

Introduction to UX Research

Lesson 12: Finding Jobs in UX, CX, and Market Research

Portfolio

- You want to show employers that you know what you are doing
- You can use the mini-projects from this course as a great start to the portfolio
- Even better would be to collect real data for a larger project and use that as part of your portfolio – it is okay if it is a group project!



Market Research

So you want to be a market researcher...

- Create a personal website that includes portfolio projects – these can include projects from your PhD research or new side projects
- Rewrite the academic work in business style – turn a journal article into a white paper, an abstract into an executive summary, and results / implications sections into use cases
- Tips
 - Avoid all jargon a recruiter won't understand
 - Make it pretty



Connecting the dots among the music of *Billie Eilish* & *Bing Crosby* with *ASMR*, *social media*, & the *coronavirus crisis*...



Billie Eilish and ASMR

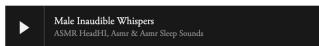
BILLIE EILISH SAMPLE



The music of Billie Eilish and Bing Crosby parallel some of the techniques used in recordings that aim to evoke **ASMR** (autonomous sensory meridian response).

ASMR has soared in popularity in recent years, with more than 2 million subscribers and 750 million views for a *single YouTube channel*.

ASMR SAMPLE



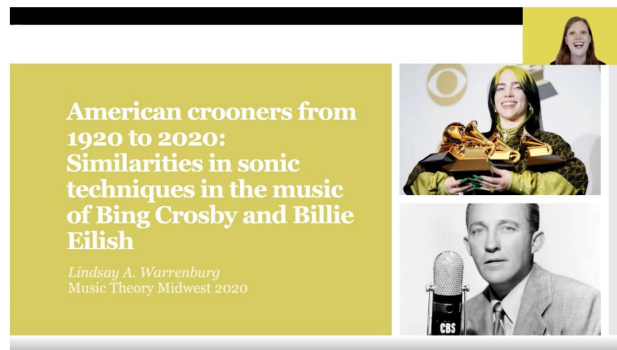
"**ASMR** is a sensory phenomenon, in which individuals experience a tingling, static-like sensation across the scalp, back of the neck and at times further areas in response to specific triggering audio and visual stimuli. This sensation is widely reported to be accompanied by feelings of relaxation and well-being."

—Barratt & Davis, 2015

My colleagues and I theorize that the popularity of these “sonically intimate” techniques, especially among Millennials and Gen Z listeners, can be explained by the need for new methods of physical intimacy after the rise of social media. This theory suggests that during periods of isolation, like the mandatory quarantines and stay-at-home orders during the coronavirus crisis, the music of Billie Eilish and Bing Crosby can be especially appealing. Our work also could help explain why Bing Crosby’s music provided American listeners with a source of comfort during World War II.

IN SUPPORT OF THIS THEORY, RESEARCH HAS FOUND THAT...

The sonic techniques used in ASMR mimic neural cues of physical proximity & intimacy. In other words, when people listen to these recordings, they feel the same sense of relaxation and pleasure usually associated with being near a close friend or family member!



UX Research

So you want to go into UX...

- If you want UX/UI jobs, it's a good idea to build a website for a test case like this one – this is your portfolio project that will get you a job
- We'll use Moritz Oesterlau's [website](#) as an example
- Other good ones to check out:
 - [Query formulation and auto-suggest \(Microsoft\)](#)
 - [Uber scooters \(Uber\)](#)
 - [Jamb \(Finna Wang\)](#)





Client	Student Project at CareerFoundry
Sector	Education, Design, Sustainability
My Role	Entire product design from research to conception, visualization and testing
Project Time	3 months



Intro & Competitive Analysis

TINIA is an online platform that enables students to interactively and playfully create solutions to real-world challenges through Design Thinking and based on the 17 Sustainable Development Goals.

Through this concept of challenge-based learning, a closer integration of society and school as well as a stronger awareness of the student's responsibility and ability to act is achieved.

It should be noted that this project was accompanied by a three-month user experience design training, followed by a fixed course plan and a digital implementation was planned. It helped me to deepen my knowledge in user experience design and to explore approaches to digitization of school lessons and to find out how impulses for modern learning can be set in accordance with the sustainability goals.

Competitive Analysis

So far, there were no comparable offers, so my research applied to products from the field of e-learning, preferably with a focus on challenge-based learning and the target group children & adolescents.

The creation of competitive profiles (in terms of marketing strategy, target market, core business, usability, layout, navigation structure, compatibility, content, design and performance) together with SWOT analysis helped to assess current offers in this area.

Also, general advantages and disadvantages of online courses and the question of how e-learning could be integrated into the context of conventional school forms was an important part of the research.

Opportunities and Challenges of E-Learning

Opportunities

OPPORTUNITY #1

Individual learning types

Through self-learning systems, the learning process can be individually adapted for each student. Studies have shown, for example, that students who were considered weak in the classroom, after a short time with adaptive, tailor-made curricula many were even better than the previous best in class. These students simply needed more time for the basics, which then led to better and faster understanding of the more complex follow-up topics.

