

# Lernunterstützungs-/Buddy-App

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## ABSTRACT

In this final report, we detail the design and development of our Study-Buddy App. The app is designed to foster a dynamic academic community by connecting students in search of study companions, facilitating academic discussions, and promoting the sharing of study tips. Our design was systematically refined through low-fidelity prototype testing and adherence to HCI principles. We used Figma for the prototyping process and collected feedbacks to further improve the application's design and usability. We used the Android Studio with the programming language Java toolkit for the app's implementation, successfully navigating resource and communication challenges. The user study of our high-fidelity prototype utilized user tasks and a questionnaire to gain insights into opinions about strengths and opportunities for improvement regarding our approach and design. We discuss these findings along with our personal reflection about lessons learned from the project and course. We conclude the report with reflections on the strengths and weaknesses of our app and propose potential enhancements for future iterations.

## Keywords

Studying; Learning; University; Academic; Student Networking; Mobile App Design; Community Building; Android; Human-Computer Interaction (HCI); User Interface (UI); User Experience (UX); Prototype Testing; Usability Evaluation.

## MOTIVATION

### Background Information

There exists a considerable demand among students for academic guidance and effective networking during their studies. However, significant challenges lie in identifying appropriate study partners, forming beneficial study groups, and securing suitable mentors. Our goal was to create an android prototype that could be a solution for effectively addressing these issues, thereby promoting accessible academic collaboration and study experiences.

### Problem

The Buddy App is designed to alleviate the struggle students face when seeking academic assistance and forming study groups. As students vary in their needs and experience levels, it's crucial to create a platform that caters to all, from novice students seeking guidance, part-time students with time and

travel restrictions, to experienced students. The App aims to foster a supportive academic community by distinguishing between novices and experienced students and rewarding beneficial interactions. Indicated by Buddy-Points, with the potential to reach a mentor rank. However, anticipated challenges included accessibility, technical limitations, differential user engagement, and varied tech-savviness across the user base.

### Tasks

The Buddy App is built with a range of tasks in mind to assist the users in their academic journey. These tasks include organizing study groups, starting chats, adding friends, and selecting courses. An overview of their chosen courses is also provided to keep students on track. It facilitates information exchange about their courses through forums, where students can give and get feedback. The app also incentivizes interaction with a point system, rewarding users for their active participation. Lastly, user registration and login functionalities ensure personalized and secure access to the platform.

### Users

Our primary users are diverse, ranging from full-time students to part-timers balancing work, academic responsibilities and more. Secondary users could include apprentices, international students, and graduating students seeking job searching support. We envision the app to be utilized in a range of environments, such as homes, on campuses, cafes, parks, and on the go. The user experience is designed to be smooth, short, and intuitive, with the application serving a primary communicative purpose. To envision our user base, we created representative personas. Lena (25) represents an experienced student keen to share her knowledge. Cosima (21) embodies a newcomer seeking social and academic connections, while Anton (27), a distance learner, is interested in engaging in online academic discussions. In contrast, Nicolas (16), a young apprentice, represents our secondary persona, seeking peer interactions. However, our negative persona, Dr. Ledner (56), an external professor, would find little utility in our app.

## RELATED WORK

### Literature

The analyzed literature provided crucial insights for our study-buddy app development. It showed the academic benefits

of friendships [5], guided us in creating a user-friendly and learning-centered design [4], offered us a relevant example of an effective matching algorithm for pairing students [1], emphasized the importance of creating accessible designs for all users [2], and illustrated how aesthetic interfaces could enhance learners' interest and abilities [3].

## Market analysis

Various platforms aim to facilitate student networking and resource sharing, each with their strengths and limitations. For example, Studio offers auto-generated timetables, course overviews, student tips, and a course-specific forum function. However, it lacks networking functions and tends to be overloaded with many elements. Studydrive allows for sharing course materials and asking questions but lacks study organization features. Discord, originally a gaming app, now also functions for many as a networking platform. But overall they lack specific features for finding Study groups, buddies & mentors.

