Belonging

From embodied attention to spatial relation

The most consistent finding across the testing phase was a reconfiguration of how participants moved through and attended to their surroundings. In everyday urban walking, attention is often absorbed inward, and movement remains largely goal-oriented and unreflective. The audio walk interrupted this pattern. Participants slowed down, stayed within relatively contained areas, and began to engage with the environment through sensory channels they would not normally activate: listening deliberately, touching surfaces, noticing light and shadow, smelling the air. This

was not a dramatic transformation but a quiet shift in register, from navigation to perception. This shift can be understood through Ingold's (2021) account of attention as a situated process of attunement: rather than a fixed cognitive filter, attention is a relational and embodied capacity that can be temporarily reconfigured through engagement with the environment.

What the behavioral observations make particularly visible is that this shift was spatial as well as attentional. Participants did not traverse large distances; instead, they remained close to their immediate surroundings. This spatial contraction is in fact consistent with the initial design intention of the intervention, which was to encourage participants to slow down and develop a more situated engagement with their immediate surroundings. This suggests that forming a connection to a city does not necessarily depend on covering large distances or moving through multiple locations. Instead, slower and more contained forms of movement can also support the development of attachment.

In this sense, the audio walk operated less as a guide through urban space and more as a device for intensifying the relationship between a body and its immediate environment. This matters because belonging, understood as an embodied and perceptual process, does not begin with social integration or community membership. It begins earlier and more quietly: in the moment when an environment starts to feel inhabited rather than merely occupied, when anonymous space begins to carry personal weight (Tuan, 1977; Relph, 1976). The slowing down that the audio walk produced was therefore not incidental. It created the minimum condition for this kind of relation to form.

From spatial relation to a sense of belonging

As attention settled into the immediate environment, something further began to occur. The city did not simply become more visible; for some participants, it began to feel more familiar. But this shift was uneven. Sensory awareness did not automatically translate into a sense of connection. In some moments, increased attentiveness seemed to produce a quality closer to estrangement than intimacy: the city became more sharply present, more textured and detailed, without necessarily feeling more one's own. Sensory attention, in other words, is a precondition for belonging but not its guarantee. It opens a space in which connection becomes possible; it does not fill

that space on its own. As Thibaud (2015) suggests, the sensory qualities of urban environments often remain in the background of ordinary experience, and bringing them into awareness does not in itself determine how they will be received or what meaning they will carry.

Where connection did emerge, it often did so indirectly, through memory rather than perception alone. For example, a flowering tree in Copenhagen could evoke a childhood memory of a similar tree elsewhere. In such moments, the city was neither immediately familiar nor unfamiliar, but became familiar through the encounter between present perception and personal history. Belonging, in this sense, was not located in either place, but emerged in the relation between them. This suggests a broader understanding of belonging that runs through this study. Here, belonging is not primarily experienced as social integration, but as a shift from spatial detachment toward perceptual and affective connection. It occurs when the environment becomes meaningfully perceptible, when the body enters into a felt relation with place, and when personal memory becomes activated through present experience.

As the testing phase progressed, the probe materials increasingly functioned more as reflective traces of participants' subjective relationships with space. This subtly shifted the research process away from measuring the effectiveness of the intervention alone and toward interpreting how meaning and connection were experienced and articulated by participants. Here, a productive tension emerged between the project's DBR-oriented structure and the more open-ended reflective qualities often associated with artistic research approaches. DBR provides a rigorous framework for iterative intervention and evaluation, but the most significant insights generated in this phase emerged not from assessing whether the prototype performed as intended, but from attending to what participants' probe materials quietly revealed about the experience of moving through and relating to urban space.

Belonging as emergent rather than designed

What the testing phase ultimately reveals is not that belonging can be designed as a predictable outcome. Instead, design can shape the conditions in which moments of connection, familiarity, or recognition may emerge. This is an important distinction. It has implications not only for how this project is evaluated, but also for how designing for belonging is understood as a research and practice concern more broadly.

Conventional design evaluation tends to ask whether an intervention meets a defined need or produces a consistent, measurable outcome across users. These are reasonable questions for many design contexts. But belonging is not that kind of subject. It is deeply personal, shaped by individual history, memory, emotional disposition, and the particular quality of attention a person brings to a given moment. Belonging, as Yuval-Davis (2006) and Tuan (1977) suggest, is not a stable property that can be produced or delivered, but a relational and processual condition that unfolds through situated interactions between bodies, memories, and environments.

The same prompt that led one participant to notice birdsong for the first time led another to recall a childhood home through a flowering tree. A tactile encounter with a surface meant something different to each person who experienced it. This variability is not a weakness in the data, nor a limitation of the prototype. It is the inherent condition of belonging as a phenomenon. Belonging does not operate uniformly across subjects, and a design intervention that produced the same affective response in every participant would likely have achieved something other than belonging.

This means that effectiveness becomes difficult to define when the object of design is emotional, relational, and experiential. As Merleau-Ponty (1962) argues, experience is always embodied and situated. It is shaped by the body's position in space, personal history, and the sensory conditions of the present moment. From this perspective, designing for uniform outcomes does not produce belonging. Instead, it risks bypassing the very subjectivity through which belonging is formed.

What then becomes important is a different question: not whether the intervention “worked” in a measurable sense, but whether it opened up conditions for a different quality of urban experience to emerge, even if only temporarily. This reframes the role of design in this project.

6.2 Design Beyond Solutions

Design problems concerned with human experience are inherently indeterminate and cannot be fully resolved in advance (Buchanan, 1992; Rittel & Webber, 1973). At a methodological level, this project takes that indeterminacy seriously. Rather than treating design as a problem-solving tool aimed at predictable outcomes, it treats

design as a way of producing situated conditions for experience. Design, in this sense, functions less as a solution and more as a framing device: it sets conditions, but does not determine what emerges from them.

Within this framing, meaning is not embedded in either the environment or the design itself. It emerges through the encounter between body, context, and designed situation (Massey, 2005; Sheller & Urry, 2006). The audio walk operated on this basis. It slowed participants down, redirected attention outward, activated sensory channels typically backgrounded in everyday urban movement, and created small openings through which memory and personal association could enter into contact with the environment. However, the same conditions that produced a moment of translocal recognition for one participant produced heightened attentiveness without intimacy for another. Design, understood in this way, operates less as a deterministic system and more as an invitation.

Accepting this uncertainty is not a concession, but a more honest account of what belonging research requires. Belonging emerges differently across people, moments, and environments, and as Massey (2005) argues, place itself is never fixed but always in the process of being made through movement, encounter, and relation. Belonging cannot be stabilised into a universal design formula or reliably reproduced across contexts. This project does not resolve that instability. Instead, the study gradually moved away from the question of whether the prototype produced belonging, toward the more generative question of what kinds of conditions make belonging more available.

This shift aligns with broader developments in contemporary design research that move beyond problem-solving logics toward more speculative and relational approaches. In these perspectives, the value of design is not primarily located in the production of measurable outcomes, but in its capacity to open conditions for reflection, experience, and alternative ways of relating to the world (Dunne and Raby, 2013; Buchanan, 1992; Fry, 2009).

From this perspective, this project does not aim to resolve spatial estrangement or to verify whether belonging has been successfully produced. Instead, it explores how design can temporarily reconfigure the conditions under which experience takes place. The audio walk is therefore understood not as a solution, but as a situated intervention

that makes certain forms of attention, memory, and relation more likely to emerge.

6.3 Future Directions

Based on the discussion with Deborah from the AAU International Office, the project also prompted reflections on how the audio walk could potentially be situated within future university contexts.

One possible direction is integrating the audio walk into existing student-facing materials, such as orientation booklets, printed cards, or QR-code-based materials distributed in campus. However, Deborah also pointed out that universities already provide a large amount of practical information to students, and that introducing additional materials within official channels may be difficult. In this sense, the audio walk may function better as an optional and supplementary resource. Another possibility is promotion through social media platforms, such as AAU's official Facebook groups or Instagram accounts. This could potentially allow the project to reach students in a more informal and accessible way.

A second direction concerned the possibility of organising the audio walk as an offline activity. Participants gather at a specific time, complete the walk individually, and afterwards engage in a group reflection. Existing university activities, such as the Study Environment Day, could be considered as possible contexts for introducing the audio walk as part of a wider programme of student wellbeing or social activities.

Beyond the AAU context, the audio walk can also be extended to a wider range of newcomers in Copenhagen. Since the current audio walk is designed as a non-site-specific experience, it could potentially be adapted to other universities. More broadly, it proposes an alternative mode of engaging with the city that moves away from information-driven navigation and destination-oriented behaviour. In the future, it could also be developed as a resource for visitors to Copenhagen, for example through integration into mobile applications, online platforms, or collaborations with tourism or cultural organisations.

6.4 Limitations

Firstly, the audio walk is mediated through mobile technology, which shapes embodied engagement. Although the experience aimed to encourage sensory awareness of urban space, participants still interacted through a digital interface, which may divide attention between the environment and the device. In addition, while the prototype was designed as a non-site-specific experience, this may reduce contextual responsiveness, as the prompts do not adapt to specific environmental conditions.

Secondly, there are limitations related to research design and participant recruitment. While the project was initially developed for AAU international students, the final participant group became more heterogeneous, including participants from other educational institutions in Copenhagen. At the same time, the prototype evolved into a more transferable experience rather than one tied to the AAU context. As a result, some findings may not fully reflect AAU international students' lived experiences, and the project may have a weaker connection to AAU as a stakeholder.

Another limitation concerns participant composition and researcher positionality. Although participants of different genders were invited, all five participants in the testing phase were female. As the researcher is also female, this may have shaped certain aspects of interpretation related to embodied and emotional responses in urban space. This is particularly relevant in relation to the selection of the narrative voice, which was female, as well as the way emotional connection to the city may be experienced differently across genders. Due to limited time, no male participants were ultimately included in the testing phase, which means that perspectives from male users are not represented in the findings.

7. Conclusion

This research began with a question about belonging: why many international students in Copenhagen experience feelings of spatial and social detachment in the early stages of living in the city, and what design might offer in response. Rather than approaching belonging mainly through social integration or cultural adjustment, I became increasingly interested in how it might emerge through embodied and sensory experience. Drawing on phenomenological perspectives, mobilities studies, and theories of relational space, the project explored belonging as something that develops through attention, sensory familiarity, and felt relations to place. The audio walk was developed as the central intervention because it allowed these conditions to be explored through movement, perception, and situated engagement with the city.

A key finding is that belonging is not dependent on social integration alone. Participants did not necessarily need friendship, community membership, or cultural familiarity to experience moments of connection with their surroundings. Instead, these moments often emerged through sensory recognition, memory, and embodied encounters with place. Small sensory events – noticing a familiar tree, touching urban surfaces, or paying attention to surrounding sounds – became meaningful points of relation to the city. This suggests that belonging may develop through everyday sensory and spatial experience in ways that are often overlooked in more socially oriented accounts.

Another important observation concerns the relationship between movement and perception. Participants generally described their everyday movement as task-oriented and destination-driven. During the audio walk, slowing down and attending more closely to sensory details changed how the city was experienced. Movement therefore does not only structure navigation, but also shapes how environments become perceptually and emotionally available. Even subtle shifts in pace and attention sometimes produced moments of familiarity or connection.

Together, these findings suggest that design does not produce belonging as a stable outcome. Rather, it can contribute to shaping conditions in which belonging may emerge in situated and temporary ways. The audio walk offers a structured opportunity to encounter the city differently – to slow down, notice, remember, and become more aware of one’s sensory relation to place. It did not aim to generate a specific response, but to open a space in which different relations to the city could become possible.

DBR proved useful for working with this kind of open-ended and situated inquiry. Its iterative structure allowed the design to evolve through cycles of testing and reflection in real urban contexts, and it supported a close connection between theoretical perspectives and design development. At the same time, the methodology made it possible to work with uncertainty and variation in lived experience. In this project, DBR functioned less as a fixed procedure and more as a way of staying responsive to how meaning emerged in practice.

At the same time, the project involved reflecting on the positioning of users and the designer within the DBR process. Iteration in this research was not a direct translation of user feedback, but an interpretive process in which feedback was considered in relation to the intentions of the work. Rather than functioning as a user-driven optimisation model, DBR is understood here as a situated practice in which design decisions emerge through negotiation between user perspectives, contextual conditions, and the researcher’s interpretive role.

While the project began within the context of AAU Copenhagen and the experiences of international students, the questions it engages with extend beyond this setting. Experiences such as unfamiliarity, habitual movement, sensory disconnection, and difficulty forming relations to place are not limited to student life, but are increasingly common in conditions of mobility and temporary urban living. In this sense, the

project points toward the possibility of small-scale, sensory-oriented interventions that do not aim to solve urban detachment, but to gently open alternative ways of being in and relating to the city.

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Appendices

Appendix A. Survey Materials and Results

A1. Survey Questionnaire

The survey was designed and distributed using Google Forms. The full survey instrument is included in this appendix.

Experience Copenhagen: A Short Survey for International Students

Hi! I'm a master's student in Visual Studies and Art Education at Aalborg University, and I'm doing a design project exploring how international students experience Copenhagen.

This survey takes just a few minutes. Your responses will help me understand how international students feel when they first arrive and inform the design of a self-guided audio experience. Your participation is voluntary and anonymous. You can skip any question.

At the end, you may leave your contact if you'd like to try the audio walk or chat further. You're also welcome to reach me directly at ycai25@student.aau.dk

Q1. How long have you been in Denmark?

Less than 6 months

6–12 months

More than 1 year

Q2. During your first months in Copenhagen, did you feel like you “belonged” here?

No / Not at all

Somewhat / Neutral

Yes / I felt a sense of belonging

Q3. What made it difficult (if anything) to feel connected to the city?(Multiple choice)

I didn't know where to go

I mostly stayed indoors

Language or cultural differences
I didn't feel emotionally connected
I felt lonely
Nothing specific
Other (please specify)

Q4. What helps you feel a sense of belonging in a city? (Multiple choice)

Having a daily routine
Finding places or elements that reflect my own culture
Finding small local places (cafés, parks, shops)
Feeling safe walking alone
Spending time in nature/green spaces
Recognizing familiar sounds
Engaging with multicultural or diverse environments
Exploring slowly at my own pace
Being with friends
Seeing people similar to me / from my culture
Other (please describe)

Q5. When you walk alone in Copenhagen, what kind of environments make you feel most comfortable?

Quiet residential streets (less traffic, fewer people)
Lively streets with cafés, shops, and people
Parks or green areas
Waterfront areas (harbor, lakes, canals)
Small hidden streets or local neighbourhood spots
Areas with cultural diversity
Open public squares or larger urban spaces
I'm not sure
Other (please describe)

Q6. Which sounds do you usually notice when walking in the city? (Select all that apply)

Traffic / cars / buses
Bicycle bells
Birds / nature sounds
People talking
Music / streets
Wind / water sounds
Other (please specify)

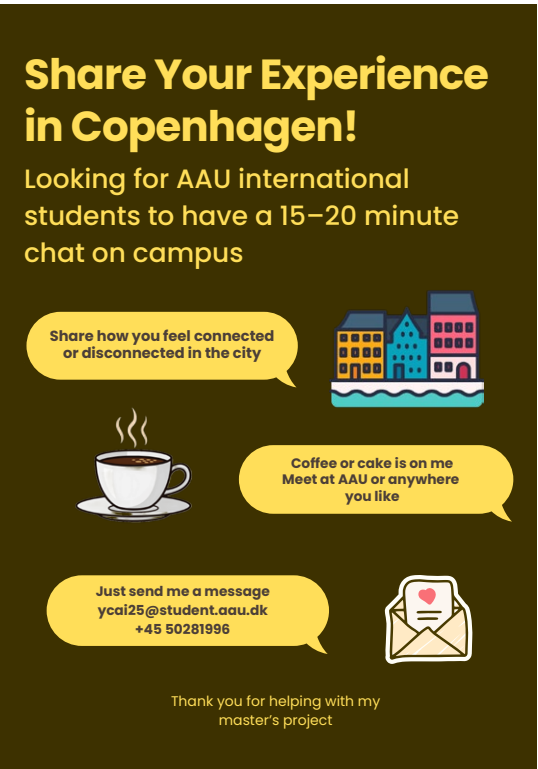
Q7. Which type of self-guided experience would you find most interesting?