OPPORTUNITY #2

Timeliness & availability

Outdated or incorrect information can be updated at any time. Textbooks would therefore be obsolete and materials could no longer be forgotten or lost at home. Insofar as there is sufficient Internet access, global availability is possible.

OPPORTUNITY #3

Self-organized learning

Through the on-demand availability, self-organization regarding time, place and topic becomes possible. The pure transfer of knowledge (know-how) takes place digitally, which gives the teacher more time to offer individual advice and orientation (Know Why). The knowledge broker role of the teacher shifts into the background in favor of the role as the student's companion and guide.

OPPORTUNITY #4

Interactivity and multimedia

Possibilities of interactivity and multimedia, through playful exploration of context, higher engagement, direct feedback and more empathy (for example about technologies such as Virtual Reality or the possibility to communicate easily with affected persons).

OPPORTUNITY #5

Lower costs

There is no cost to buy textbooks, which will also make it easier for financially weak families to access education. In addition, e-learning contributes to the saving of financial, human and time resources, i.a. by simplifying various processes for schools, teachers and students.

Challenges

CHALLENGE #1

Lack of acceptance

Low acceptance of the teaching staff (and some parents), since a change of teaching methodologies and, in general, often also a change in attitudes, including e.g. a higher level of trust is required.

CHALLENGE #2

Bad Infrastructure

Reasonable infrastructure, ie a stable Wifi and high-performance terminals are needed.

CHALLENGE #3

Isolated Learning

The high availability and flexibility results in less exchange with other learners and thus a weaker sense of community, which can lead to a loss of motivation in the long term.

CHALLENGE #4

Lack of media literacy

Success depends heavily on the respective IT and media literacy of teachers and learners.

Generally

Learning in the form of traditional teaching and e-learning both require self-discipline, motivation and acceptance of the methodology, whereby e-learning – insofar as it is used in isolation – relies more on intrinsic motivation.

Interviews & Surveys

With the knowledge of Design Thinking, E-Learning and the image of sustainable education according to ESD and the Sustainable Development Goals (SDG's) I conducted interviews with pupils and teachers from the grades five to thirteen.

Goals

- Which group constellation is preferred for the project work and why?
- What is the willingness to become active within the meaning of the SDGs?
- What support is desired from students and teachers?
- To what extent are digital tools already being used for learning?
- What about digitization at the respective school? What are the obstacles in school life?

Based on the responses received, I formulated questions for an online survey that was answered by 202 people (about 75% teachers, 25% students) within one day – of course this survey is not representative, especially if you still have the differences between younger and more experienced teachers and between the different age groups of students.

Findings from interviews and surveys

INTERVIEW INSIGHT #1

Students do not feel taken seriously

Students often do not feel taken seriously by teachers (and adults in general) and feel that they are unable to present their ideas to others.

INTERVIEW INSIGHT #2

Students want to have a noticeable influence

Many students think about local issues and many would seek a solution to them, as they are part of a motivated and "fit" group and their efforts have tangible impact.

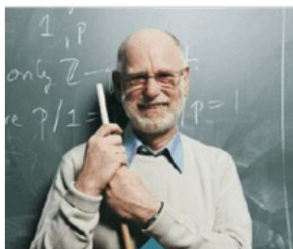
INTERVIEW INSIGHT #3

Students hardly know local role models

Few of the students surveyed knew people from their environment who are committed to society. They repeatedly wished the teacher in this role. Are not these models or are the young people e.g. not sensitized?

Building empathy

Using the quantitative and qualitative data from interviews and survey results, I defined the three target group profiles Peter (Teacher, 55), Sarah (Student, 16) and Tobias (Student, 13) to better empathize with my main user groups and prioritize goals according to their needs.



Peter

Age: 55
Job: Teacher of Math and Politics
Education: Master of Education
Family Status: Married, two children

Peter is a highschool teacher. He is very passionate about his subjects, but also he has high expectations of his students. In his free time he likes to go on vacation, listen to music and read. Peter doesn't use digital devices that much. He owns a smartphone, but usually uses it for phone calls and sms-communication only. Peter prefers to use his computer to browse the web, order books and to prepare work sheets for his class. He is familiar with Word and Powerpoint and has basic knowledge of Excel.

Most times he likes to use computers for his classes, but often his students need to help him with troubleshooting. So Peter needs an app that is easy to setup and maintain. It should work on his outdated computer at home.

He would like students to learn by real problems instead of theory only. He thinks the connection of real problems with the class is very useful, but he has some doubts if technology will let him down in school.

Goals

- Engage the Class in learning
- Spice up Politics Class with Problem Solving
- Get the Status of a Modern Teacher

Tasks

- Teach students about Tina
- Prepare a Problem Presentation
- Learn about Design Thinking
- Help students with their challenge
- Setup Account and Create School Classes

Frustrations

- Often he needs a plan B in case technology doesn't work as expected
- It takes too long to set up
- The software is complicated to use
- Cross-Device-Incompatibility
- Internet Connection Issues

How Tina helps

Tina takes over the time consuming task of finding suitable problem presentations for challenge based learning and also delivers the whole process & materials to conduct the lessons.