## Previous Work Incorporated

We drew inspiration from popular apps like Tinder, Jodel, Reddit, Discord, and Studio to build our four initial low fidelity prototypes. Each one included parts of their best practices, but put together in unique ways. We then tested these prototypes with users to see what worked best. The final app prototype was created by blending the successful features from these individual prototypes, avoiding their limitations, to create a tool that specifically meets the needs of university students.

## DESIGN

### Description

The Buddy App is designed with a clear and user-friendly approach, including a taskbar that hosts standard features such as Chat, Courses, Home, and Account. Each provides access to various functionalities. Users can chat, participate in course forums, discover new study partners or groups, and manage their profiles. To ensure a user-friendly experience, we designed everything with recognizable and easy-to-read symbols. The overall workflow is straightforward and intuitive, resorting to subwindows sparingly and only when necessary, such as the sidebar within the courses menu, when commenting or adding users to the group chat. (see Figure 1,2,3 and 4 for References)

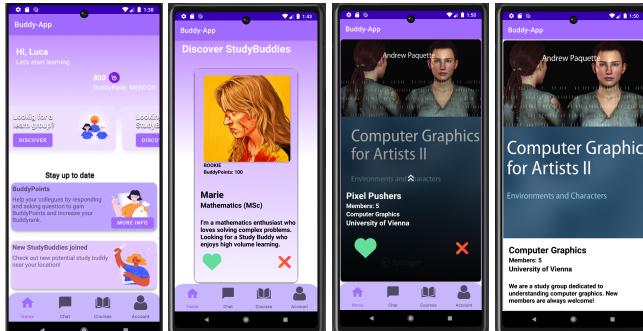


Figure 1. Home-screen; Discover/Swiping; Buddy- and Groupcards

The "Discovery/Swiping-feature" being part of the "Home-menu" aids the students in finding study groups and individuals. The homescreen also displays notifications and updates as news in the "Stay up to date section" underneath the discovery functions. The **Chat** frame facilitates fast shifting between group chats and single chats as well as managing new matches for these sections. The integrated search function allows to quickly find and add users. The "Courses" frame, provides a

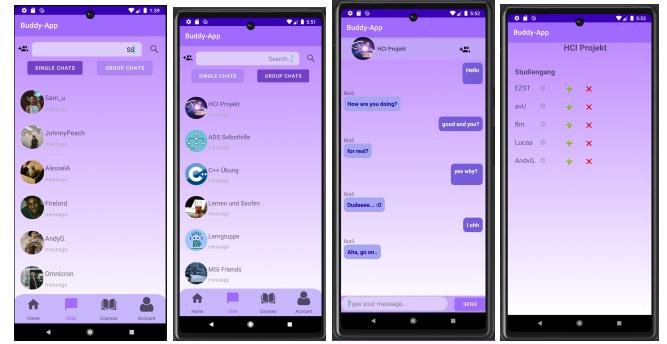


Figure 2. Chat; Group-Chat; Chat; Adding Groupmembers

feed for current Q&A's but also allows specific examination of specific courses within a sidebar. Here Courses are sorted by major. Allowing to inspect and provide details like difficulty ratings, preparation time, prerequisites as well as "Tips and Tricks" for individual courses. The "Account" section displays a profile preview and offers editing options for various User-Data, managing the Profile and Log Out. For

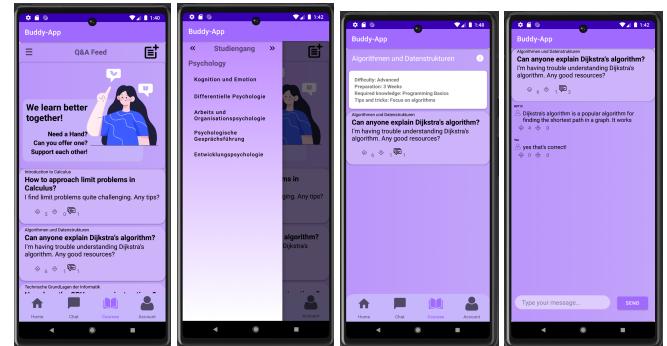


Figure 3. Course-view; Sidebar;Course Details; Q&A-View;



Figure 4. Start-screen; Log-In;Sign-In; Account

differentiating between novices and experienced students and implementing a rewarding system to increase interactions we included 'Buddy Points', which indicate the current rank e.g. newbiew or mentor. This way we aspire to foster a supportive academic community. The Points are depending by interacting with content in the Forum, commenting, being upvoted (or downvoted) or similar interactions. The overall aesthetic are following a linear blend from the top from violet to white on the bottom side, because this was the color scheme most favored and named to be best fitting for a Student App.