Learning stories about historical areas
Discovering public art and open public spaces
Mindful walking, noticing my surroundings and inner feelings
Not interested in any of these
Other (please specify)

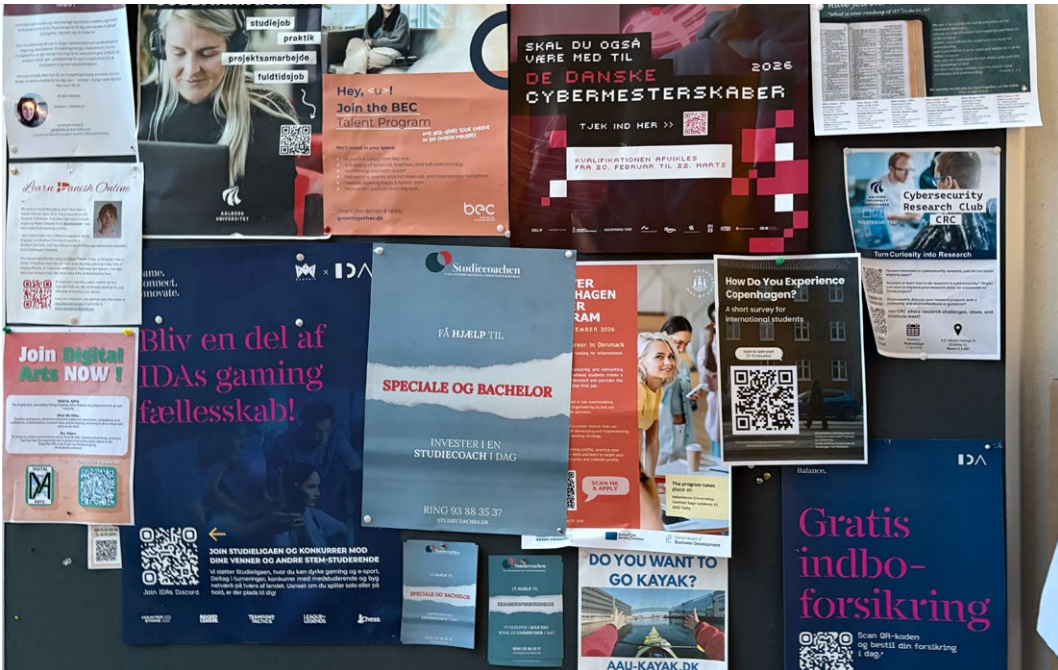
Thank you for participating in this survey. I am developing an audio-based prototype as part of my thesis. If you are interested, I would be happy to invite you for a short chat and a brief prototype testing session.

If you would like to take part, please feel free to leave your contact information(email/ WhatsApp/phone number) below. Your details will only be used for this project and will not be shared.

A2. Survey Recruitment Poster

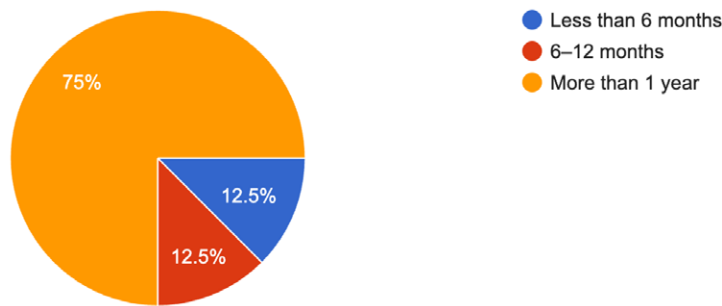


Posters placed in AAU CPH campus for participant recruitment and questionnaire distribution

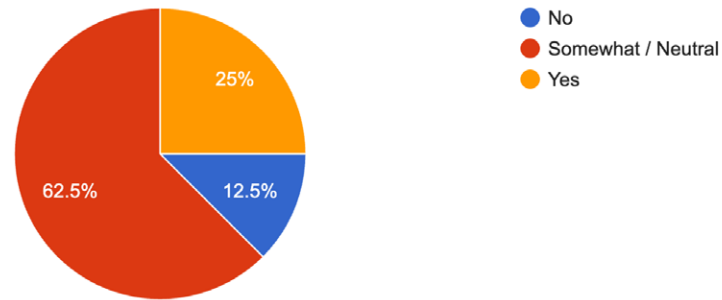


A3. Survey Results Summary

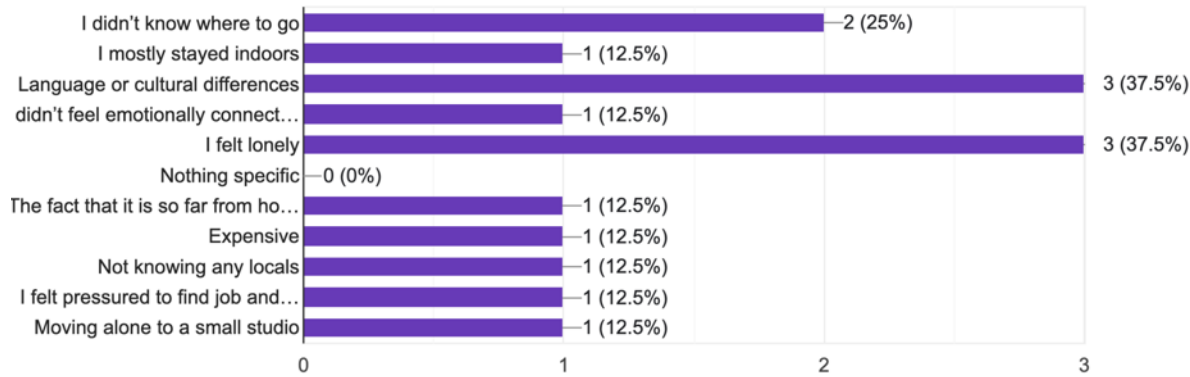
Q1. How long have you been in Denmark?
(8 条回复)



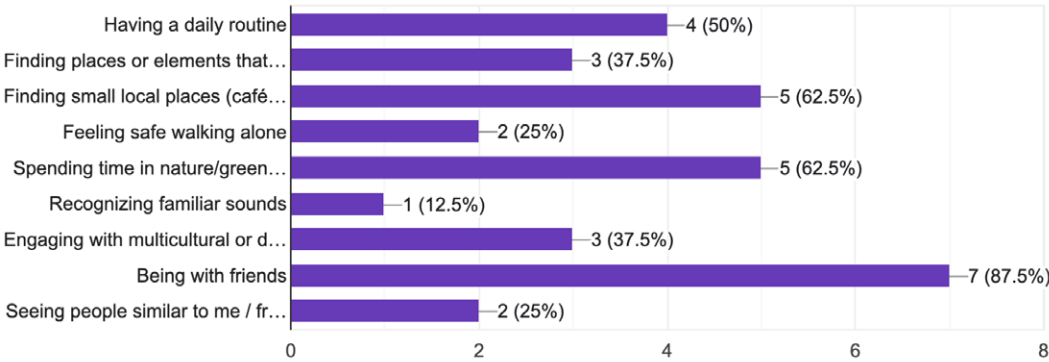
Q2. During your first three months in Copenhagen, did you feel like you “belonged” here?
(8 条回复)



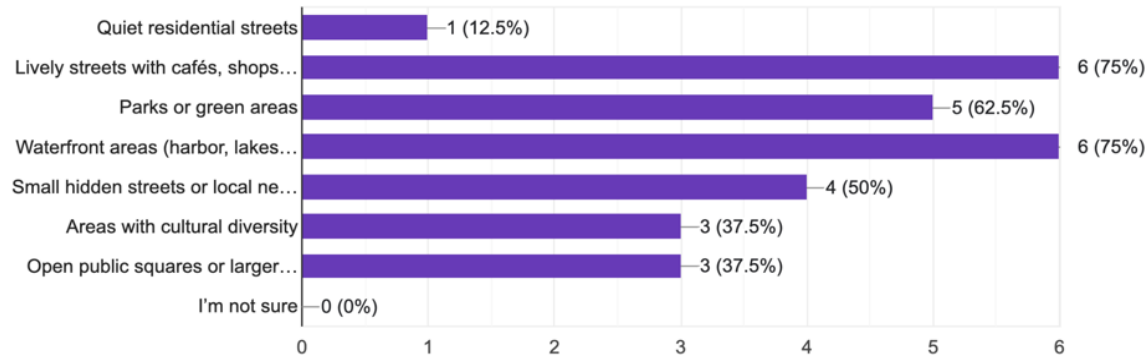
Q3. What made it difficult (if anything) to feel connected to the city?
(8 条回复)



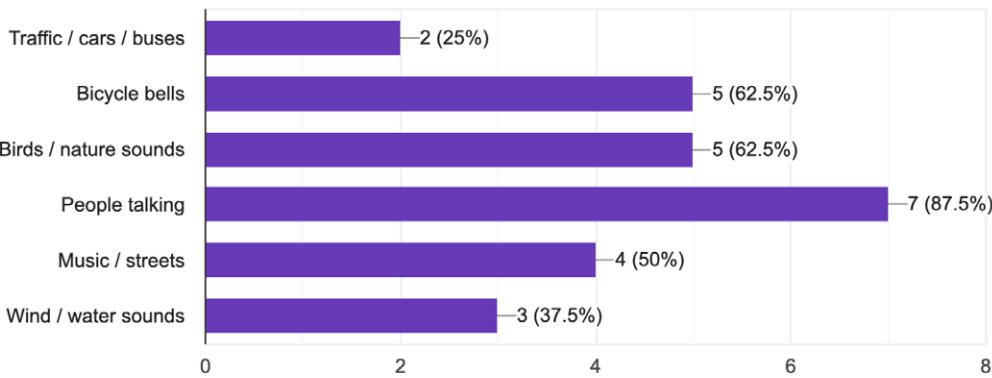
Q4. What helps you feel a sense of belonging in a city?
(8 条回复)



Q5. When you walk alone in Copenhagen, what kind of environments make you feel most comfortable?
(8 条回复)

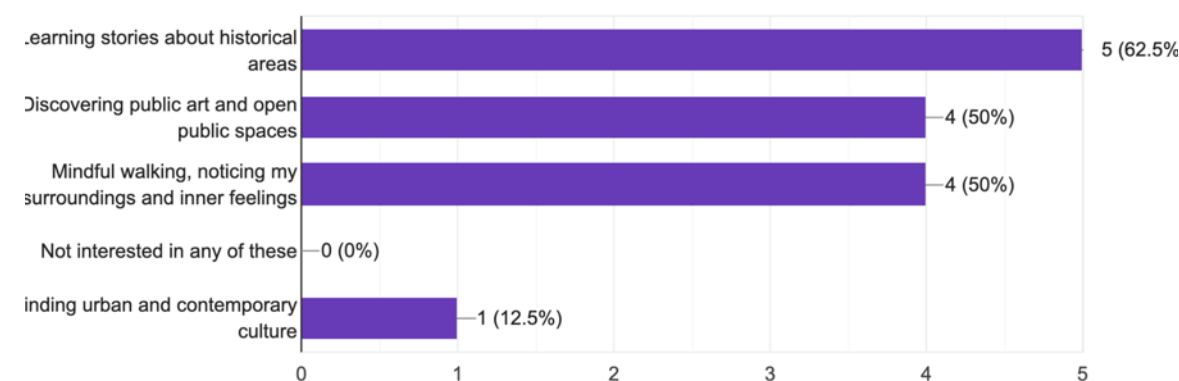


Q6. Which sounds do you usually notice when walking in the city?
(8 条回复)



Q7. Which type of self-guided experience would you find most interesting?

(8 条回复)



Appendix B. Interviews with the Stakeholder

B1. Explorative Interview

Question List

1. What information or resources are usually provided to students when they first arrive in Copenhagen?
2. Which resources do students use most often, and which are most often overlooked?
3. Do you have any resources that support international students to explore the city? (e.g. bike tour, boat tour)
4. Do you think exploring the urban spaces would be an useful way for international students to develop a sense of belonging with a new city?
5. If there were a short audio walk experience, do you think students might find it useful during orientation or early arrival?
6. Which delivery method would be most practical: QR code, website link, brochure, or orientation activities? I plan to make it digital, might be a webpage that includes the audio and map
7. Where or when would such a resource be best presented to students (online/offline, before arrival/during orientation)?
8. Are there any practical limitations or considerations we should be aware of (time, technology, privacy, etc.)?
9. Who would be the best contact in your office for follow-up questions or further input? I hope to receive some feedbacks on my prototype?
10. How to reach out to other international students? For interviews and user testing. Do you recommend any student communities or associations that are relevant with my topics?
11. Can you give me the brochure for new students?

Interview Transcript

Place: AAU Copenhagen

Date: 5th Feb

Interviewee: Deborah Vlaeymans, International Coordinator at AAU CPH

Yiyi: First I would like to introduce my Master's thesis. Our project can be like a visual project, which means that you can design a prototype or some small design that can be useful in the real life context. So, because I am an international student moving to the Denmark and the Copenhagen, so I experienced a sense of dis-attachment with the city when I first arrived here.

Yiyi: So I'm thinking about if I can develop some small product that can help international students to have better. You know, integration and connection. Yeah, yeah. Connection with you feel, I mean, with the city, not only with the campus or some school life because we are living in different areas in the city and that's what I'm thinking for the product

Deborah: Yeah, definitely. That would be interesting,

Yiyi: Yeah to develop a real product, so I wonder if I finish it and I can see if this product can be may be used in the future, and to see the feasibility of this product in the real life.

Deborah: Yeah. I mean, it would be an online product, right?

Yiyi: Yeah, yeah. I'm thinking about as an online product because it can be used, uh, I mean as a digital resource in the future. So it's not like a, for example, a group tour that's some person need to

Deborah: Yeah, yeah.

Yiyi: I mean, it's some digital product and if you listen to it and you follow some instructions and it can help you to explore the city yourself.

Deborah: Nice. Yeah. This is, that's a nice idea.

Yiyi: That is my idea. Yeah. I have a few questions that maybe you can help me.

Deborah: Maybe. I hope so.

Yiyi: Because I don't know some real problems that international students may have when they first came here. My experience is only based on my own, I want to learn more about some other students. Some problems or difficulties when they come to you

Deborah: So the first thing, um, that always is the problem in Copenhagen is housing.

Deborah: Yeah. but this is really a lot connected with the wellbeing. Mm. Because

I don't know, I can't remember if you had issues with finding housing, but for many students, some students are very good at preparing themselves beforehand, before they arrive and also read on the website and full of the links. But I also experienced many students that maybe are not so, um, well prepared.

Deborah: And just before the study starts. It's also depending on when they get the permit and when they get the approval and the admission, yes. But there's a very short period to finding housing. And this can really make a lot of stress.

Deborah: And because of this, all the other processes that the other students are involved for, maybe like more of social characters. And maybe visiting the city or like making a belonging also with the campus. It all gets delayed or they are not ready yet.