„Tina should really enhance the lessons and be easy and intuitive to use!“



Sarah

Age: 16
Job: Student, 10th grade
Hobbies: Swimming, Reading, Photography

Sarah comes from a suburban area. She likes to go out, take photos, meet with friends or to read a good book. Her main digital device is a smartphone she mainly uses for music, communication and simple games like candy crush. Currently she learns spanish with the app Duolingo. Sarah definitely wants to engage in solving social problems, but in school she experienced group work as time consuming and hard to organize... also she is quite insecure if she could have an impact, as she doesn't know any role models that successfully engages in such topics.

Sarah would like to connect with like-minded people to tackle social projects. At her school she feels left alone with this.

Often she has much homework to do, so the project has to somehow fit in her schedule.

„I want to be taken seriously and really have an impact!“

Goals

- Learn something new
- Engage in social problems
- Fun Process
- Connect with like-minded people
- Help a friend so she's not alone

Tasks

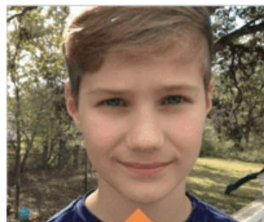
- Group Organization
- Conduct Research
- Conduct Interviews
- Create Ideas
- Create an Action Plan
- Hold Presentation

Frustrations

- „I know no people who'd like to engage in social problems - but something needs to be done!“
- „Students get graded individually, so even in group work there is much competition.“
- „I would like to spend more time on it, but my day is full with homework...“

How Tina helps

Tina offers Sarah a structured process to develop solutions to local and global problems. She will get expert and community help on where to connect with like-minded people and how to expand her impact.



Tobias

Age: 13
Job: Student, 8th grade
Hobbies: Football, Drums, Meeting with friends, Computer games

Tobias is a student at middle school. He likes to challenge himself, so he does a lot of sports and often meets with friends to compete against or cooperate with them in video games. His favorite game is Minecraft. His computer time at home is restricted to one hour a day, but he just got his first smartphone and tries out many apps and games.

In school teachers often talk about local and global problems, but the students just have to listen and repeat. He's a little angry about this, because he's interested in doing something, but teachers aren't inspiring and he really wishes his friends to participate so he wouldn't be alone.

„The school day is full with boring lessons, so Tina should be fun and inspiring.“

„Tina should be fun and inspiring!“

Goals

- Group up with friends
- Entertainment
- Challenge himself
- Engage in local problems

Tasks

- Group Organization
- Conduct Research
- Conduct Interviews
- Create Ideas
- Create an Action Plan
- Hold Presentation

Frustrations

- „Sometimes it's annoying that students have to help the teachers with troubleshooting digital devices.“
- „Teachers aren't inspiring, they just want us to listen and repeat.“
- „I don't know how to present my ideas so I get taken seriously by grown ups.“

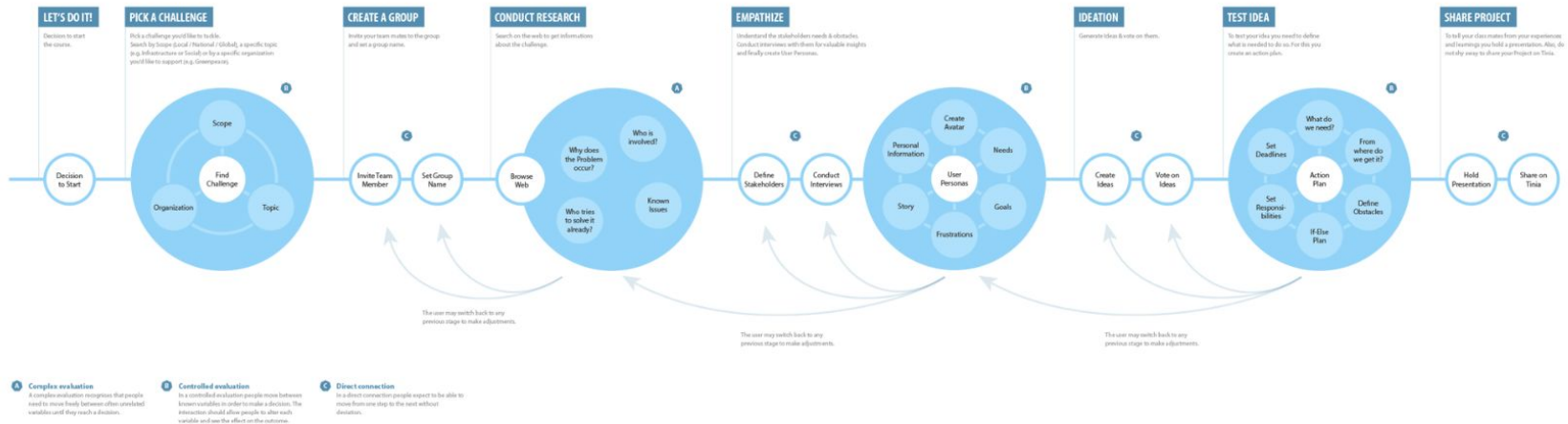
How Tina helps

Tina will help Tobias with presenting his ideas in a compelling way he'll be more likely to be taken seriously by grown ups. He can group up with his friends so he's not alone.

