Research Document
Noise Control (Education Dashboard)

This complete research was conducted by:
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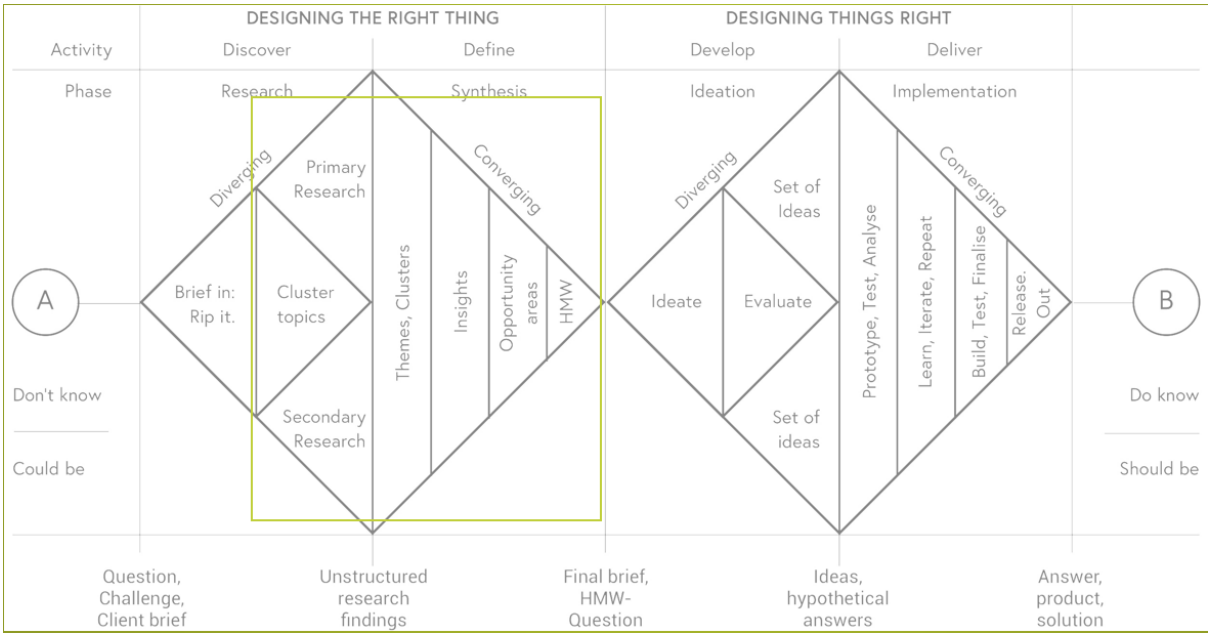
We want to approach our research according to the UCD design methods that we learn in our UCD class. This means that we want to start our research phase with the following approach:



Discover phase:

- **<u>Research (contextual / behaviour)</u>**

  <u>Primary research</u>

  We will conduct this research by means of surveys / interviews. We want to gain a better understanding of the problem by asking people about their experiences in their time in gym halls when they went to school. Ideally, if this is doable, we want to go to a school and interview gym teachers about the noise problems. We also want to know how people would like this information to be presented to them, as this is what our product aims to do in the end.

  <u>Secondary research</u>

  We will conduct this research by means of searching for tried and tested data and analysing that data to apply it to our research.

  i.e., researching the problems experienced with noise in gym halls and what causes these problems, and solutions and pitfalls regarding this problem.

Define phase:

- **<u>Insight (interpret / understand)</u>**

  After our research we need to start defining the results we have gained from our research so that we can start to implement our findings into our product. By doing this we will gain insights into the needs of our users and what our product needs to give our users a good and clear overview of the noise problem, its causes, and its possible solutions, in our dashboard.
  In this phase we will use our findings from the research phase to make the following deliverables that will give us, and our stakeholders a better understanding of our research:

- Personas
- Wireframes
- User journey map
- Content inventory

Library Research

The research conducted on high noise levels in primary school gym halls was primarily a comprehensive library research endeavor aimed at understanding and addressing the issue of excessive noise in these educational settings. The primary concern identified in this research is that noise levels within primary school gym halls frequently surpass the 90 decibel (dB(A)) threshold during an extended 8-hour workday. Such high noise levels are widely considered to be detrimental to the physical and mental well-being of individuals exposed to them over extended periods.

This research primarily focused on the experiences of physical education (PE) teachers who work in these gymnasiums and the various adverse health effects they may endure due to prolonged exposure to high noise levels. The findings of this research are invaluable in shedding light on a critical occupational health concern, which is essential for the well-being of educators and, by extension, for the students under their care.

The most significant health concerns associated with high noise levels in primary school gym halls were identified through this extensive library research. These health issues include:

1. **Concentration Problems:** Prolonged exposure to high noise levels can impair an individual's ability to concentrate, which is particularly concerning for PE teachers responsible for maintaining a safe and organized environment for students.

2. **Hearing Loss:** Consistent exposure to noise levels exceeding 90 dB(A) can lead to progressive hearing loss over time. This not only affects the professional lives of PE teachers but also their overall quality of life.

3. **Headaches:** Frequent headaches may be induced by the stress and discomfort associated with high noise levels. These headaches can impact an educator's performance and overall well-being.

4. **Tinnitus:** Tinnitus, or the perception of ringing or buzzing in the ears, is a common consequence of exposure to loud noises. PE teachers in primary school gym halls are particularly vulnerable to this condition.

The research was undertaken to provide a substantial foundation of information regarding this issue. It serves as a call to action to address the adverse effects of high noise levels in primary school gym halls, with a focus on the health and safety of educators. In this research, an extensive review of existing literature, relevant studies, and available data was conducted, forming the basis for understanding the severity of the problem.

Additionally, this research aimed to establish a practical solution to raise awareness of this issue and advocate for change. To achieve this goal, We are aiming to build a dashboard website. This website should act as a centralized platform for displaying key information related to noise levels in primary school gym halls and their impact on PE teachers. By making this data accessible to the public, school administrators, and policymakers, the website would serve as a crucial tool for raising awareness about the issue and encouraging measures to mitigate noise levels in these settings. It provides the resources and information needed to promote healthier working conditions and improved well-being for PE teachers, ultimately benefiting the educational experience of the students they serve.