Deborah: And then you come in like a bit on a wrong angle and then it can be very difficult to um, like, have the time also, for example, if you had an online product, they would, I think it would be great. But when the housing, it's like the basis of pyramid, right?

Yiyi: Yeah, yeah, yeah.

Deborah: If that is not in order, there's too much stress to focus on nice things. So I would definitely say this is the, but of course, we cannot solve this. Because this depends on, uh, the municipality and the housing options and, and. how many availabilities there are. And if it's affordable or not. What I can do is, or what a tool or a product also could do is prepare them. I don't know. Now you mentioned the product. If this is something they would have before arrival or only when they are here. This is the first thing.

Deborah: Because if it's before arrival, if you have some online tool. Then definitely this should be a part of it. Like some stories about how other students found housing. That would be really a good help. But of course you cannot solve it. But more preparing, like if they haven't been, uh, thinking about it yet that they, oh, I need to go and start. That is my first project because then when that is settled, I can focus on the Nice to have

Yiyi: Ah, yeah, yeah, yeah, yeah. because, you know, my program is an artistic program. So maybe my product will more focus on some, you know, artistic experience that encourage them to explore some communities and public space in the city. So I didn't think about the housing problem. Y

Deborah: This fills up a lot of space in the minds and the bodies of all the new students, Unless they already have found something, then they can, and then they, But my experience is really like mm-hmm. Because it's not only housing and I Maybe you also remember that it's also the CPR number. The registration process. And this is connected to the housing. So if you don't have a house, you cannot get the CPR number and you cannot start your daily life. Like relaxed in Denmark, right? Yeah,

yeah, yeah. Because you also want to have a student job. Many do many, most of the students, and you need to have a bank account to get the money on this. And this all is together.

Deborah: So the first thing is really all kinds of practical things. Not so much. And that's. Why maybe it goes wrong later. Because other students are already in the nice to have like Danish or some other students that are well prepared. Mm-hmm. Or like in advance or have more money that also to be the case so you can get easily more a room, but so yeah.

Deborah: If you ask me what are, what do I hear most. At the study start, it is definitely housing registration, like settling in Copenhagen. And not so much about network. Because then there's also the study, of course they need to get used to the, PBL and the study groups. This also fills up space.

Deborah: And then, when all that is settled, then I, first thing there is like. Space to look into more fun stuff. And that's sad of course, because it would be nice that it's like more integrated from the start.

Yiyi: Yes.

Deborah: But I, I'm not sure if it's, um, how you can do that because Yeah, I know this will not be prioritized first.

Yiyi: I know most people, our concern should be some very practical and administrative issue, and after all these things settle down,

Deborah: You can visit or, or, make in the WhatsApp, Hey, shall we visit this exhibition? Or whatever. Yeah. so, I don't know how to solve this, but if you can have this in mind, even though it's not your focus. I think it's good to have that in mind.

Yiyi: I think that's a very good point that maybe I think I can put my product not in the very beginning of their stage, just arrived Copenhagen, because at that time they need some very practical stuff. But I can put it later maybe when they already settle down and want to learn more about the city

Deborah: Yeah, that could be definitely. And then, um, what else is there? Uh, can be issues. Yeah. It can be an overwhelming, information. Mm-hmm. And also culture differences. It can also be as, as something, you know, like down to earth, like the climate. Ah, like some people are not prepared. That's starting from October, right? Mm-hmm. When it is dark and people are not outside anymore and you are alone. And then you haven't had the time to make the networks yet. Mm-hmm. But then everybody's already inside of their homes.

Yiyi: That's also the problem. I mean, when it goes into the winter time, maybe people do not have the motivation to go outside.

Deborah: And if you haven't had the time to make the networks in September, then

October starts. Yes. Everything not closing down, but more like getting inside. So yeah, I think, um, it, that is definitely a thing to have in mind.

Deborah: But that would fit very well with like making groups for visiting an exhibition, for example. Or cooking together. Mm-hmm. Or have some kind of initiatives that are a bit more in smaller groups and indoor, Yeah. I think also what could be interesting is to find a way how the students can connect with maybe other students that are already living here for longer.

Deborah: Ah, yeah, so they can be like tutors or, more like contact to do something together. Um. With somebody who already knows a bit more about the city.

Yiyi: I saw there is like a buddies program on the website. Is it?

Deborah: Yeah. That's not here. It's in Aalborg only because we don't have the resources here. And the problem here is also because we don't have so many bachelor programs. We have mostly master programs. The bachelor's are also only Danish.

Yiyi: Oh, okay.

Deborah: So, um, when you are a master student. And you have been here one year, like two semesters. And the third semester you go on the internship. So we don't have like, and then the, like you, then you do the thesis. So it's very difficult to make this network because then they maybe are doing internship far away, or, yeah. So you cannot. So we have challenges with that.

Deborah: Ah, yeah. because then in Aalborg it's also a lot of bachelor students that are the buddies. But here we don't have so many,

Deborah: So, which means that we don't have so many students who have been living here for a long time and can be, or yeah. Connected to the Albo University. Yeah. Then it should be an alumni or something. But then there is this thing who will do this work of getting them together and. Yeah. And that is different with how many resources we have.

Yiyi: But now do you have any like, like this tutoring program or if someone ask,

Deborah: we only have, yeah. Then I explained that we don't have the buddy program. But we have the tutors tutor. But they are active at the study start. Mm. So each, uh, study program. Have to, uh, find two or, or more tutors. Mm-hmm. So there are students that already have been studying at least one semester, and then they can be a tutor for the new students.

Deborah: And that is, were you here at the study?

Yiyi: yeah, I was here from the autumn semester.

Deborah: Yeah, the autumn. Yes.

Deborah: And then it is the study programs task to find the tutors. Oh yeah. Yeah. So maybe you didn't have to, I don't know,

Yiyi: The other second year students, they were tutors. They were organizing some events for the new students. So there are some events happening, um, and there's also a small main tutor group that is doing the events for. Everybody, like all new students. And of course I, we hope that the international students take part of that. Ah, but we don't know of course. That's up to each person. It's like, are they too stressed? Like do they still need to figure out a lot of stuff or do they have the free space to join in. Yeah.

Yiyi: And I remember that during the orientation week we had like a boat tour. departure from here. Yeah. And also I heard that there is like a bike tour organized by the school. Can you introduce more about, do you have some other, like these activities to explore the city?

Deborah: No, we, it's again, a question of resources. I'm the only one working here and it's half-time. So I arranged the bike tour. But I must say it's like, because I talked with students and I said, okay, now let's try to do it. And I contacted, um, the Danish Cycling Union and also the Donkey Republic that we could borrow for free. They also donated that. So the students are enthusiastic about it. But to have the students meet up mm-hmm. That's difficult.

Yiyi: Oh, why? It's difficult to?

Deborah: I mean, you have to tell me, you're the student. You were not part of it.

Yiyi: Ah, yeah. Because I didn't hear about this activity until one of my classmates told me that there is a bike tour for free. And I say, oh, I didn't hear. And maybe the second reason is that we lived in different districts in the city and sometimes a bit far from the campus,

Deborah: So you're maybe not that often here.

Yiyi: Yeah. I mean, I remember the bike tour started from the school and,

Deborah: yeah. Yeah, exactly.

Yiyi: But the route of the tour is around the whole city center or which area?

Deborah: No, because, that would be too much. Also, we don't know. It's an introduction, right? So it was more talking about bike culture in Denmark. And then we did a little tour, or no, actually it's also still 10 kilometers. but like in the South Harbor.

Deborah: And showed some interesting places for the students and it was fun. But, you know, um, there were not many students showing up. And that is always, the challenge, for activities also, the activities we do for international students, we have these four workshops. In the autumn, for navigating Danish culture for example. That

is one. Then there's also networking in Denmark. Mm-hmm. And, yeah, we have some different themes, workshops.

Deborah: We don't have like. It's always a challenge to make the students meet up. Those that come, they are very enthusiastic and they love it. But we have like around 200 new students starting every summer. I mean, like, autumn But then maybe there are 17 that are active

Yiyi: Uhhuh. Ah, you mean 17 or 70?

Deborah: Uh, no, no. 17, 18. Ah, like 20.

Yiyi: Oh, okay.

Deborah: I say 20. So that's very little students. And this is also, again, connected, that there is too much happening. So you have all the registration, CPR housing. You have the new study program meeting, the group, group formation, All the, you know, studying here is a fulltime occupation.

Deborah: So that fills a lot. And then the other thing that really fills a lot is finding a student job. And then I also try to make the students go to the Danish class so you can learn a bit of Danish. And that's also like a social activity. So if they do that, then there is like no time left like that.

Yiyi: Yeah, I think so. And do you think maybe as a master student, most of the students concern more about those practical issues and also their own career development in the future? Do do you hear any anyone, I mean, tell you that. they feel lonely and they cannot feel integrated with the city or they have this emotional issues.

Deborah: Of course we, we hear about it, and it's not, but it's not like generally everybody. But of course there are, um. Students that struggle both Danish and international. We hear that's especially the study counselor that takes the talks with wellbeing and stuff like that.

Deborah: But of course, everybody can experience loneliness and depression. And yeah, so that's of course something we also have focus on wellbeing and trying to Support them, right?

Yiyi: Yes. Yeah. Uh, so you say that maybe it's difficult for students to meeting up in the school physically, and do you think maybe a digital tool or digital product can be more flexible?

Deborah: It would be very interesting to see if that could work. Yeah. Mm-hmm.

Yiyi: Have you ever tried any, like a digital tool?

Deborah: We have had, a group or we still have in Facebook. Oh, the group. I was also interested to, yeah, maybe join in some student group or some communities. We have the international students at Aalborg University Group on Facebook.

Deborah: But Facebook is of course not a platform where everybody's like joining and want to join. Yes. But besides that, we, and then there's the Instagram, but this is more open for all students. Um. What I always do, um, is to encourage the students to make WhatsApp groups or another platform. So they, like, for example, now when we started with the six new students from the exchange programs, they are all together in the WhatsApp group.

Deborah: And then they can like talk, like they have each other, you know? So they can, maybe somebody says, Hey, uh, let's go and visit Louisiana or something. They can do that, right? Yes. But it's up to this to the students themselves to make this happen.

Yiyi: Mm, okay.

Deborah: Yes. So it might be like a digital tool could help of course, even more. Yes. Like to make this happen so the students can make this happen.

Yiyi: Uh, I mean, because what I thought is, for example, I, I can show you example that what we did for our Finnish organization in last semester. This is kind of an audio walk and If you have this, you can click and have this webpage. And then, and then you can do it yourself, but I mean, wow. Okay. Yeah.

Deborah: So it's like you put, AirPods in and then you walk in the city or...

Yiyi: This one is not specifically with city, but you can walk like somewhere outside your home and you follow some instructions to do some, for example, feeling your surrounding and focusing on your own sensory experience like this.

Yiyi: And they publish this one in their website, so they will add one page on their digital resources website. So you can see this and then you click this and try it. This is what we have done for a Finnish organization. So I'm thinking if it's possible to, for example, to create something also like this.

Deborah: Yeah, yeah, definitely.

Yiyi: That would be some, somewhere on the school website, because I saw there is some resources for international students on our website and maybe just to create an additional link here and the, they can try, I mean, for free and also every, anytime you want yourself, yeah.

Yiyi: Then you can just, uh, listen or watch whenever you want. Yeah. Yeah.

Deborah: Definitely. We have like a website for, uh, webpage for the new students. So that would be easy to add, but I cannot guarantee if, people will go there to click on it. Do you have an experience with the Finnish?

Yiyi: Because that prototype is specifically for Finnish young man who experienced loneliness. So it's a very specific small group and, uh, a few of the participants in the

organization, they tried it, but not for like a very public one. Yeah, okay.

Deborah: What I'm thinking right now is, have you heard that we have a study environment day on campus?

Yiyi: Ah, I don't know. The study environment day.

Deborah: Just show it. Because I think this would be also really interesting if you could join there. To, um,

Yiyi: Oh, yes.

Deborah: I'll just, uh, try to find it. You know this page, right? For students. And then if you go down here. You can just click Events Copenhagen. And then see more Copenhagen Events Copenhagen here. This is, uh, join the study Environment day.

Deborah: Because when you see here. This is also like with focus on how do we create a nice environment. And space for students also. And because you said something with loneliness, breathing, and meditation. So we have like different workshops That you could, uh, take part in.

Deborah: Ah, but I'm also thinking it could be interest. I mean, it, it's very relevant. This is happening physically. But like, to find out how could maybe your, idea also be part there, maybe. There could be like a space where you can sit and listen. Mm. Not maybe it's too late now for, because the program is set, but maybe next year.

Deborah: So there is a focus on like this idea about how can we integrate, like having something where you can just sit and listen as a student.

Yiyi: Yeah. Yes. I think it's a really nice, I mean, yeah, maybe the context that it can happen.

Deborah: And, you could also talk with more students here.

Yiyi: That's what I need for, before I developing this product, I want to talk with some students to learn more about their real concerns and what they like experience and what they hope to have.

Deborah: AI really recommend you to sign it's for free of course. Ah, yeah. You just, you need to sign up because they need to know if there are places, y

Yiyi: So some students will attend this physically as at campus,

Deborah: This is for all the students here at campus. The programs have got a message from the director. That they should not have classes on that day. So everybody is encouraged to join. This is a new initiative.

Yiyi: Yes. Thank you so much. Yeah. I think it's a very good chance. Because currently another maybe difficulty for me is to know some other students in Aalborg university. Because you know, our program is quite a small program. And we are busy with our

internship and thesis, so we seldom have chance to come to the campus and also meet with others. Do you have some recommendation how I can reach out to some potential students?

Deborah: Yeah, you could write in the Facebook group if you are on Facebook. AAU CPH international student.

Yiyi: Can I ask how many maybe members in the group?

Deborah: 1300. But it's the students from all the years students. But here you can see, you can people post also like a water polo, like you wanna join for the international welcoming thing.

Deborah: And then I post like when there is like a program That is, you know, relevant for the international students. We have like the international corner. Have you heard about that?

Yiyi: Ah, I also didn't know about this, Is it every month or only like every month. Every month have the International corner?

Deborah: Yes. Yeah. Maybe you don't have the new student guide. You didn't receive it.

Yiyi: Oh, I had that one. But to be honest, when I moved here, I cannot find it.

Deborah: It's important that you sometimes visit this page. And then you can see here. see more Copenhagen events? So here is all the information that is good also for you. When you are doing the project to find out where are the international students? Also with the CV feedback. Mm-hmm. There will be a lot of international students down here. Oh, because it's happening here.

Deborah: So I mean. This is really like a good place to go to see where can I meet the students. I mean, hopefully show up at this event, right?

Yiyi: Ah, yes, yes. Yeah. Yeah. I think it's really helpful. I still need to explore more of the website.

Yiyi: And also I learned there are some like student association and communities. I find them on the website. Some students, they voluntarily organize that, but it's not belong to the school

Deborah: No, but the thing is, it's uh, a shame you weren't there yesterday at the open house. Oh. Because they're all the university organizations were there Oh. With the stand. And you, and they are happy to talk with international students.

Yiyi: Oh, okay. Oh, I miss that.

Deborah: you could meet them, but sometimes they do like, uh, like a thing in the lobby here, where they are standing there and you can talk to them. Oh. But to find all

the organization, you can just go your study environment – student associations, and then Copenhagen, and here you can find all What is going on?

Yiyi: Oh yeah. I already saw this page.