### **Reasons for our Design Choices**

Our final application design was shaped by user feedback from low fidelity prototype testing. Each prototype contributed insights into what worked and what needed refinement. We incorporated the praised simplicity and logic of the first Prototype into our final design, while avoiding clutter and poor color choices. Prototype 2's function-oriented design inspired clear navigation in the final design, but we updated its aesthetics to be more vibrant and modern. Prototype 3's positive feedback led us to base further conceptual development on it. We maintained its appreciated structure and design in our final application while improving forum organization. Prototype 4's easy navigation and menu bar readability were integrated into our final design, but we adapted the Swiping-Features which received criticism for being too focused on profile pictures. Overall, in the second evaluation our final design encapsulated the strengths of all prototypes and addressed their shortcomings.

### **Design Principles**

In the development of the Buddy App, we used various design principles to facilitate a user-friendly interface. The principle of similarity was employed in the design of our taskbar. By ensuring all buttons had a similar appearance, we signaled to users that they all had similar functionality. The principle of proximity was used in the Chat and Courses sections. We grouped related items together to communicate their relationship and streamline navigation. The heuristic of consistency is evident in the latest iteration of the app as similar aesthetics and interaction patterns across the app or functions. The backgrounds, buttons etc. share the same design cues, promoting ease of use and learnability. Lastly, we ensured user control by allowing users to edit their profile, choose courses, and manage chat groups. This should empower users and allow them to customize their experience to better fit their needs."

### **Implementation**

We used Figma for the prototyping process. For the app's implementation we decided to create our app using Android Studio and Java with a database connection, which stores data about the user. SQLite was used for database operations, providing secure storage for user data, and XML defined different user interfaces. SQLite was used for database operations, providing secure storage for user data, and XML defined different user interfaces. To create a more immersive user experience, we utilized dummy data in a JSON format. This data was processed through our JSON Parser Classes, which used the Gson library to convert the information from the JSON files

into our serializable classes. For image processing, the Picasso Library was deployed to load the image URL.

Development faced issues due to miscommunication within the team, disagreement and skill levels leading to design and navigation issues. Time constraints and resource limitations prompted us to use dummy data instead of creating a full-fledged database for user communication. For example, auto generated messages handled chat responses, and forum thread messages were not permanently stored. Each user message triggers a random selection from a list of pre-established bot responses. Although this allowed for some form of interactivity, it fell short of creating a realistic user experience. Stacking the Study-Buddy Card and LearnGroup-Cards was challenging due to the unsupported library CardStackView "yuyakaido," leading us to create a custom CardStackLayout class.

The search function, which required scanning extensive databases, was also daunting. Hence, we introduced a provisional search function icon to complete the user interface while showcasing its potential without overextending our resources.

## **EVALUATION**

### **Introduction**

Our initial user studies were meticulously designed to gather a broad spectrum of user feedback, from the low fidelity-prototypes to test various features and design preferences. Despite its effectiveness, we acknowledged its limitations including a male-dominated panel, excessive interview duration etc. In our subsequent Userstudy, we ensured diverse participation and refined our study design to gather more nuanced feedback for an improved design process.

### **Description Usability Tasks + Questionnaire**

In order to come up with usability tasks we created 4 User-Stories depicting the different specific needs of each persona. The details of our approach can be viewed in the appendix.