Structure of the course curriculum

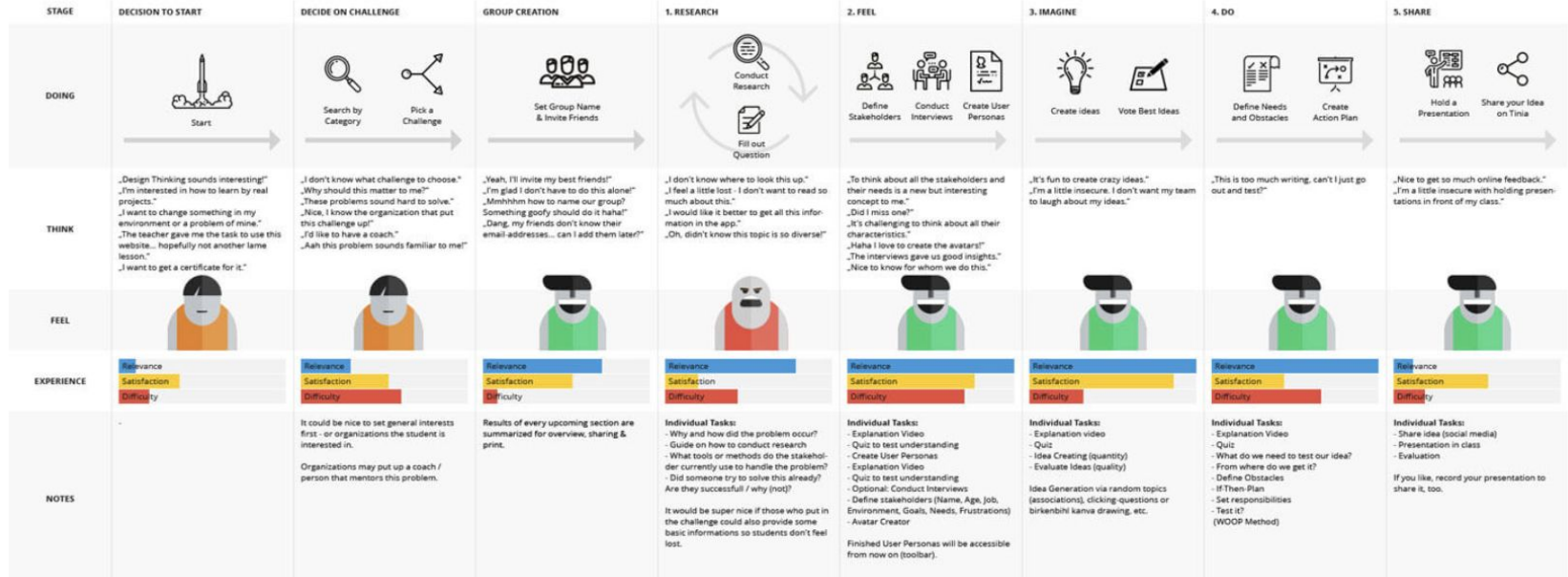
Task Model

In order to visualize and make more tangible the individual steps that a user makes during the course and its possibilities, I have created a corresponding task model.