Deborah: You know, in the little canteen on building B, they are doing a Friday bar. And in that bar you can also meet, Also a very good page for you. There you can see the dates, what is happening, right. Ah, okay. This is more socializing, um, character and of course it involves also some beers, but yeah, some people don't drink alcohol, but they have. Yeah, yeah. Yeah. It's like here they do board games,

Deborah: If you want to meet other students, yes. Also to talk. Then I would definitely recommend like this one. Okay. Meeting up at Solution? Yes. And also the coffee spot. I know it is run by some international students or they are part of it. In order to meet mm-hmm. International students, that's my best advice. To meet up at the events or contact them them directly.

Yiyi: Yeah. Yeah. Uh, and I don't know if you are the only teacher who are responsible for the international like student issues here.

Deborah: Yes.

Yiyi: You are the only one. Ah, okay. So it must be, I mean, a lot of things.

Deborah: No, no, it's okay. Uhhuh, luckily, There's not so much. I mean It's okay. It's more like, when the study start is coming, then it's really busy because a lot of people have questions and stuff like that.

Yiyi: Because when I maybe develop the first version of my prototype, I also hope to invite you, if you can give some feedback or to see if it's useful.

Deborah: Yeah. I'll be happy to do that.

Yiyi: Yeah, that's, yeah. That's super nice so I can try it out. Yeah thanks a lot. It's very good to that have chance to talk.

B2. Feedback Interview

Interview Transcript

Place: AAU Copenhagen

Date: 18th May

Interviewee: Deborah Vlaeymans, International Coordinator at AAU CPH

Yiyi: Today is a feedback session with the stakeholder for my project because my project is designed for the AAU International Office. So you are like my stakeholder. Like this-

Deborah: I understand.

Yiyi: and this product is aiming for helping the students in the future. Yes. And today we can...

Yiyi: First of all, I would briefly present what I've done and share some insights during the process and because also I interviewed some students and asked about their experience in navigating the new city and how they overall feel about the starting of their study here.

Yiyi: what they need help, what kind of help they think they need, and challenges like this. I can also give you some feedback. And the second part is I would briefly introduce my design and what I am thinking, what I want to do in my product.

Yiyi: And after that we can have a discuss and you give me some thoughts about maybe would this kind of product can be used in the future as a maybe a line material that students can use themselves or if it possible to introduce to the students at the beginning or at some time.

Deborah: And what about the audio walk.

Yiyi: yeah, I can show you first this one page but this is

Deborah: just a- ah, no. yes, but I did the walk.

Yiyi: oh, you did the walk?

Deborah: yeah of course. That's what I thought I was going to give you feedback on. on the walk.

Yiyi: Thank you so much.

Deborah: so I have it here also. I've done the walk and had the headphones on. I thought that was the idea that I was doing the walk and then we would talk about it.

Yiyi: Welcome to share your experience.

Deborah: I really liked it. it was a very soundscape that was very grounding, like a main focus for me was getting grounded. like walking and getting grounded.

Deborah: I was wondering why you specifically thought it would be for international students because I think it could be like a nice thing to do for all kinds of people. Danish or other people. just all kinds of people. you just need to understand English and then you can listen to it.

Yiyi: At the beginning I thought this is like an English product. And what I'm thinking is that as a Danish, even though you move from another city in Denmark and you move to Copenhagen, I think this experience is different from moving from a foreign country to Copenhagen. and I want to guide the users to notice your surroundings and observe the city slowly.

Yiyi: and also if you can find some familiar elements that are connected with your previous experience. I hope this can help them to feel less unfamiliar or uncomfortable with the new surroundings.

Yiyi: But I do think that if you are a Danish resident or Danish student you can also try this.

Deborah: I think you could also use it in other cities. it's not connected to Copenhagen. because I remember there was one sort of cultural comment in the audio walk.

Deborah: which was about Danish people or other people you meet like to be in groups and talk.

Deborah: I thought this is a cultural input. like how the culture is here. and I think it could be longer or wider and more specific related to Copenhagen or Denmark that you could put more Danish elements in it for internationals. and you can find inspiration online like Danish culture.

Deborah: a lot of internationals are doing YouTube videos where they are making fun, but not in a bad way, but more like astonishing things about Danish culture.

Yiyi: Yes.

Deborah: You could take some inspiration from that.

Deborah: Because I felt you did that with one element but the rest felt more like grounding and awareness of senses. so I don't know where you want to go with it. but if you want to make it more for international students that could be an idea. and also make it longer.

Yiyi: do you think for example 20 minutes is too long.

Deborah: No. I think 20 minutes would be nice.

Deborah: there is a balance. like how not to make fun in a bad way but more astonishing facts or experiences with Danish culture. or what internationals might find helpful like Danish flags are used for celebration.

Deborah: I like both grounding exercises and meditative things but then it's not especially for international students. then it could be for anybody.

Yiyi: I don't want to make it a very practical tool. I intentionally did not include detailed description about a specific place. I give a lot of introduction when they are working.

Yiyi: but I do think if I can find a way to introduce some Danish culture or information but not make it feel like I am giving a lecture.

Deborah: I think you already did that with observation of people you meet.

Deborah: It depends how specific you want to make it because cultural differences can become clichés. like for example as a Belgian in Denmark I notice small differences but if I make a podcast it might only make sense for Belgians.

Deborah: so you need to be careful with clichés. I think you can get inspiration online.

Yiyi: Last time you forwarded my email and I connected with another international student. they are also doing a project.

Yiyi: And they design a website and I think is a very helpful tool. People can directly get the information they need. Yeah. This is what they are doing. But maybe f- uh, when it comes with my projects, at the beginning I don't think about it as a practical tool, but maybe some, uh, urban experience and also you can use this after you're already settling down in a city.

Yiyi: Which means that you do not struggle with many different things for starting up, but you already settled down and begin to discover your neighborhoods or you, are curious about more about the city.

Deborah: Definitely. So have you listened or tried the city walks? Also the audio walks?

Yiyi: Yeah. I tried some other, maybe something alike of my work. Yeah, yeah. Yeah, I try this. Yes. And I find their audio work is also, for example, they do not give you some very specific instruction about which place you need to go.

Yiyi: They also encourage you to find your own path and also reflect on your past experience, and you observe the surrounding and like this.

Yiyi: So it's more like about your own emotion and memory. So it's not about some give you some specific guidance. I think that's the difference between this kind of art walk and some useful tools. Yeah. So it's the difference.

Deborah: Yes. Because you are making more an art walk, right?

Deborah: So it's more like awareness and how you are... Oh, Yes, I remember, there were some art walks in Copenhagen also, in English.

Yiyi: Ah, Yeah.

Deborah: But that's, that could also be a nice inspiration. Maybe I can find them somewhere. But I mean, yeah, I would say, if this is a pilot, of course, but I think it would be nice to have it longer.

Deborah:.. Because first you need to come into it. Like, also just, like, hearing the voice when it's, like, in getting into the work. Yeah, it was a bit difficult with, I just kept on my headphones. Yes. But what you say, like, take them off but then you, when you have taken them off, you don't know when to put them on again.

Yiyi: Ah, Yeah.

Deborah: Because then, because I didn't take them off-

Deborah: Then I listen, and now you can put them on again, but you, you will not know that, right? Uh-huh. So maybe it would be nice to have, like, press pause or- Ah, okay ... I don't know what you should do. That's also for people taking the headphones out-They don't know when to-

Deborah: Maybe they stay in the experience and they are walking and, like, enjoying the sounds and then- Yeah ... maybe they... And then it's, and then the purpose is done. Like, then it's finished like if you have been like five minutes.

Yiyi: Okay. So you mean at the end?

Deborah: Yeah, there is something practical with those just practicalities, like how you take them off. Or are you listening, like just like this, you know? Not with headphones. Yeah, yeah, yeah. But if you have the headphones and you take them off, then there is something to do this. Like, this is more practical.

Yiyi: Okay. I would think about this, because another user also reported the same confusion, and she suggests maybe you can use some like this shaking to remind wearing again.

Deborah: Or could say, if you want to take your headphone... Because I was with the headphones- and then you said, "Listen to the sounds around you." But that was difficult because I had the headphones on. Ah, Yes, yes. And then I thought, "Should I take them off?"

Deborah: But then I thought, "But then I don't know when to put them in again." So maybe it's, it could also be a solution-you could press pause And after then you continue surrounding and then pause and continue. Uh-huh. Like, take your time.

Deborah: Yeah, yeah, yeah. Experience it, like take some minutes or Hours, whatever.

Like if you wanna, how much you wanna be in the situation. And then put them on again.

Deborah: I like the thing that happened, you were talking about moving a direction that you are not used to. That was nice.

Yiyi: Yeah, yeah,

Deborah: And also like try to touch something. It was also really nice. And yeah.

Yiyi: Yeah. Thank you so much for trying it.

Deborah: Of course trying out the experience. It's nice to do, of course. Yeah.

Yiyi:.. And also I'm thinking about the final page, because now this page is only for testing. But if it's for the final page and I want to integrate, for example, this page to one of the AAU page, and it could be like an additional material and the students can click.

Yiyi: I could think about how to design a page that fit in the AAU website. This is the next stage I'm thinking.

Deborah: So that- That's like the idea for the exam, right?

Yiyi: Yeah, yeah.

Deborah: This is not my domain. It's very strict. And I don't think you will be able to get permission to have a page in the AAU page.

Yiyi: It's just a proposal that could be used, but it's not a real page.

Deborah: But you should make it and have this in your project. And present it. That's what I mean.

Deborah: Just not that you get your hopes too high. It's a difficult thing.

Yiyi: Yeah, yeah, yeah. I know. I also think about other possibilities like QR code cards and putting them somewhere in school.

Deborah: like you mean printed cards?

Yiyi: Yeah.

Deborah: Because there are many flyers and posters.

Deborah: Yeah, there are many places where student-related stuff can hang.

Yiyi: Okay.

Deborah: And also in the student lounge, but this is always a bit messy so you would have to go there sometimes to see if it's still there. And you can also have postcards and

put it somewhere. But I don't... Like I said, it's more also relevant for students, for any student or for any, not student.

Deborah: It can also be for new people in Denmark.

Deborah: Or Danish people because it's not so specific for international students how it is now, I would say. It's more open and it's more a grounding experience and an awareness enhancing tool.

Deborah: So it's more open for... Yeah, it could be. You could also, if you make cards or something, also put it at the University of Copenhagen or other universities. It doesn't have to be, or International House.

Yiyi: Okay. Yes.

Deborah: Like you can of course, it depends how much time you want to invest in it.

Deborah: Yes, I know.

Yiyi: Yeah. At this stage, because it's only a project, so it doesn't have to be a real product, but we need to discuss about the possibility of making it into the real context. So you could mention this but not do it.

Yiyi: So I could just think about possibility and also the AUU context, some possibilities to introduce it. If you say that maybe some official resources are not that possible to include

Deborah: one of these things. you mean from AUU, like the website?

Yiyi: Maybe if not website

Deborah: We could use it in the Facebook group.

Deborah: You know, we have in Copenhagen campus this international students Facebook group. And then we have the Instagram and I guess communication but that's not me, that's communication of Aalborg University. You could also contact them and say "I have this project and people can do this audio walk. Maybe you can make a post out of it."

Deborah: If this is something that you need to show in your project then definitely include that in your project so that you can present it for communication for the Instagram profile, Facebook profile, and then the idea is also to have a website page. But I know this will be a very little chance to be able to.

Deborah: But still you can have this as an idea. Like you pitch this idea and then it's in the project for your exam. It will not be a real happening.

Yiyi: Because maybe the final product would be on a webpage, but this webpage is created by myself, so I don't need to embed it into our official website. But for example this webpage, if you scan a QR code or get a link you can simply start it. And I wonder if this QR code is possible to include in some brochures of the school?

Yiyi: A small flyer or for example during orientation week we get a small book like this.

Deborah: Yes, the little booklet. I will also have to check if this is okay because we have a lot of students that have projects like this so we have to take care not to overload information. But it could definitely be an add-on.

Deborah: I think it would also be fun to have because the walks I referred to earlier the art walks audio works they had people meeting up at one specific hour, let's say 12 noon at the metro station. Come with your own devices and then everybody started together and listened to this.

Yiyi: Oh you mean I can organize an offline event?

Yiyi: For example I say that you can gather at the AAU campus at a time and we can do it together.

Deborah: Yeah.

Deborah: For me this is honestly much more specific and related to AUU. So you can be like and it's also a bit social. Everybody has a headset and then you could actually this is a completely other version of our pilot now but if you could start the walk for example, outside of campus and then you could even incorporate the surroundings because you know it like go to the water. But people still can go wherever and look is there sun is there rain or do you feel the rain on your skin. And then walk to the closest something and then go in the end maybe you've walked around go back to your starting point so everybody comes back.

Yiyi: We can have a small discussion and everyone can share what you have discovered when you are walking. Oh that's also a good idea.

Yiyi: So it's an offline event but it also gives the users their own agency to try on their own pace. But after that we can have a group reflection together like a small workshop.

Deborah: Of course, the thing again is how to get people.

Yiyi: Like at the beginning I remember you mentioned that the bike tour or some other tour is really difficult.

Yiyi: But I want to share one insight from my interview with some international students. I ask them at the beginning of their study if there is an offline event or online event, which one they prefer. And I think most of them still say that if there is an offline

event, they would like to go.

Yiyi: But I think maybe the problem is that most of the offline events happen at the very beginning of September, so they are struggling with different study issues.

Yiyi: But if it's for example, October or November when they are not so stressful from all the stuff. And then you tell them there is an event, and maybe it's not in the weekend, just in one of the afternoons after class and they might come. They don't need to travel to school only for the event, but after class.

Deborah: Yeah, exactly.

Yiyi: That is what I think maybe can help is better than at the beginning or you are for example on the weekend, maybe they don't have time to meet up at school. But if just the afternoon after class I think some of them would like to go

Deborah: Definitely. The thing is still that it's difficult but it's already better. Because people finish differently. Some finish at 2 and some at 4. And then we have the Danish classes also the language classes.

Deborah: And some of the interested people they had to go to the language class. So I said no, go to the language class it's more important. But yeah it's also a good idea to do it after the classes.

Yiyi: Okay. I think I already got some very good ideas to, at least, try to put it in real-life context. And what do you think if it's online resources? Do you think that people would like to try it?

Deborah: If you manage somehow to get it out on social media then it would... And if it then becomes like something people click on then it will be something. It's the same thing with everything that is being made these days. It's like you win or lose. If people start to like it or find it and then other people find it and then people use it. But if it's a bit more hidden then it's difficult also for people then they have to scan the QR code. This is a challenge right?

Yiyi: Yeah. Based on my experience for last time I put a lot of posters with the QR code in the campus to do the survey.

Yiyi: And I have to say no one answered it when you just hang it on the school.

Deborah: Then no one did.

Yiyi: You have to, for example, directly ask your friends. If you just hang it I think no one would really stop and look at it.

Yiyi: Last time you mentioned about the study environment day. Although this year I didn't have time to attend, but I wonder what the study environment day looks like, and

if it is possible to introduce such kind of thing to students on that day.

Deborah: Yeah. Yeah. I think that could be an idea. I don't know how it would... It could be like just a poster but would it then be this one or would it be a new one or would it...

Yiyi: Yeah I think for example a new one, but I don't know during the study environment day if it is possible for me to... For example, there are many different stalls and I can stand here and introduce to students.

Deborah: Yeah. Yeah I think so. I am not part of the programming thing of the study environment day but you can always make a suggestion like could I be involved in this and then yeah definitely. And how would you then imagine like you would stand and then let the students scan and try to go a tour?

Yiyi: I mean because I just thought if I only put posters or postcards maybe no one notices so you have to be like a person standing here or introduce the product to others actively then they would know. So I'm thinking maybe I still need a chance to reintroduce this to others.