### **Method**

We conducted the study in a group of two. One of us conducted the interviews while the other person focused on our equipment as well as generating quantitative data such as "time-spent-per-task", "total duration" and "total mouse clicks". In total we conducted 8 + 1 Interviews. The first interview served as a pilot interview helping us to see flaws that we might not have noticed during the construction of the interview. Afterwards we approached several students within a study space of the university of vienna asking them whether they are interested in doing interviews with us, incentivized by coffee and oreos. We managed to balance gender by having 4 women and 4 men taking part in our study. Although we had diversity in mind we did not manage to include people outside of the binary system. We further varied the subject of study, being able to reach 4 students of psychology, 2 students of teaching, one student of economics and one student of linguistics. The age of the tested users ranged from 21 to 25 years. The interviews lasted from 13 to 20 minutes averaging around 16 minutes. To keep the duration of the interviews within a tolerable extent we decided to split up the tasks into 2 groups. Both groups had to work through the main task (consisting of 5 tasks), because

we considered it to be essential for understanding our concept. This included our main functions: "Discover Learngroup" and "Discover Learnbuddy". Then we split the User-Tasks into "Group 1", which included tasks regarding the functions of "Courses" (consisting of 6 tasks) and "Group 2", which included tasks regarding the "Chat" function (consisting of 5 tasks). The detailed user-tasks have not been translated and can be found in the appendix.

During task 2 we often helped users to find the solution when we felt that they had the right intention but misclicked and moved on to different solutions. Similar for task 5 (group 2) we informed users, that the "Bell-icon" was misleading.

After conducting the usability tasks we conducted a quantitative interview using a likert-scale ranging from 1-5 depicting concepts such as design, functionality, intuitivity and Play-store ratings.

Following this, we also posed several qualitative questions with the intent of giving our users an open answering format, allowing them to talk about topics that we might not have included otherwise.

## RESULTS

### Quantitative Data

After calculating the mean of all recorded task times and user evaluations, we arrived at the following scores. The scale ranges from 1, indicating very poor performance, to 5, indicating excellent performance:

App Design: 4.38; Functionality: 3.94; Intuitivity: 3.81; Play-store Rating: 4.13. Generally speaking, there were no substantial discrepancies in the assessments or task completion times among the two groups. On average, users required 124 mouse clicks and just over 3 minutes to fulfil their tasks. For a comprehensive list, please refer to the Appendix.

Analysis of the duration spent on each task helped us identify areas where users struggled. The relatively extended periods spent on task 1 (locating the Discover Learngroups function), task 3 (finding the Group description), and particularly task 4 (locating Discover Study buddies) suggested challenges in functionality, discoverability, and intuitiveness. The discrepancy between actual task completion times and the "optimal" usage time was instrumental in pinpointing features that were not user-friendly or malfunctioning.

### Users Comments regarding Strengths

The app is clear and uncomplicated. The division into groups and individual chats is great. The Discover function was found to be relatively intuitive, as it is similar to Tinder. The language and icons are generally easy to understand. The color scheme is pleasant. Navigation within the app is fundamentally simple.

### Users Comments regarding Weaknesses

The "Courses" feature was confusing. The home screen was not easy to navigate. Horizontal swiping for Discover functions was not visible enough. Scrolling in "Courses" was complicated. The arrow in the Discover learning group function was not easily visible. The bell icon as an add button for

groups was out of place. There was too much text in places, such as when opening the app. The app was not always immediately intuitive. The homepage was cluttered with text and information. "Courses" was felt to be cluttered because half of the page was occupied by non-interactive text.

### User Comments regarding improvements and implications

More color differentiation would be desirable. Features could have been merged, for example, the Discover features within the chat. There should be the ability to change the course of study in both directions, not just one direction. Search functions should be implemented. One person thought that the chat icon was not active because, unlike the other icons, it had a full fill rather than just a border. A dark mode would be desirable. The "buddy points" should be explained. Learnbuddy should be changed to Studybuddy.

### Question regarding the design of the discovery functions

Generally the opinions diverged in both directions raising valid arguments for both sides. This made it difficult for us to choose because there was no clear "winner". Another aspect that made us feel unsure was that we felt that some participants might not have considered the reason for why we made the image within "discover Learnbuddies" smaller. After we explained that we did this in order to provide a non-superficial interaction between users that is arguably more fitting for a study app than a look based interface such as Tinder, many seemed to change their opinions. However, by explaining our reasoning the question seemed to take up a suggestive character, by presenting a seemingly "right" answer. Because of this we were unable to reach a clear conclusion regarding this question with the help of our interviewees.