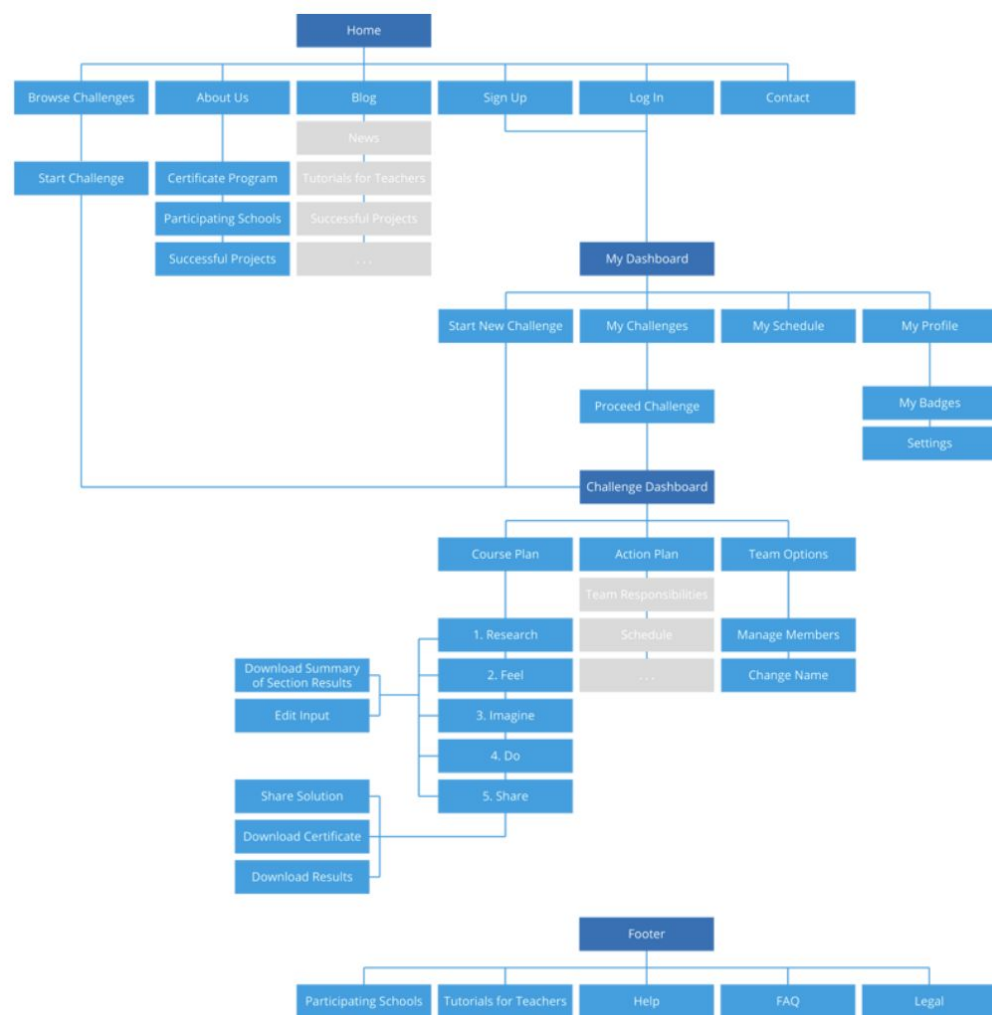
Customer Experience Map

A product-based journey map helped to better understand the course phases as well as the user and their experience in them. The originally planned syllabus was greatly adapted as there were unnecessary and unfavorable steps coming to light.



Information Architecture

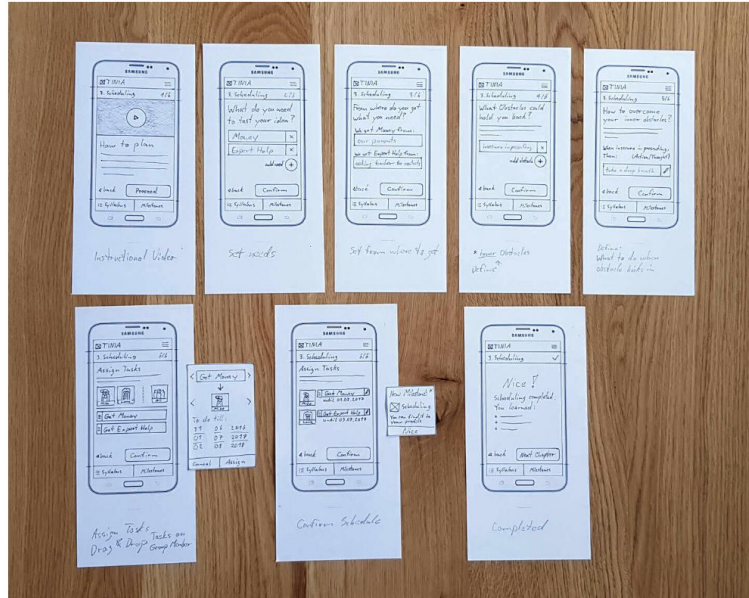
Based on the insights gained from the initial content audits, competitor analyzes and Card Sorts with potential users, I defined the sitemap for TINIA and then evaluated it via tree tests with potential users.



Wireframing, Prototyping & Usability-Testing

Paper-Prototypes

With low-fidelity paper prototypes, the planned syllabus and the general structure of the application could easily be tested in usability tests. Without much effort, adjustments could be made before going into the much more costly digital implementation.



Clickable prototypes

After some paper prototyping adjustments, wireframes, mid- and high-fidelity prototypes were created, which I supplemented with clickability using InVision. Again, user tests revealed small vulnerabilities in the structure of the user interface, in some formulations and interactions. In addition, the users asked smart questions, which led to further improvements.



Visual Design

The visual design was developed by iterating from mood boards and styletiles to the UI kit and finally to creating a first version of the style guide.

Text Styles

H1 Headline

Congratulations!