Deborah: I think for the study environment day it would be more relevant if you made a thing happen like at 2 o'clock we go for an audio walk.

Yiyi: Ah like it's organized.

Deborah: Like organized. And then those that don't... Like this year we had building Lego and making flowers. And there was also yoga.

Deborah: Yeah so that would be definitely an idea if you... But this is maybe more so you make it an event happening. So you say at 2 o'clock I am here for those that want to do an audio walk. Artistic audio walk. Meet up here and then bring your own headset. Or I don't know if there is some way of finding money for grants. Getting headsets. So people can get headsets and then do this walk together.

Yiyi: Yeah like then I think they will just sometimes even though they scan they forget it later.

Deborah: Yes. Yeah right. So it's something about either arranging it as you would do for a performance or an installation. Or you go on social media and make sure people begin to try it on SoundCloud.

Yiyi: I think we finish and thank you so much.

Appendix C. User Interview Materials

C1. Interview Guide

Section 1: General Introduction

1. Brief introduction of the researcher and the purpose of the study.
2. Ask for basic background information (Where are you from? Which university are you studying at? How long have you been in Copenhagen and Denmark) ?

Section 2: Experience of Arriving and Adapting to Copenhagen

3. When you first arrived in Copenhagen, what was the first place you visited outside of your school?
4. What challenges did you experience as a newcomer? Did you have time or energy to explore the city during the initial period?

Section 3: Everyday Mobility and Urban Experience

5. How do you usually move around the city (e.g., cycling, walking, public transportation)?
6. Does the weather influence how you explore the city? If so, how?
7. Do you prefer walking alone or with others? When walking in the city, how do you experience or perceive it?

Section 4: Place Preference and Changing Experience

8. Are there specific places in Copenhagen where you feel especially comfortable or that you visit frequently?
9. After living in Copenhagen for some time, have the places you prefer changed compared to when you first arrived? Has your perception of the city changed?

Section 5: Sense of Belonging

10. After living in Copenhagen for a period of time, do you feel a sense of belonging here?
11. What factors do you think influence your sense of belonging?

Section 6: Audio Walk (Design Exploration)

12. If there were an audio walk experience available, would you be interested in trying it?
13. What type of content would you find interesting or useful in such an experience?

Section 7: AAU Students Only

14. How would you describe your overall experience of the AAU Copenhagen campus?
15. How did you experience the orientation week? Did you participate in any events or tours organized by the university? How did you find them?
16. What kind of support would you like to receive from the international office?

C2. Thematic Coding Process

Theme 1: Tension between physical presence and social belonging		
Sub themes	Key Codes	Example Quote
Language barriers limit integration	Difficulty understanding Danish; Limited access to information; Feeling less confident navigating daily life	“When I'm in the country that I'm familiar with or like my home country or in English speaking country, I would feel more relaxed because I know what's going on, but when I’m here I just don't really understand anything.”(P4)
Limited connection with local society	Desire to make Danish friends; Limited interaction with locals; Danish society perceived as difficult to enter	“I mostly interact with my international friends and I definitely don't feel like I integrated into Danish society or like into the community of Copenhagen locals.” (P3) “I wouldn't be really between other Danish people, doing things that Danish people do.”(P6) “It’s quite hard to really get into their society. It's quite a close bubble.”(P5)
Personal space as a source of belonging	Home provides safety; Personal room as a place of comfort; Feeling secure in private space	“Outside I am exploring and adapting, but once I enter that home space, I feel safe.”(P1) “I think belonging is so, I would feel comfortable to just go there and then to escape from, you know, whatever I've met. So to have that sense of belonging, it will be my, my room where I have all my personal belongings.” (P4)
Exploring local places strengthens belonging	Visiting cafés and neighborhoods; Participating in local events; Discovering community spaces	“I would sometimes go out and start to explore some cafes and something, and I think that really adds a lot to kind of feel the belonging.”(P6)
High living costs affect belonging	Financial pressure; Hesitation to spend money when going out; High prices limit participation in activities	“I'm not used to the price here. Like every time I go out,I kind of like ask myself, do I really want to spend that much money to do it.”(P5) “I think I'm still not fully belong because I don't fully experience all the opportunities because it costs a lot.”(P6) “If you want to go anywhere, consume anything that's really expensive and it makes you think twice when I'm back home.”(P3)
Theme 2: Exploration does not happen spontaneously		
Sub themes	Key Codes	Example Quote
Housing and job search pressures	Difficulty finding accommodation; Searching for student jobs; Adjusting to studies and daily life	“For me, it felt like it would be a little bit much, altogether to find a place to live,find a student job, start my studies, kinda get familiar with the city, get everything I need, and I would maybe struggle with all of that at once.”(P6) “Well, I think housing is a problem for me in the first month, so I think that's the thing I'm most worried about the most.”(P4)
Limited time and mental energy	Academic pressure; Limited mental energy for activities; Need time to settle down	“It was more like I felt I should go in order to integrate, but at that time I didn’t have the mental energy to participate in many activities.”(P1) “So I think that my first month was not about traveling that much. It's more about like settling down.”(P4)
Financial barriers to exploration	Expensive public transport; Limited budget for leisure activities; Searching for free events	“In the beginning, like public transport here with the single tickets is so expensive that I tried to minimize traveling.”(P3) “I try to find some more budget-friendly way or free events in Copenhagen.”(P5)
Social interaction as motivation	Meeting friends; Participating in activities together; Socializing as reason to go out	“I think overall I don't have the motivation to go outside, which is why I often go with friends because that's my motivation.”(P4)
Curiosity about Danish culture	Interest in Danish culture; Joining local communities; Trying local activities	“I am trying to open the worlds, if you will call communities. Bathhouse sauna culture is one way where I will connect to Danish communities.”(P3) “I think I'm interested in Absalon, the neighborhood around there because I've heard it's a very nice place with a lot of activities.”(P4)

Exploration driven by practical purposes	Visiting areas when moving house; Buying second-hand items; Exploration linked to daily tasks	“I honestly didn't go to the city too much. And I really had to find a reason to go there.”(P3)
Theme 3: Different ways of moving create different urban experiences		
Sub themes	Key Codes	Example Quote
Cycling as the dominant mobility mode	Daily commuting by bike; Cycling even in winter; Bicycle as affordable transport	“I always use the bicycle. All the time.”(P2) “But here in Denmark, I would say 95% when I leave the house, I take my bike.”(P6) “I can finally buy a bicycle, so I would bike here and there, which really gives me some time to explore the city on the way.”(P4)
Walking as a way of exploring	Walking through neighborhoods; Observing people; Car-free areas make walking easier; Walkable urban environment	“Whenever anybody came to visit me. I always tell them that Copenhagen is a very nice, walkable city. Both in size and in style.”(P3) “But if it was like a weekend and if I wanted to go somewhere, I would still go by bike, but then I could park it and walk around in some neighborhood.”(P5) “They were like, it's just really easy to walk because there's no cars allowed there.”(P5)
Public transportation perceived as expensive	Avoiding transport costs; Traveling less before owning a bike	“I think the public transport is still too expensive here. So I am still by bike.”(P2) “In the beginning, like public transport here with the single tickets is so expensive that I tried to minimize traveling.”(P3)
Theme4: Urban qualities that shape impressions of Copenhagen		
Sub themes	Key Codes	Example Quote
Positive first impressions of the city	Immediate attraction to Copenhagen; Love for bike culture and urban life	“I think Copenhagen was the first time where I came here and I immediately felt that I love this city and I would love to be here.” (P3) “I had been here before multiple times because I visited my friend. And during those visits, I really fell in love with Denmark. I saw how bike friendly, how lively this city is that there are so many restaurants and people are just on the streets.”(P6)
Appreciation of waterfront spaces	Enjoying canals and lakes; Swimming and water activities; Relaxing near water	“I come from a landlocked country and this was the first time I lived close to the sea, so it is very special for me to be close to the sea as much as I can, and I love it.”(P3) “I kind of stopped there and spent around 30 minutes there just sitting at the lake because it's kind of soothing for me.”(P4)
Attractive Nordic architecture	Appreciation of building aesthetics; Positive impressions of neighborhoods	“Even though the weather was not good, I still felt very comfortable because I like the architecture there.” (P1) “Every building you look at is like good looking, let's say. It's not like an ugly gray block.”(P2) “I think the first time I came here I was very surprised by their architecture of Denmark.”(P5)
Limited environmental diversity	City perceived as orderly but monotonous; Lack of mountains or forests	“I definitely feel like there's not that much variety in the city. Everything is so neat and organized. I feel like over time it can turn a bit boring.”(P3)
Weather not a major barrier	Expectation of Nordic climate; Continuing outdoor activities in winter	“Because I still go to the park, even if it's winter. And I still go in nature, the season doesn't really make a difference to me..”(P2) “But I took a lot of walks there, even in winter. And I liked it (canal).”(P3) “But like for me, it's (weather) not bad. It's something I've already expected. I did some research about the country and I know I would meet this, so I don't feel bad.” (P4)

Appendix D. Audio Walk Design Materials

D1. First Version of Prototype

Audio Walk Web Interface:

<https://audiowalk.carrd.co/>

Audio Recording (SoundCloud):

<https://soundcloud.com/yiyi-958359534/just-a-walk-a-guided-audio>

Audio Walk Script:

[1] Opening: body & orientation

Take a moment to arrive.

Look around you.

You can start walking in any direction you like.

Or not choose at all.

Just follow what feels right.

I won't guide you from here.

When you're ready, start walking.

Slowly.

...

(pause 10–15s)

[2] Sensory opening

Let your attention expand.

Notice what you can hear.

Maybe voices around you.

Maybe the sound of bicycles passing.

Maybe wind, or water nearby.

These are sounds many people notice in this city.

...

If you're wearing headphones,
you can take them off for a moment.

Listen directly.

(pause 30s)

Put your headphones back on
when you're ready, and continue.

[3] Touch / material

As you walk, notice the surfaces around you.

The pavement beneath your feet.

Brick, concrete, or maybe wood near the water.

If you can, gently touch something nearby.

a wall, a railing, or another surface.

How does it feel?

Warm, cold, rough, smooth?

...

(pause 10–15s)

[4] Memory+migration & sensescape

As you continue,

notice if something here reminds you of somewhere else.

Maybe not exactly the same—

but something similar.

A sound,

a smell,

or just a feeling.

For many people living here,

these moments connect different places together.

...

If you like, take off your headphones again.

Notice how your surroundings feel now.

(pause 20–30s)

Then continue walking.

[5] Belonging and surrounding

Now notice the people around you.

Maybe someone sitting at a café,
talking with friends.
Or someone passing by,
moving with ease.

...

Being with others
is something many people associate with belonging here.

[6] Belonging and Self

Now notice yourself in this space.

Do you feel comfortable here?

Would you stay,
or keep moving?

Now gently adjust your own movement.
Just slightly.

Do you feel closer to this place now?
Or still a little outside of it?

(pause 10–15s)

[7] Nature

If you are near a park,
or any kind of green space,
notice how it feels different.

The air,
the sounds,
the pace of movement.

Many people find it easier
to feel at ease in these spaces.

[8] Optional action

If you want, you can stop for a moment.

Choose something that caught your attention.

You can take a photo,
or simply stay with it.

This is one way of marking your presence here.

...

(pause 15–20s)

[9] Direction & exploration (dérive)

When you're ready, continue walking.

Choose a direction
you wouldn't normally take.

Turn where you usually wouldn't.

Let your body explore a slightly unfamiliar path.

...

(pause 10–15s)

[10] Closing and reflection

As you keep walking,
notice if anything feels different.

In your body,
in your attention,
or in how you relate to this place.

...

Belonging doesn't always come from knowing a place.

Sometimes it begins
with small moments—
a familiar sound,
a comfortable space,
or a brief connection.

[11] Ending

Now, this audio walk is coming to an end.

I will no longer guide you.

You can continue walking in your own way.
Follow your body, your pace, your curiosity.

Let your attention move gently—
from yourself
to the space around you.

You can choose any direction.

There is no right way to go.

Perhaps, in your own time,
you may find your way back
to where you began.

Or perhaps not.

Just keep walking for a little while,
and see what unfolds.

D2. Second Version of Prototype

Audio Walk Script:

Newly added or revised sections in the second iteration are highlighted in bold.

[1] Opening — body & orientation

Take a moment to arrive.

Look around you.

You can start walking in any direction you like.

Or not choose at all.

Just follow what feels right.

(pause 10s)

Before you continue, take a slow breath and notice your breathing. (pause 15s)

Gently move your body and notice where you feel tension or stiffness. Adjust it slightly. (pause 15s)

If it feels safe, gently slow your walking. Bring your attention to the temperature of the air on your skin. Notice how your body responds to the environment around you.

(pause 20s)

When you're ready, start walking.

Slowly.

...

(pause 30s)

[2] Sensory opening

Let your attention expand.

Notice what you can hear.

Maybe voices around you.

Maybe the sound of bicycles passing.

Maybe wind, or water nearby.

These are sounds many people notice in this city.

...

**If you're wearing headphones,
press pause and take them off for a moment.**

Listen directly to the environment around you.

When you are done, put your headphones back on and continue.

(The audio does not continue automatically; users can pause it themselves)

[3] Touch / material

As you walk, notice the surfaces around you.

The pavement beneath your feet.

Brick, concrete, or maybe wood near the water.

If you can, gently touch something nearby.

A wall, a railing, or another surface.

How does it feel?

Warm, cold, rough, smooth?

...

(pause 30s)

[4] Memory + migration & sensescape

As you continue,

notice if something here reminds you of somewhere else.

Maybe not exactly the same –

but something similar.

A sound,

a smell,
or just a feeling.
For many people living here,
these moments connect different places together.

...

While doing so, notice something in your surroundings that feels unfamiliar or different from what you have known before. It might be a small detail – something that feels specific to Copenhagen or Denmark.

(pause 20–30s)

[5] Belonging – social

Now notice the people around you.
Maybe someone talking with friends.
Or someone passing by,
moving with ease.

...

In Denmark, social life is often described as more informal and low-pressure, with small groups and quiet togetherness being common. The idea of hygge is often used to describe this sense of comfort and shared presence in everyday situations.

Being with others, is something many people associate with belonging here.

[6] Belonging – self

Now notice yourself in this space.
Do you feel comfortable here?
Would you stay,
or keep moving?
Now gently adjust your own movement.
Just slightly.
Do you feel closer to this place now?
Or still a little outside of it?
(pause 20–30s)

[7] Nature

If you are near a park,
or any kind of green space,
notice how it feels different.
The air,
the sounds,
the pace of movement.
Many people find it easier
to feel at ease in these spaces.

[8] Optional action

If you want, you can stop for a moment.
Choose something that caught your attention.
You can take a photo,
or simply stay with it.
This is one way of marking your presence here.

...

(pause 30 s)

[9] Direction & exploration (dérive)

When you're ready, continue walking.
Choose a direction
you wouldn't normally take.
Turn where you usually wouldn't.
Let your body explore a slightly unfamiliar path.

...

(pause 30s)

[10] Closing

As you keep walking,
notice if anything feels different.
In your body,
in your attention,
or in how you relate to this place.

...

Belonging doesn't always come from knowing a place.

Sometimes it begins
with small moments –
a familiar sound,
a comfortable space,
or a brief connection.

[11] Ending

Now, this audio walk is coming to an end.
I will no longer guide you.
You can continue walking in your own way.
Follow your body, your pace, your curiosity.
Let your attention move gently –
from yourself
to the space around you.
You can choose any direction.
There is no right way to go.
Perhaps, in your own time,
you may find your way back
to where you began.
Or perhaps not.
Just keep walking for a little while,
and see what unfolds.