Roboto-Bold / 52 px / 68 px Leading / #293240

H2 Headline

Task Title

Roboto-Bold / 32 px / 40 px Leading / #293240

H3 Headline

Headline

Roboto-Bold / 24 px / 32 px Leading / #293240

Quote

„The future enters into us, in order to transform itself in us.“

Roboto-LightItalic / 22 px / 33 px Leading / #434B59

Paragraph

We have no reason to harbor any mistrust against our world, for it is not.

Roboto-Regular / 18 px / 28 px Leading / #5C5C5C

Button

Proceed

Roboto-Bold / 18 px / 24 px Leading / #FFFFFF

Buttons



Progress Bar

3/9

Checkboxes & Radio Buttons



Input Fields

Type something

Knitting sweaters for fire hydrants

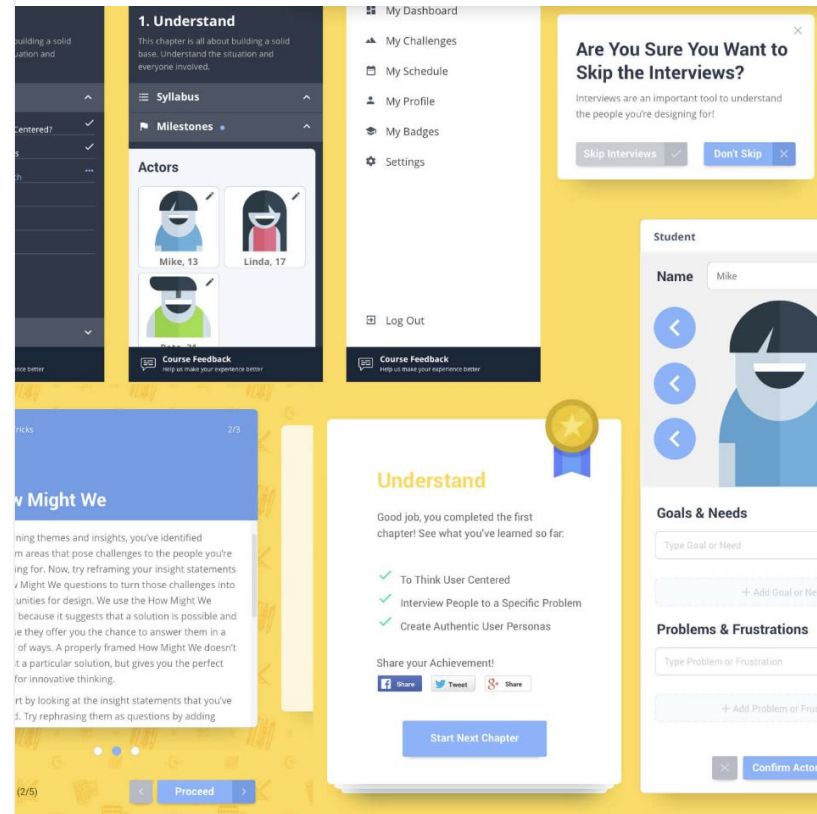
Type something

+ Add Actor

Idea

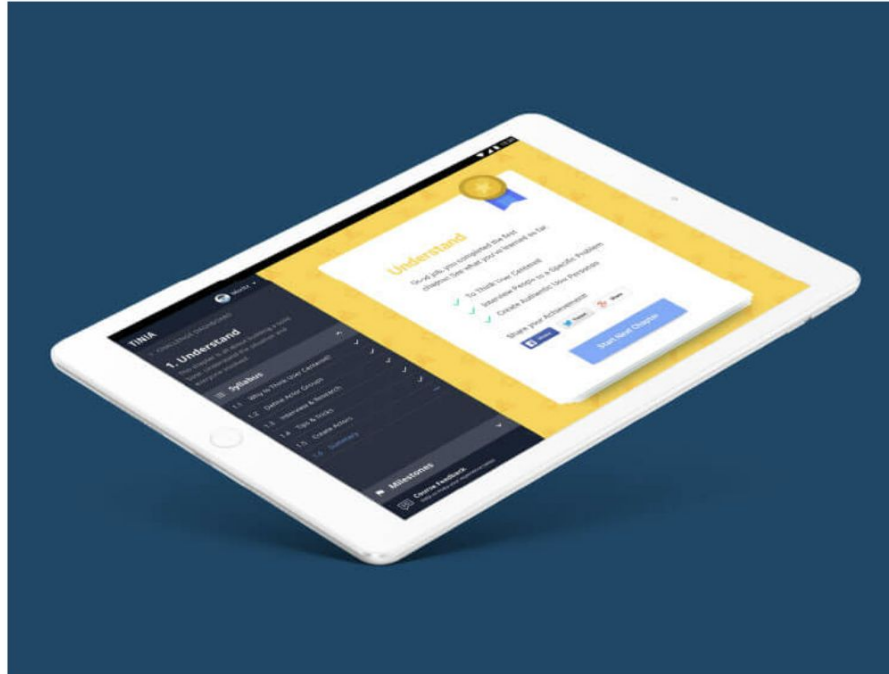
Idea chosen to test

Glyphs



A/B & Click Tests

To quantitatively review the usability assumptions, I did A/B and click tests, which confirmed my assumptions except for a few details. First and foremost, I tested the navigation structure on tablet and mobile, the wording of some actions as well as preferences regarding the visual design.