[A soft ambient music (2–3 minutes) is played at the end as a gentle closing, allowing the experience to slowly fade out.]

Appendix E. Prototype Testing Materials

E1. Testing Procedure

1. Introduction and Preparation

1. Brief introduction to the research project and purpose of the session.
2. Explanation of the testing procedure.
3. Participants read and sign the informed consent form.

2. Think-Aloud Usability Testing

Before the actual walk, a short usability test was conducted to evaluate the clarity and usability of the audio prototype.

Participants are asked to:

- Listen to a short segment of the audio prototype
- Interact with the instructions

During this process, participants were encouraged to think aloud, verbalizing:

- What they understand from the instructions
- What they expect to do next
- Any confusion or uncertainty

Follow-up prompts:

- Was the instruction clear?
- What would you do at this moment?
- Was anything confusing or unclear?

3. Design Probes Introduction

Participants were introduced to a set of design probes and could choose how to document their experience:

- Photo-taking
- Drawing / mapping
- Visual thinking cards

(All users need to finish the photo taking task embedded in the audio walk)

4.3 Inspiration Card Probe

Participants selected cards to express their relationship with the place:

During the walk:

- Which image best represents how you feel about this place right now? Why?

After the walk:

- Choose one card that represents your overall walk experience

- Choose one card that represents your relationship with the place

5. Post-Walk Interview

- Have you experienced an audio walk before?
- Did you have any expectations before starting? Did your experience match your expectations?
- Why did you choose that direction or starting
- Did you feel more aware of your body while walking?
- Did the audio influence your walking pace or movement?
- Did the environment feel different compared to a normal walk?
- Did you notice things you would normally ignore?

Probe-Based Reflection (Using photos, cards or drawings)

- Can you walk me through this photo/drawing? What was happening at that moment?
- What made you notice this? (audio, environment, or both)
- Would you have noticed this without the audio walk?
- Which material (photo, drawing, notes) helped you express your experience most?
- Was there anything easier to show than to describe verbally?
- Did using these materials influence how you experienced the walk?

Feedback on the Audio Walk

- Was the audio easy to follow?
- How did you find the narration? Was it clear?
- What would make the experience more engaging?
- Can you recall any prompt that made you stop, slow down, or look around?

E2. Feedback Form and Answers

This feedback form was placed below the Audio Walk prototype page. When face-to-face testing was not possible, the link was shared with participants for independent completion. One participant completed the form.

Audio Walk Feedback

The questions below are optional, feel free to skip any of them

1. After this experience, how do you feel about your body?
2. What part of the experience stayed with you the most?
3. Any thoughts or suggestions for improvement?

Feedback 1 (U5)

1. I don't think that much have changed.
2. Noticing different materials around me
3. It sounded like an AI voice, and it felt like I'm interacting with a robot, that can't actually understand humans. I wish it was a real human voice.

When advising to take the headphones off it should also be advised to paused, otherwise you can't really enjoy as you don't know when the audio will play again.

There were a few questions asked one after another, I would have preferred some time after each question, otherwise I can't think about two or three things at the same time, and some questions were unanswered.

Appendix F. Informed Consent Forms

This appendix contains the informed consent template used in the empirical phases of the study, including semi-structured interviews and prototype testing.

The template was used to ensure that all participants were fully informed about the purpose of the study, the data collection process, and their rights in accordance with ethical research guidelines.

Signed consent forms, both in paper and digital formats, have been securely stored by the researcher and are not included in this appendix due to confidentiality and privacy considerations. They can be made available upon request if required.

F1.Interview Consent Form Template



INFORMED CONSENT FOR INTERVIEW

You are invited to participate in a research project conducted as part of my master’s thesis in the Nordic Master’s programme in Visual Studies and Art Education (NoVA), a collaboration between Aalborg University, Denmark and Aalto University, Finland. This study aims to understand how international students experience urban environments and how audio-based guidance may influence their perception of the city.

Participation
If you agree, you will take part in an interview lasting approximately 20–30 minutes. The interview will be audio recorded for research purposes.

Processing of personal data
By signing, you consent to the collection and processing of:

- Audio recordings of the interview
- Your responses and reflections during the interview

All data will be processed in accordance with the General Data Protection Regulation (GDPR).

Anonymity and confidentiality
Your data will be anonymised in the thesis and publications. Your name and identifying information (e.g., nationality, education, place of residence) will not be included.

Data storage and retention
Data will be stored securely and accessed only by the researcher. It will be deleted no later than 6 months after thesis submission.

Data controller and responsibility
Aalborg University is the data controller. The researcher will handle the data in accordance with applicable regulations. No third parties will have access to your personal data.

Your rights
You have the right to:

- Access the personal data collected about you
- Request correction or deletion of your data
- Withdraw your consent at any time without consequences

Contact the researcher via email ycai25@student.aau.dk or the Data Protection Officer at Aalborg University via dpo@aaau.dk

Consent statement
☐ I voluntarily agree to participate in this study and consent to Yiyi Cai processing my data in accordance with the above purpose and information.

Date:
Name:

Signature:

F2. Testing Consent Form Template



INFORMED CONSENT FOR USER TESTING

You are invited to participate in a research project conducted as part of my master’s thesis in the Nordic Master’s programme in Visual Studies and Art Education (NoVA), a collaboration between Aalborg University, Denmark and Aalto University, Finland. This study aims to understand how international students experience urban environments and how audio-based guidance may influence their perception of the city.

Participation

- You will:
- Experience an audio-based walking prototype for about 20 minutes.
 - Provide feedback for about 10 minutes after the experience. The feedback session will be audio recorded.
 - Be observed by the researcher during the experience; photos may be taken for research notes only (not published).

Processing of personal data

By signing, you consent to the collection and processing of:

- Your responses and reflections during the interview
- Observational notes and photos

All data will be processed in accordance with the General Data Protection Regulation (GDPR).

Anonymity and confidentiality

Your data will be anonymised in the thesis and publications. Your name and identifying information (e.g., nationality, education, place of residence) will not be included.

Data storage and retention

Data will be stored securely and accessed only by the researcher. It will be deleted no later than 6 months after thesis submission.

Data controller and responsibility

Aalborg University is the data controller. The researcher will handle the data in accordance with applicable regulations. No third parties will have access to your personal data.

Your rights

- You have the right to:
- Access the personal data collected about you
 - Request correction or deletion of your data
 - Withdraw your consent at any time without consequences

Contact the researcher via email ycai25@student.aau.dk or the Data Protection Officer at Aalborg University via dpo@aaau.dk

Consent statement

- ☐ I voluntarily agree to participate and consent to Yiyi Cai processing my data in accordance with the above purpose and information.

Date:
Name:

Signature:

Appendix G. Full Interview Transcript

This appendix includes selected full transcripts from the empirical phases of the study. One complete transcript from the semi-structured interview phase and one complete transcript from the user testing phase are provided as representative examples of the data collection process and analysis.

All interview and testing sessions were fully transcribed verbatim and used as part of the thematic analysis conducted in this study. Due to space limitations, only one full transcript from each phase is included in the appendix. The remaining transcripts have been systematically organised, coded, and securely stored by the researcher, and can be made available upon request.

In addition, the user testing phase involved visual materials, including in-situ photographs documenting the testing context and participant interaction. These materials are not included in the appendix due to space and privacy considerations but can also be provided upon request if needed.

G1. Semi-structured Interview (selected full transcript)

Date: March 2026

Location: AAU Copenhagen

Duration: 37 minutes

Participant: P6

[00:00:00] P6: And I allow you to record me. Yeah.

[00:00:03] Yiyi: Nice. Oh, perfect. Yeah. And I can first introduce a bit about my master's thesis, this project. Mm-hmm. this project is collaborated with the AAU International office. Yeah. I'm curious about the difficulties and challenges international students would have when they first arrived Copenhagen. If I can design a prototype that help the students have better integration with the city.

I mean, outside of campus. How to help them have better connections and feel more familiar with the Copenhagen. Yeah. So that's the major purpose of my project. And also I am going to design an audio work product in the following months.

[00:00:50] P6: I would love to test that.

[00:00:51] Yiyi: Yeah. That's so nice. Yeah. And also, I, I am reaching out to some AAU international students. I want to learn about their experiences when they first arrived here, and also how they feel about the Copenhagen City.

[00:01:07] Yiyi: And also, maybe during the first month, you are studying in AAU what problems you have. Mm, yeah. That's the topic. And also you can also briefly introduce yourself.

[00:01:23] P6: Hi my name is [anonymised]. This is my first year, so second semester here in AAU.

[00:01:36] P6: But I moved to Denmark one year prior to this. So I started university in 2025 September.

[00:01:46] P6: But I moved here in 2020 for August. So one year before.

[00:01:53] Yiyi: Yeah. Yeah. So you already studied in another university?

[00:01:56] P6: No, I just, uh, I moved here and I found a job. Mm-hmm. And then I worked for a year, full time. Mm-hmm. And then I applied for my studies while I was here and got accepted and then started my studies.

[00:02:11] Yiyi: Ah, okay. Perfect.

[00:02:13] P6: So, yeah, I, I think normally, well, not normally, but, uh, most. Maybe not most, uh, students that arrive here and start their studies right away.

[00:02:25] P6: For me, it felt like it would be a little bit much, altogether to find a place to live. Uh, find a student job, start my studies, kinda get familiar with the city, get everything I need, and I would maybe struggle with all of that at once.

[00:02:44] P6: So I thought I will first. Do finding a job and finding a place to live.

[00:02:50] P6: And then when I, I'm kind of settled and used to things, I will start my studies, so I don't have, and I remember some other students in September were, were still struggling with finding a place to live. And I was like, well, I'm so glad I don't have to think about that.

[00:03:08] Yiyi: Ah, that's so nice. Yes. 'cause you are already here for one year and when you start your study, everything is settled down.

[00:03:14] P6: Yeah.

[00:03:15] Yiyi: That's so cool. Yeah. So, but I am curious, do you remember when you first moved to Copenhagen? Mm-hmm. Like when you start your job here?

[00:03:24] P6: Yeah.

[00:03:24] Yiyi: Uh, what is the, maybe the first place you went to when you first arrived?

[00:03:32] P6: So, uh, I had a friend. Mm-hmm. Here. Uh, so I stayed at their place.

[00:03:39] P6: Uh, so right from the airport, I went to my friend's place. Mm-hmm. Uh, but if I didn't have this friend, I guess I would've chosen some Airbnb or some hostel or something like that. Uh, and from there, uh, 'cause I still hadn't found a place because it's very hard to find a place if you're not here. In person. Uh, there are a lot of scams going on if you're trying to find your place online and, uh, there are a lot of viewings of the place.

[00:04:11] P6: And you kind of have to be there to be able to secure that place. So I tried to look for a place to live already multiple months before, like I started in spring.

[00:04:23] P6: Mm-hmm. 'cause I knew that I would move here in August, but I was unsuccessful. But then once I moved, I really booked a lot of uh, uh, viewings in August. And then within two weeks I found a place to live. And also I signed up for my CPR number. Oh yeah. So I went to the, I forgot what was the name

[00:04:47] Yiyi: Like the international office?

[00:04:50] P6: there was a, yeah, I think there, 'cause I have a European passport, so I had to go to a different place and I think it's a little bit easier than if you're not from Europe.

[00:05:03] P6: Uh, but it was still complicated. I forgot what was the name of that place, but I had to go there. Uh, but, but yeah, for there I needed, uh, an address and I couldn't sign up unless I had an address. So the first thing was to find a place to live.

[00:05:22] Yiyi: Yeah. I know. It's always the most challenging thing for international students.

[00:05:26] Yiyi: Yeah. Uh, and after you already settled down and find your permanent address to live. Maybe what neighborhood you like to go most?

[00:05:39] P6: well, I was influenced by my friend and my friend studied in CBS, which is located in Frederiksberg. And uh, that's where I also, before I moved here, I had come here to visit.

[00:05:56] P6: Mm-hmm. And, uh. And that's the area that I was most familiar with, because I came here and then I also, uh, yeah, I heard good things about Frederiksberg, so I mm-hmm. Tried to prioritize something near there.

[00:06:11] Yiyi: Ah, okay. Yeah. Is there any specific place like cafeteria or park in the Frederiksberg you like to go?

[00:06:20] P6: Yeah, it's the, the big park, from which you can also see, uh, parts of the zoo. So you can see the elephant or on the, there are two, they're kind of connected. There are two parts. One is the Frederiksberg Park and the other one is, I don't know how to pronounce that name

[00:06:37] Yiyi: You mean the zoo or ...?

[00:06:38] P6: Yeah. The zoo is because the zoo is on the two sides. Two parks have different names. But it's all kind of connected anyways. Yes. But yeah, on the other side you can see, uh, some zebras and, giraffes and rhinos and I love that zoo.

[00:06:56] P6: Yeah. I even had the membership of the zoo, so I can go as many times as I want.

[00:07:02] Yiyi: Okay. I also went there once, but you know, the ticket is a bit expensive for each entry, but if you have the pass like that year pass, it's much better.

[00:07:13] P6: I think the year pass passed, uh, almost like a bit more expensive than two entries. So if you go at least three times a year, then it's better to buy the year pass and then you can go whenever.

[00:07:25] Yiyi: Yeah.

[00:07:26] P6: And Yeah. And as I, I did manage to get an apartment right next to Zoo, actually. That wasn't my priority. My priority was more, uh, in the city center of Frederiksberg. But we couldn't find anything there. And this was the only place we, uh, that actually said. We offer you this place if you want it. And that was our only offer, so we had to go with it.

[00:07:53] Yiyi: Yeah. Yeah.

[00:07:54] P6: And it's on top of the hill next to the zoo.

[00:07:57] Yiyi: And also the neighborhood you went most is also the Frederiksberg. Mm-hmm. Yeah. Do you feel it's, uh, like the most comfortable area in the Copenhagen you enjoy?

[00:08:10] P6: Mm. Yeah, I mean, now that my university is in Sydhavnen, I also like this area a lot because I see. Uh, the huge benefits of having water so accessible and when I started studying here, I was actually considering to hopefully somehow manage to move closer here because I really love the proximity of water and being able to just go for a swim.

[00:08:45] Yiyi: Yeah.

[00:08:46] P6: I think if I lived really, really close by, I would even invest in a standup peddle. Uh, and, uh, yeah. And then go on the peddle.

[00:08:57] Yiyi: Yes, I know. So you enjoy this location that just next to the river and the water, really love this kind of mm-hmm. Mm-hmm.

[00:09:05] P6: Oh, yeah.

[00:09:07] Yiyi: Uh, and maybe I want to ask when you first visited the Aalborg

campus, how do you feel about the whole campus and this location?

[00:09:23] P6: Yeah, I, uh, I was really impressed with the campus and, uh, um, I really like from outside also, how it looked. Uh, yeah. Now that I study here, it's uh, maybe become like, became a bit more common.

[00:09:49] P6: Kinda like I kinda got used to it. I'm not so amazed by it anymore.

[00:09:53] P6: And uh, the bridge, at first I was so impressed by the bridge. And now I think maybe it's a bit like, it's still fine, but maybe it's a bit too steep. I sometimes see cafeteria people when they push the strollers, they really struggle because on one side they really have to push it and on the other side they really have to catch it so it doesn't just roll away.

[00:10:12] Yiyi: Yeah.

[00:10:13] P6: But I don't know, that doesn't really change how I feel about this place. And I think it's a really cool campus and that we have the facilities, there's like the sauna and, the mirror room and all the cool study places. It's a really nice campus.

[00:10:41] Yiyi: Yeah. Yeah. Okay. So during the orientation week, did you participate any events that organized by the school for the new students?

[00:10:52] P6: Yes.

[00:10:53] Yiyi: Did you remember any events?

[00:10:54] P6: Yeah, there was an International Day. Uh, there were presentations, uh, for people that are new to Denmark.

[00:11:03] P6: Uh, even though I had lived here for a year, it was still, some part of it was still relevant to me as well. They also gave a tour of the campus. Yes. And, that was exciting. And, on the first school day there were the boat trip. Uh,

[00:11:24] Yiyi: yes. Yes.

[00:11:24] P6: Uh, we did that one as well. That one sounded better than it was because we sat in the boat and the, the boat was so loud we couldn't really talk with each other. We just looked around and there was technically a tour, but we couldn't hear any anything because it was so loud, the, the motor of the boat so loud, they couldn't hear anything that the tour guide was telling.

[00:11:47] Yiyi: So yeah, it's a pity that you cannot hear anything. Yeah. Uh, because I also learned that the school, they organized some tours at the very beginning, like the boat tour and also a bike tour.

[00:12:00] P6: Yes. The bike tours I really wanted to go, butthere were three tours. Two of them were in the days where I worked. Mm-hmm. And I couldn't, come because I couldn't move my work to another day.

[00:12:15] Yiyi: Oh, okay.

[00:12:15] P6: And one was in the time when I had my studies. And they were all very much at the beginning of the year.

[00:12:24] P6: Uh, it would be nice if they, I mean, I understand the weather is still nice in September and that's why they had it at the beginning of the year.

[00:12:32] P6: Mm-hmm. But it also feels like a lot of people are a bit overwhelmed how many activities are at the very beginning, and you kind of want, don't wanna miss out on things, but also you can't make everything, and there's still a lot of like. It wasn't the case for me, but there's still a, a lot of people trying to find a place to live trying to get their documentation right mm-hmm.

[00:12:56] P6: With all their CPR and everything. And then there all these tours and, I don't know, studies are quite intense. At the very beginning, uh, you have to do a lot of reading and it, it just, yeah, it. A bit too much at the beginning and uh, yeah, then I had more time, for example, in October, but there were no tour bike tour organized in October.

[00:13:14] Yiyi: Oh, okay. Yeah. So all the like tours and activities were in the September. Everything is you know, in unstable.

[00:13:23] Yiyi: Yeah. Uh, and I am wondering if there is an online tour that you can do yourself and an offline tour that you need to meet at the school and participate with others, maybe which one you prefer?

[00:13:36] P6: Hmm. Um, I would definitely enjoy an online tour. Mm-hmm. Because like if it was organized as a video, then I would for sure watch it because mm-hmm. When I joined the university, there were some videos of how to use Moodle and something, but there wasn't really one that would explain the whole campus, or, maybe the city itself or something like that would be extremely useful and like, especially if I could watch it on my own terms, like on my own time.

[00:14:08] Yiyi: Mm-hmm.

[00:14:08] P6: Super helpful. Uh, also a tour. Uh, if we could organize, if I could make it. I would definitely do it. Uh, but yeah, I think. When you have to be in a physical place. At a specific time, then it adds the challenge that it's not gonna work for everyone. Mm-hmm. Uh, there will be some people that will, or I don't know, how many do you have to organize so that everyone can participate. Or do you also do it if only two people participate? Mm-hmm. Like,

[00:14:39] Yiyi: yeah.

[00:14:40] P6: Yeah. It adds some struggles.

[00:14:41] Yiyi: Yes. Yes. I know. Uh, and when you first moved to Copenhagen, do

you think, uh, if there are some like this video or podcast that introduced Copenhagen more for you, do you think it's useful, useful for you to learn more about the city?

[00:14:58] Yiyi: I mean, outside the campus?

[00:14:59] P6: Mm, yeah, for sure. Uh, I think I did try and look on TikTok, I know places to see Denmark or what to, uh, not Denmark, specifically Copenhagen. Things to do in Copenhagen. Mm-hmm. Or, uh. I don't know, just some fun fact or something. I would push her. Yeah, I would, uh, I would listen.

[00:15:23] P6: I would still listen. I still feel like I'm haven't discovered the everything. Of course I will never discover everything. But, I, I would still enjoy listening to something like that. And especially if it's, again, if it's a podcast or a video, I could listen to it at any time.

[00:15:47] P6: Mm-hmm. And maybe, as I said, uh, at, at the beginning in September, it's maybe a bit overwhelming.

[00:15:54] P6: A lot of, like too much information. Yes. But then, for example, I could listen to this in October or November and then try and catch up with some things around. Uh, and finally when I'm settled, then I could like start exploring what to do or how.

[00:16:09] Yiyi: Yes.

[00:16:09] P6: And it would be really cool if it also was, uh. Yeah. If there were different episodes for seasons, like what could you do in summer? What could you do in winter? What's there in spring or autumn?

[00:16:22] Yiyi: Yes. Yes.

[00:16:23] P6: Because there's, yeah, like, ice skating in winter time, or has all these Easter things and spring, or I don't know, events in summer.

[00:16:34] Yiyi: Yes. So for you, I mean. In different seasons, do you usually go to some different places or do different activities in different seasons?

[00:16:45] P6: Mm. In Copenhagen?

[00:16:47] Yiyi: Yeah. Yeah. In Copenhagen.

[00:16:49] P6: Yeah. I mean, um, in summer I would cruise, well cruise. Anyway, uh, I would ride around with my bike.

[00:17:00] P6: And, uh, I would go swimming a lot, but yeah, because I live in Frederiksberg, it's like a half an hour drive.

[00:17:08] P6: Uh, for me to have a swim, but I would still do it.

[00:17:11] P6: Um, also because it's summer and it's so bright, I wanna spend more

time outdoors. In wintertime, you more wanna do the hygge thing and stay indoors. But then in wintertime there are like a lot of board game cafes and I would go to those, uh, um, yeah. I don't know if there's something specific for Autumn or spring

[00:17:38] Yiyi: Uh, yeah, I don't know. It should be some, like in the spring there would be some cherry blossom area and, and also the autumn, maybe scenery of the golden leaves and yeah, I

[00:17:54] Yiyi: Uh, and also since you have been living in Copenhagen for one and a half a year. But you say that there are still some places or neighborhoods you have not discovered enough.

[00:18:07] P6: Yeah.

[00:18:07] Yiyi: Do you have some place that in your mind that if you have time, you would like to discover more or explore more?

[00:18:13] P6: Um, I mean, hmm. First question. There is a place that I haven't discovered is Amager because I live on the kind of this side more. Yeah. And I haven't been in Amager a lot. Yes, I did went there twice, like with bike riding around because there's a lot of bird watching options. Uh, and there's just like a really long bicycle path near the animals.

[00:18:46] P6: But if a question is a place I would like to discover more.

[00:18:51] P6: Maybe it would be Nørrebro because I think it's super diverse. There's so many cultures, and there's I think every time I go pass by or go through there I discover something new. And, uh, I would like to know more about that district because it feels. Yeah, I don't know.

[00:19:17] Yiyi: Yeah. I know that the Nørrebro is also the most vibrant neighborhood in Copenhagen and also most multicultural area. Yes. I know many young people would love Nørrebro.

[00:19:30] Yiyi: And also I heard that you mentioned you usually ride a bike during the summertime and is the bike your major transportation to move around the city?

[00:19:40] P6: For sure. I drive also and winter time.

[00:19:49] Yiyi: During the winter time you also ride a bike? And do you like to walking, I through the city?

[00:20:02] P6: Um, I do. Um, yeah. Every time I travel sometime somewhere to another a new place I always walk through.

[00:20:14] P6: But, here in Denmark, I would say 95% when I leave the house, I take my bike.

[00:20:26] Yiyi: Ah, okay.

[00:20:27] P6: So maybe five times I would take a metro or bus. That is mostly when the weather is not so great.

[00:20:36] P6: So I'm actually not walking that much in the city. But if it was like a weekend and if I wanted to go somewhere, I would still go by bike, but then I could park it and walk around in some neighborhood and then take the, like I would meet with friends in the park, for example.

[00:20:52] P6: And you're, you are not allowed to drive the bike in the park, so then I would walk.

[00:20:57] Yiyi: Yes. And when you have the bike, it's very convenient for you to go everywhere. Yeah. So, yes, that's so true. I am still want to know that maybe is there any like place or any moments that you feel discomfort about the city?

[00:21:23] Yiyi: Um. You may not feel really comfortable or you feel a bit dislike about this area.

[00:21:33] P6: Mm. For me personally I have phobia against dark. So I'm really scared of dark places. Yeah. Okay. But if the dark place is vibrant with like some restaurants or bars and there are lots of people, then I don't have the panic.

[00:21:57] Yiyi: Ah, okay.

[00:21:57] P6: But if I'm alone in a dark place, I get really scared.

[00:22:04] P6: Uh, and, uh, yeah. So if it's an area, and especially in winter time, because it gets dark so early and it's still dark in the morning. Mm-hmm. Um. Yeah, I, for me, it's really important that there is like really good street lights.

[00:22:24] P6: Uh, I don't know. Uh, but yeah, I don't know. I, I am not sure if this is the right answer to this one.

[00:22:33] Yiyi: Yeah. Yeah, It's fine. I want to know maybe the most comfortable and maybe some discomfort, like your personal preferences for the place. Uh, and you mentioned that you have the dark phobia so during the winter time, it may be a bit, you know, troubling for you. Sometimes it's, uh, the daytime is quite short and

[00:22:57] P6: Yeah.

[00:22:59] Yiyi: But do but you still feel okay about the winter in Copenhagen?

[00:23:03] P6: Yeah. I mean. As I explained, if it's near other people, if I'm not alone, then I, then it's okay.

[00:23:11] Yiyi: Ah, okay.

[00:23:14] P6: Uh, like from, Sydhaven, the university to my home in Frederiksberg, I pass by there is a cemetery. Mm-hmm. Uh, and on the side there is like a bicycle

path. And on the other side there's also cemetery. So it's like, uh, when I go through there. And it's a bit scary.

[00:23:40] P6: Um, yeah. So maybe 'cause cemeteries are not very light. Mm-hmm. Uh, like there's not a lot of light in them. And also parks, they close parks in the night. And, uh, the one next to my home also, we once went there, uh, in the evening. Mm-hmm. when it was dark already.

[00:23:58] P6: And uh, they had no light in the park. It was weird. Yes.

[00:24:04] Yiyi: Yeah, I, I usually find that during the winter time, there is not very lightning on the Copenhagen Street. There are not too many lights.

[00:24:13] P6: I think in the streets it's fine, but just parks

[00:24:16] Yiyi: Oh, yeah, yeah. In the park and also the area which I lived in. It's not, it's also not in the city center, so I feel only a few lights on the street. But during the winter, I really prefer to, you know, stay at home and don't go out.

[00:24:33] P6: Yeah.

[00:24:34] Yiyi: Uh, oh, by the way, I forgot to ask which country you from?

[00:24:38] P6: Uh, I'm from [anonymised].

[00:24:40] Yiyi: Okay. and I wonder, is the living in Denmark your first time to live in a foreign country?

[00:24:48] Yiyi:

[00:24:48] P6: Mm-hmm. No. I've also lived in Ukraine for six months. And then I lived in France, uh, in different cities in total for about a year.

[00:25:08] P6: Um, and then I've lived also in Belfast, which is Northern Ireland. I lived there also for a year.

[00:25:18] Yiyi: Oh, okay. So you have kept moving from one country to another

[00:25:25] P6: Well, um, I always come back to [anonymised] in between.

[00:25:30] Yiyi: Ah, okay. But you still have many international experience already before you came here.

[00:25:38] Yiyi: So when you first moved here, you don't feel that quite like unfamiliar or troubled by moving to a new country.

[00:25:46] P6: No. And also as I explained earlier. Uh, I had been here before multiple times because I visited my friend. And during those visits, I really fell in love with Denmark. I saw how bike friendly. I don't know that there're a, like how lively this city is that there are so many restaurants and people are just on the streets.

[00:26:17] P6: And in the parks and enjoying their time and swimming in the cannal, the water. Um, yeah. All of that kind encouraged me to decide to move here. Yeah.

[00:26:32] Yiyi: Ah, okay. So you already know about Copenhagen, so this would be the city I love. And then you move here.

[00:26:39] P6: Mm-hmm. Yes.

[00:26:40] Yiyi: And after you have been living here for one and a half a year, do you think it's still fit your expectation or do you think you I still love here.

[00:26:48] P6: Mm-hmm. Yes, I would say so.

[00:26:49] Yiyi: Ah, okay. That's so good. Uh, and maybe the last question is about the belonging, because the whole topic of my thesis is about the the belonging.

[00:27:00] Yiyi: And do you think, would you say that you feel you belong to this city or the city gives you this sense of belonging?

[00:27:08] P6: Hmm it's a bit hard to answer.

[00:27:15] Yiyi: Yeah, yeah,

[00:27:16] P6: No, um, I would say I'm get getting there but not there yet. Uh, because I feel also Denmark is in general quite an expensive country.

[00:27:33] P6: And then I feel like there are a lot of things to do for free. But then there are also a lot of things that cost money and there it's quite pricey.

[00:27:46] P6: I don't know. If you want to go to some classes, for example, yoga classes or a gym or whatever, it all costs money. And then, I don't know, there are these like communal dinners which is for everyone to join, but then it still costs money. And then I feel like now, I think I'm still not fully belong because I don't fully experience all the opportunities because it costs a lot.

[00:28:26] P6: yeah. As I say, there's still things that don't cost money. Uh, but, uh, yeah, I don't know.

[00:28:32] Yiyi: Ah, okay. So maybe you think if you belong to some place, it means that you already experienced most of the place, including the events and the different opportunities.

[00:28:46] P6: Yeah, I think you kind of go, I feel like I kinda kept the same maybe lifestyle that I had before and continued the activities. At home that I was doing, like playing board games. Or I don't know, painting with water colors. Or just reading, or mostly staying at home. So I wouldn't be really between other Danish people, doing things that Danish people do. Yeah. Uh, because especially like restaurants are so expensive, and I would always choose to eat at home than going and eating outside.

[00:29:28] P6: So I haven't I feel like I haven't really discovered fully Frederiksberg neighborhood, for example.

[00:29:40] Yiyi: Okay. Yes. Yes. I totally understand that.

[00:29:44] Yiyi: And maybe among all the cities you have been living before, and outside your home country, is any of this city give you this sense of that I belong here, or I am here?

[00:29:56] Yiyi: Not just arrive here, but I am here.

[00:29:58] P6: Uh, it was maybe a little bit easier in France and UK because I could understand the language.

[00:30:15] Yiyi: Ah, okay. You can speak French?

[00:30:19] P6: Somewhat. Speak French, okay.

[00:30:20] Yiyi: Yes,

[00:30:21] P6: Like I could at least understand half of the conversations. And uh, also when I was in France, uh, I, yeah, I don't know, just friends, uh, because I learned French from a very young age, it kind of already.

[00:30:40] P6: I understand the culture a lot better. Because I've learned about it and I think, yeah, my previous knowledge kinda opened that up. And in England it was just that I could, uh, actually no. In England, I didn't really felt the belonging. It was a very, Belfast, especially as a very strange place. With a very harsh history. Yes,

[00:31:03] Yiyi: I know.

[00:31:03] P6: And it really had these two sides of Catholics and Protestant. And I wasn't aware of, uh, how intense these conflicts were. Mm-hmm. And I felt kinda, ooh, I'm in between these two fronts and uh, I'm just gonna be polite and I don't wanna offend anyone. 'cause it's still kinda, there's a lot of tension there.

[00:31:26] Yiyi: Yeah, yeah,

[00:31:27] P6: And, uh, I'll just do my things. Yeah, there I didn't really felt the belonging, but it was easy because of the language. 'cause at least I could understand everything.