Conclusion

Digitization could revolutionize the entire education sector. Not for the sake of digitization, but because, as also highlighted in the research, thereby an important and profound social change is possible: The change from the teacher to the learning companion; as Gunther Dueck would say, “from the right to the true man”; from the rigid transfer of knowledge to the human companion through a time in need of orientation. In general, I see here the great opportunity of digitization, namely that it gives people the opportunity to become “more human” – a more empathetic, collaborative and social learning and working culture.

I completed the course in three instead of the normally planned nine months and chose my own project. Due to the complexity of the project that I chose and the demanding course plan, I was able to implement hardly any major adjustments to the concept in the short time. Also, the training provided a digital solution, where I can imagine as the first prototype also analogous materials to increase the acceptance and feasibility in schools.

Rather, it requires a change in attitudes and investment in a reliable technical infrastructure before the full potential of digital platforms such as TINIA can be harnessed. Of course, this is an interplay and requires digital solutions that are worth upgrading or questioning attitudes.

With the ambition to create a solution that can be adopted by schools, integrates sustainable development goals into school life and brings society and schools closer together, I was doomed to fail – the goal was far too vague and big. Also, I approached the project with too many strong ideas, which in retrospect was not conducive to reasonably responding to the research findings. My result is therefore rather an approximation and, above all, at the conceptual level requires further work, e.g. to facilitate a smarter group work.

It is also to be learned whether TINIA would prescribe a too strict course of Design Thinking, because Design Thinking is more of a mindset rather than a very concrete process (in terms of methods used). For this, it would need more experience from the field.

If there was more time available...

- Development of further user personas and Journey Maps / Task Models – in addition to the product-based Journey Map an experience-based Journey Map
- More research, as it's a complex and extensive topic with many factors (for example, technical and social challenges) and various stakeholders
- Further iterations / test phases, actually test the course plan in a real classroom

Learnings

#1 Big challenges require small steps

Take small steps, because big changes can not be brought overnight, especially not just by an application alone. Accordingly, develop more strategically meaningful and realistically applicable tools that steer in the intended direction.

#2 Be open to research and let ideas go

I thought too digitally and approached the product with too concrete ideas about the result, thus failing to correctly take into account some needs and challenges of the target group and thus unfavorably defined the minimum viable product.

#3 Journey Maps are my new best friend

Especially as it gets more complex, Journey mapping is very helpful, on the one hand to put a comprehensive process on paper and to uncover problematic and promising points, on the other hand to provide a basis for good cooperation for all stakeholders.

#4 Distribute polls via Facebook pages

More participation than expected, surprisingly many insights won and many answers to open questions received. Facebook pages with the appropriate fellowship and activity can quickly reach a relevant target group.

#4 Distribute polls via Facebook pages

More participation than expected, surprisingly many insights won and many answers to open questions received. Facebook pages with the appropriate fellowship and activity can quickly reach a relevant target group.

#5 Interview questions chosen unfavorably

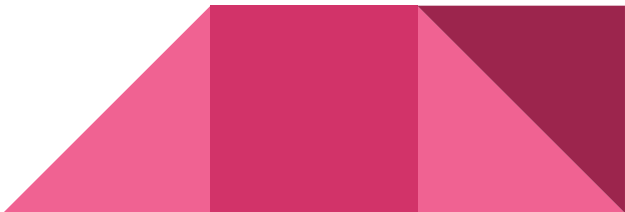
Looking back, I would rebuild the interviews differently as I used too many questions where interviewees should imagine what the optimal solution might be (for example, “describe your dream school”). Especially through the book “The Mom Test” I have been able to uncover many of my mistakes. It would have needed further interviews with teachers and school management (as well as parents) to create a more complete picture.

#6 More substantive visual design

In the meantime, inasmuch as no visual language has yet been defined, I would define brand attributes in advance, which can be used to orient oneself with regard to the visual appearance as well as (linguistic) formulations – see my project for youth culture work.

Consumer Insights

So you want to be a consumer insights researcher...

- Create a personal website that includes portfolio projects – these can include projects from your PhD research or new side projects
 - Create a GitHub for any statistical analysis / modeling
 - Highlight skills using business terminology (e.g., experimental design → A/B testing)
 - Focus on results, rather than process
- 

My work has shown that *melancholic* and *grieving* musics exhibit different structural characteristics, convey different emotions to listeners, and result in distinctive emotional experiences.