[00:31:39] Yiyi: Yeah, yeah, but in Denmark you feel the language. I mean the Danish is still like a barrier for you to integrate well.

[00:31:53] P6: A little bit. Yes. Mm-hmm. I think there are still a lot, plenty of options to do in English. But, uh, sometimes, yeah, there are some things and jokes and something that I don't understand that are Danish.

[00:32:04] Yiyi: Okay. Yeah. And are studying now the Danish? Are you studying?

[00:32:09] P6: I am, but uh, it's, uh, a slow process.

[00:32:13] Yiyi: Yeah. No, yeah. But it's good. Maybe gradually when you learn more about the Danish and you have more like local friends, it would be easier.

[00:32:25] P6: Yeah, I think now I'm also I changed my job, and now I feel like I can maybe afford a little bit more. Uh, and now I would sometimes go out and start to explore some cafes and something, and I think that really adds a lot to kind of feel the belonging.

[00:32:44] Yiyi: Yes.

Yeah. Okay. Thank you so much. Thank you. And I'm also going to attend an international corner. I'm going to try to meet new, some other international students here. Yeah. Yeah. Because since I started my study here, I only know the other students in my own program.

[00:33:48] P6: Yeah. I feel similar.

[00:33:50] Yiyi: Yes. Oh, and by the way, if you can get more support from the international office in AAU, what do you think the support that you need? Or you think that can be helpful for you?

[00:34:03] P6: Um, I don't know. Maybe some more events. Uh, I don't know. It feels like, I don't know.

[00:34:29] Yiyi: Oh, you already got everything you need, huh?

[00:34:29] P6: Yeah, but I feel like there's not that many events happening in this university. I feel like a friend of mine is studying in KU. Maybe it feels like they have things happening more regularly.

[00:34:38] P6: But here it feels like, yeah, but I don't know. Yes. Oh, yes, I, yes.

[00:34:50] Yiyi: So, yeah, I mean, I have the, maybe the same feeling with you also because I heard from the international office that, mm-hmm. The percentage of international student is a bit lower here. Most of the students are Danish students and they only have like a small portion of the international students,

[00:35:08] P6: But I think all the master programs are English, and in my program majority are foreigners. Then we only have a few Danish people in my program.

[00:35:20] Yiyi: Yeah, so I don't know if they organize some events for the international students. Because some events may be in Danish and also I try to like meet some people in the campus, but most of them are Danish. I feel that international students are not that active in the campus.

[00:35:40] P6: Yeah. Because I also think most of the people that are active are from bachelors.

[00:35:46] P6: And maybe they have more free time. And I think like in master's program, people are foreigners that need to study more.

[00:35:54] P6: And also, so they're more busy and also they have these student jobs and everything and they don't really have much free time.

[00:36:03] Yiyi: So when they, after they finish the class, they just go home directly?

[00:36:07] P6: Mostly, yeah.

[00:36:08] Yiyi: And for you, do you often stay at the campus or study in the campus?

[00:36:13] P6: Yeah, for group works, we stay and study, but uh, yeah, otherwise we would go somewhere else.

[00:36:22] P6: And also because Denmark, well, Copenhagen is such an expensive city then majority of people don't like live a bit further away and then it.

[00:36:33] P6: Yeah. They don't come that often to the campus, just to hang out because it's quite far away and maybe they have to pay for Metro or something like that.

[00:36:42] Yiyi: Yeah, that's true. Do you have any other friends in other programs in AAU?

[00:36:47] P6: Uh, well through some of my course mates, they might have some friends in other programs. Oh, yes. I don't know. I was learning the Danish .

[00:37:04] P6: I took Danish classes in here, so I did meet some people from other programs, but I wouldn't call them friends.

[00:37:11] Yiyi: Oh, okay.

[00:37:12] P6: I mean, I would know their names and I would maybe say hi to them if I saw them in the campus, but I, I don't know them that well.

[00:37:19] Yiyi: Okay. Yes,

[00:37:20] P6: It's not that close because I'm still trying to know more people here, but it's a, I do experience some difficulty.

G2. User Testing Interview (selected full transcript)

Date: April 2026

Location: Aalborg University Copenhagen

Duration: 10 minutes (after walking experience)

Participant: U1

00:00:36] Yiyi: Why do you take these photos?

[00:00:53] U1: These ones. Because that looking so pretty, So interesting ... like there's new trees, new coming out.

[00:01:03] U1: And the next one is, I don't know, it feels weird to me, So I feel like it's really different. And the other one is the trees.

[00:01:12] U1: They look like they're dying Mm-hmm but actually it's the spring, so they're gonna be full after some time. And there was a man kayaking by himself.

[00:01:21] U1: Ah, okay. The last one. So it's like you have to zoom it.

[00:01:24] Yiyi: Yes, I would.

[00:01:25] U1: And it looks so interesting, like he was just by himself, he was going so fast, so I couldn't take a picture that much.

[00:01:44] Yiyi: Yes, I know. I know.

[00:01:45] U1: So yeah. When I first came here, I was like rowing so fast. Uh-huh. I was like I have to take a picture. Yes.

Yiyi: Uh, and first of all, I would like you to choose another two cards? Because you choose this two (beforehand). And now after maybe staying in outdoor for a few minutes, now I would like you to choose another two to describe your feeling.

[00:02:08] U1: I don't know, but I want to choose this one- ... but it's not my feeling.

[00:02:15] Yiyi: I mean, if you still want to choose this, yes, it's okay. Um...

[00:00:00] Yiyi: And first could you explain this?

[00:00:03] U1: Okay. This one is like, Because the spring obviously is coming. And I was looking at so many trees when I was coming to the campus, and, uh, like, I saw so many trees and stuff, so it felt like it's blooming outside and so getting green.

[00:00:23] U1: And, yeah, the feeling was like it's growing, and also about my life.

[00:00:28] U1: It felt like I'm doing something for my life- so it's also growing. So it, it was a metaphor, like trees are growing, so my life is also growing. And the next one

is I have so many works pending. Mm-hmm. That's why.

[00:00:42] Yiyi: Yes.

[00:00:42] U1: Because I have to do a lot of things, even though I was chilling outside- and feeling like, yeah, I'm doing something, but at the same time I was feeling like I have a lot of things to do and a lot of ideas are coming in my mind.

[00:00:55] Yiyi: Mm-hmm.

[00:00:55] U1: And aafter walking, taking a walk at the nature and the water- I felt like there's so many, like- Ah

[00:01:06] U1: there's also so many ships around and- Yeah ... water and so many water feeling. So it felt like even if I don't do my thesis and even- ... if I don't stud my life will go on.

[00:01:17] Yiyi: Mm-hmm.

[00:01:18] U1: And, uh, the nature will just grow, and everything will go on their own paces. It's like even though I have to take the risk, I should do it on time.

[00:01:28] Yiyi: Mm-hmm.

[00:01:29] U1: And the next one is these rocks just represent me. Like, there's so many new things happening around me, but right now I have to sit still and do my work.

[00:01:38] Yiyi: Mm-hmm.

[00:01:39] U1: So I'm taking the motivation that- yes, after doing my work, maybe I will take a long breath and explore the nature again.

[00:01:48] Yiyi: Yes. So nice. And I wonder, When you were studying in the university,do you enjoy walking along the canal before? Uh, yes.

[00:02:04] U1: Mm-hmm. I always enjoy walking around river because where I live there's also a lake.

[00:02:09] U1: There's so many ducks around. And it feels so nice to see them having kids and growing. And whenever I have time, I just sit by the lake and take a time. And sometimes I also take one of my friend from my dorm and sit and talk about life. It feels nice once in a while.

[00:02:29] Yiyi: Ah, okay. And is this your first time to listening to something when you're walking?

[00:02:35] U1: Um, not first time actually. Mm-hmm. Sometimes I also listen to some other podcast.

[00:02:41] Yiyi: Uh-huh.

[00:02:42] U1: Or, uh, like, I don't usually go on music that much these days. And, uh, sometimes I also, like, go through the, my study materials when I'm walking.

[00:02:54] U1: And sometimes you just realize, okay, it makes sense. Because I'm in my room, and I can't make a sense of it, I take time and listen to it again and it makes sense.

[00:03:03] Yiyi: Mm-hmm.

[00:03:04] U1: So, uh, I try not to listen to anything study- Mm-hmm ... uh, related to study outside, but this is not my first time because I did it before.

[00:03:14] Yiyi: Yeah, I know. Yes.

[00:03:15] U1: even before in my country, I had an exam, my language exam. So I used to take a walk and listen to my materials outside and yeah, I quite remember that because I actually understood most of the things when I was walking and listening to that, and it made quite a sense.

[00:03:33] Yiyi: Yes. Uh, and when you're listening to such kind of guided audio walk how do you feel it's different from the normal walking?

[00:03:42] U1: Yes. Mm-hmm. It is different- because it's actually guiding me to actually look around myself and, like feel the texture of my surrounding environment, and also guiding me to be more into the nature than just walking mindlessly. And also, when I was listening, it talked to me about some texture and also about surroundings.

[00:04:07] Yiyi: Mm-hmm.

[00:04:07] U1: I was actually looking at some birds because here I could see some birds, making sounds and also some trees growing. And when I looked at the, I felt good

[00:04:17] Yiyi: Mm-hmm

[00:04:18] U1: uh, because it made me feel that nature is blooming. So yeah, it felt nice, and because in the winter you don't see that much growth outside. Mm-hmm. So, yeah.

[00:04:29] Yiyi: Uh, so, uh, if there is no audio guided, will you notice the things like growing or something?

[00:04:38] U1: Uh, I would actually because in my regular life, I try to look at things once in a while.

[00:04:45] U1: Even when I'm traveling, I look outside the window. Try not to use my phone. but sometimes I do. But whenever I look outside, I try to look at what

other people's homes are like and, uh, what trees are blooming right now-

[00:05:00] U1: Mm-hmm and how people are walking outside or what the kids are doing. So typically, that's how my regular life is. So I don't think that's really different from me. Okay... but I really liked it when something is actually telling me, so that you can actually explore this and that.

[00:05:15] Yiyi: Yes. And did you notice something that you usually will not notice?

[00:05:25] U1: Like, I wasn't looking at other people, but when it told me to actually look at your surrounding Mm-hmm maybe some other people walking or something, I actually looked at other person and the dog was barking at me.

[00:05:37] U1: So I was scared for a time. Yeah. Yeah.

[00:05:40] Yiyi: Yes.

[00:05:40] U1: But yeah, I took a look and felt like, yeah it's nice to have something guiding you.

[00:05:45] Yiyi: Mm. Yes.

[00:05:47] U1: Yeah. It was telling you to actually look into the texture. And take a picture if you like to memorize this moment as yours. So it, it really made a difference, I think.

[00:06:01] Yiyi: Okay, yeah. But you also already have the habit of taking a photos?

[00:06:04] U1: Yes, I do.

[00:06:05] Yiyi: And when you were trying this walking experience, how do you feel about your body?

[00:06:16] U1: I was breathing fine. And I was trying to smell something, and the wind was fresh.

[00:06:21] Yiyi: Mm.

[00:06:21] U1: So I, I think it... Yeah, that's how I felt, yeah. Oh. So when it was telling me to actually smell around you or actually listen to the birds. I actually tried to listen to the birds, of the birds. And, uh, there was a dog barking at me, so I was scared for a time. Oh. That's what I said. So yeah.

[00:06:38] U1: Other than that, it, it was... Yeah. Yes. It guided me.

[00:06:41] Yiyi: So you mentioned that you, you really smell the wind, and you feel the wind is fresh?

[00:06:46] U1: Yes. Yeah. Because it's raining. It started raining-so it was feeling like a bit muddy.

[00:06:52] U1: And because the water is near so also the smell of the water.

[00:06:55] Yiyi: Mm-hmm.

[00:06:57] U1: Yeah, and it's so quiet right now, but at the time, I was listening to some birds.

[00:07:03] Yiyi: Mm.

[00:07:04] U1: So yeah, it felt nice.

[00:07:05] Yiyi: Yes. And do you think the sounds of birds and also the, the fresh smell of the wind make you feel more connected to the place at this point?

[00:07:15] U1: Yeah. For once, I actually forgot about my workload and started actually looking and felt fresh.

[00:07:23] Yiyi: Yeah, that's, that's really good. It's very good to hear. And also, I want to ask, maybe during this audio experience, do you think you have something more to do, or you think something more that I can add in this experience that you want to try?

[00:07:43] U1: Um, I don't know, but right now I feel like it's really a nice experience that you had. Also, it was giving me time to actually think about it- Mm ... and actually telling me to maybe take a seat or maybe take a walk- Mm-hmm ... and pausing for some time. I think that was really nice.

[00:07:59] Yiyi: Mm-hmm.

[00:08:00] U1: And I don't have any suggestions right now because I can't think of any because it's also really new to me that something is guiding me.

[00:08:09] Yiyi: but if you want to add something new, maybe, I don't know what to add. Maybe you can tell it to maybe, um...

[00:08:23] U1: Actually, it was telling me to remember some good memories back from my home and- Ah ... stuff like that. So I felt really connected,

[00:08:27] Yiyi: Okay. Yes.

[00:08:28] U1: So I felt really connected, so

[00:08:32] U1: I can't think of any more suggestions right now. Because already it's a good one.

[00:08:34] Yiyi: That's, that's good.

[00:08:35] U1: Yeah.

[00:08:35] Yiyi: Uh, and do you feel the prompts is easy to follow?

[00:08:40] U1: Yes. It was really easy to follow, and even though right now I'm by the- Like it was telling me to look for a cafe, but it was giving me other options as well.

[00:08:48] Yiyi: Uh-huh.

[00:08:49] U1: So I could look for something else. Yes. Like, yeah, this is... There is a person that I can look at. Or there is a, some water that I can look at, or some trees I can look at. Mm. So it was giving me other prompts as well. So it was nice to follow.

[00:09:01] Yiyi: Okay. That's good. And also I just want you to imagine that would you like to try such kind of experience in some other place of the city?

[00:09:20] U1: Yeah.

[00:09:20] Yiyi: Uh, like for example, which place you would like to try it?

[00:09:23] U1: Could be like by the castle. Yeah, uh, because like I have been to one or two castle where you can actually take a look at the object, and they have an audio of telling you the history of the object.

[00:09:37] Yiyi: Mm-hmm.

[00:09:37] U1: So I feel like that's, that was a really nice service.

[00:09:41] U1: So if there was something like audio when you were actually visiting something and it was telling you like, uh, a live, uh, broadcast of how it was made or the brief history of it, I think that would be really nice. And some people. I would really appreciate that, because I would really appreciate that.

[00:09:56] Yiyi: Yeah,

[00:09:57] U1: Because I sometimes go to a place, and I don't know about the history, but when I know I feel like, "Oh, that, that was a really nice meaningful place."

[00:10:02] Yiyi: So you want to learn more about like historical stories about something?

[00:10:05] U1: Or like how it's going on and, uh, its value or something.

[00:10:11] Yiyi: Okay. Yes. Nice. But I mean, because at the beginning I also thought about what I want to design in this audio work. But since our program is focusing on the embodied. experience, like these things.

[00:10:27] Yiyi: So finally I decided not to include some very concrete information. Like o make it as an introduction of a place. But it's more like a mindful walk. So yeah, that's, that's-

[00:10:41] U1: That's a really nice of it actually, because you can listen to it anywhere.

[00:10:44] Yiyi: Yeah.

[00:10:44] U1: And it's, it's a nice one I think.

[00:10:46] Yiyi: Yeah. Okay. Thank you.