Some of my findings:

1. *Melancholic* music tends to be quieter, lower-in-pitch, and contains narrow pitch intervals. *Grieving* music tends to contain sustained tones, gliding pitches, and harsh timbres.
2. Listeners perceive different emotions in *melancholic* and *grieving* music. This finding was replicated using a separate methodological design.
3. Listeners feel different emotions when they listen to *melancholic* and *grieving* music. This finding was also replicated using a separate methodological design.
 - **Grieving** music tends to elicit feelings of Crying, Distress, Turmoil, Death, and Loss.
 - **Melancholic** music tends to elicit feelings of Sadness, Depression, Reflection, and Nostalgia.

My work on experienced emotions, published in *Music & Science*, showed that:

- People experience more **mixed emotions to melancholic music** than to tender music or grieving music.
- People with **different levels of empathy differ in their emotional responses to music**—people with a higher level *empathic concern* experienced more positive emotions than others, but people with a higher level of *personal distress* reported feeling more negative emotions than others.

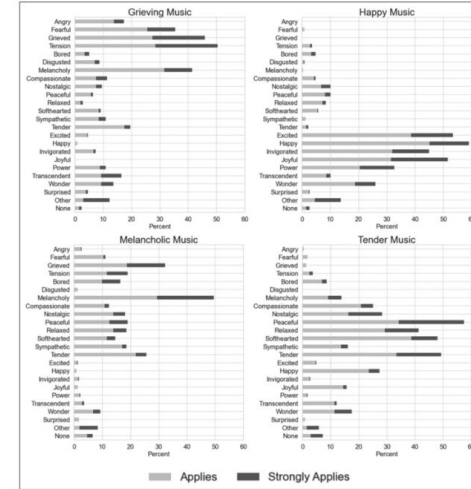
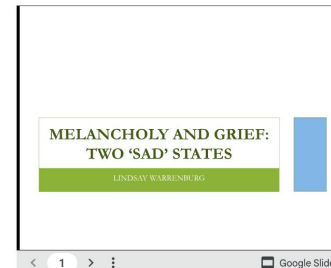


Figure 1. Induced emotions from the four stimulus types (melancholy, grief, tender, and happy) in Study 1.



An overview of my work on melancholic and grieving music.

Coronavirus Music Questionnaire (CMQ)

Description

Beyond immediate health risks, the COVID-19 pandemic poses a variety of expensive or unavailable strategies during a pandemic (e.g., therapy, social: music might serve as a tool for socio-emotional coping. We surveyed the m over 5000 people, with representative samples from 6 countries (3 continer

Main Takeaways

- 1. During the COVID-19 lockdown, people have turned to music for regulating their emotions.
- 2. People experiencing different degrees of emotional changes showed different patterns of musical engagement.
- 3. Music listening and music making may provide different coping potentials.
- 4. Coronamusic played a key role in socio-emotional coping.

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Participants

We surveyed 5113 participants with representative samples (in terms of gender, age, and education) in 6 countries on 3 continents.

The survey took place during the first lockdown of the COVID-19 pandemic, from mid-April through mid-May, 2020.

Country	Number of Participants
France	983
Germany	872
India	891
Italy	892
UK	621
USA	854

[Link](#) Complete demographic information can be found in `Descriptive_Statistics.ipynb`.

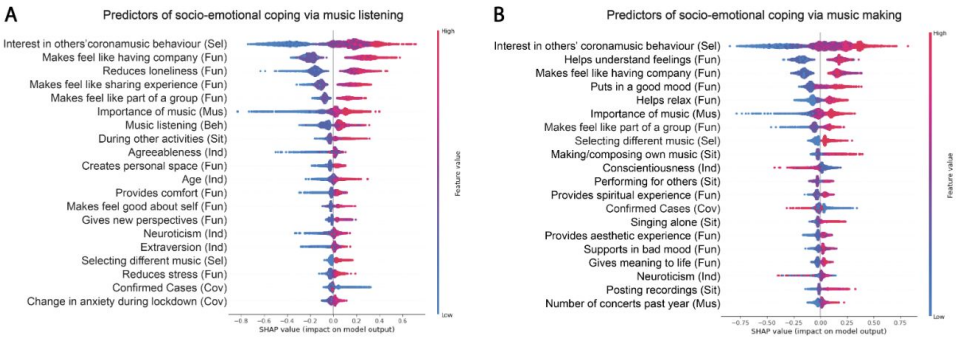
Music as a tool for socio-emotional coping

During the pandemic, people are less able to rely on some methods of coping, like ones that may be expensive (therapy) or unavailable (socializing inside). We used a machine learning approach to investigate how people are using music to cope with the stress of the coronavirus crisis.

We defined music-related coping as listening to or making music in order to:

- Feel connected to others
- Serve as a replacement for social interaction
- Cope emotionally with the present situation

Two LGBM regression analyses were conducted: one about *music listening* and the other about *making music*. The results are summarized in the SHAP value plots below.



Top 20 features predicting socio-emotional coping via (A) music listening and (B) making music. Data points represent SHAP values for every person on each of the top 20 most predictive features.

Music listening script: `Music_Listening_LGBM.ipynb`.

Music making script: `Music_Making_LGBM.ipynb`.



Thank You!

Contact Lindsay on Slack