### Implemented improvements

In refining our app, we addressed several key areas of the UI, bringing changes for improved functionality and aesthetics.

**Homescreen:** Now accurately presents the user's name. Enhanced clarity for both Discovery functions, as the padding was reduced. Improved appearance of the Buddies Cards and the symbols for the Group cards. We added information for BuddyPoints and mitigated information overload, with simplified info cards. We added the missing heading "Stay up to date" and replaced "Learnbuddy" with "Study-Buddy".

**Forum:** The motivational block can now be moved and dismissed, allowing a better overview. The Infinite vote function has been fixed and operates consistently across the platform. Swiping the field of study is now bidirectional. We removed lingering back arrows from the submenus and on writing a comment, the message count updates automatically.

**Backgrounds:** We adjusted the color scheme of the app, including backgrounds, to create a more visually appealing interface. Additionally, the omnipresent header bar was rebranded with our app name, however, the forum's background was preserved to maintain a consistent look.

**Navigation Bar:** All four symbols on the navigation display a consistent design.

**Account:** The account window has been visually upgraded with rounded corners and other design tweaks. We also added a logout function.

**Chat:** Improved placement of search and add function, indicating their global use and making them more accessible. In group chat, we replaced the add user symbol with a user-friendly symbol. Image borders in the chat have also been corrected.

## REFLECTION

**Luca:** My Key takeaway surprisingly was, that offering home-brewed coffee and Oreos is effective in motivating interview participation, regardless of whether they wanted it in the end. The course did emphasize for me the potential of applying scientific principles from e.g. psychology to practical HCI research. From conducting user studies, I learned the significance of a detailed interview guide and the need to clearly define actions beginning by different encouragements of free exploration of the software. Facing negative feedback was a surprising emotional hurdle to stay impartially after for an unbiased evaluation. Empathizing with users and foreseeing potential difficulties was both rewarding and challenging, reminding me that minor oversights can lead to significant problems. Especially how important meticulously designing prototypes for web or software implementation was. I also acquired numerous new skills, such as using Figma and Overleaf, and working with HTML/CSS and JSON files. The interdisciplinary nature of HCI, particularly its intersection with psychology, is a standout aspect for me, indicating a compelling potential academic or professional career path. The mix of design, studies, and empirical analysis of user behavior makes HCI a diverse and engaging field and I plan to delve deeper into HCI.

Our group dynamics were a bit of a rollercoaster, teaching me that successful teamwork requires more than just effort and time. Maintaining a positive team atmosphere demanded significant emotional, social, and motivational commitment. Given my high ambitions from the start, I started organizing, structuring and presenting the project. I aimed to participate in all tasks and review as much as I could, though I didn't always succeed with it. I learned that I need to improve my ability to present my work in an engaging, and easy to understand way. Despite the challenge of communication, coordinating time slots and fluctuations in mood, it was enjoyable working with a team committed to producing quality work. We managed to maintain a democratic approach to most decisions, which made the overall experience positive.

**Florian:** I have never before coded with HTML and found it to be quite fun. Although many concepts regarding HCI we have talked about within this semester are very intuitive I have never specifically thought and reflected about them before. Now everytime I interact with machinery I think of them. I learned that it is incredibly important to have very detailed plans regarding goals, roles and responsibilities within group projects. When tasks are not very clear or transparent responsibilities often get lost and teams lose sight of what's important, which can heavily affect efficiency. As a future psychologist I was able to see how my field of knowledge

can be very helpful during projects, for example during User-Testing. It was also interesting to see how much knowledge within the lectures was based on psychological research. This gave me some confidence.

I would not say that I had a clear role throughout the entire Project. During M1 I focused on creating personas and the context analysis as well as general tasks. During M2 we spent most of our time working on our own prototypes. Other than that I covered general tasks when they came up. During M3 I collected and prepared information regarding our conclusion drawn from M2. Other than that I worked on general tasks. During this milestone I felt at the mercy of group members with more coding knowledge, oftentimes feeling out of place. Perhaps better guidelines for communication regarding transdisciplinary work would have been able to provide a support for us. During M4 I was responsible for developing an interview guideline, conducting the interviews and drawing conclusions from the interviews. I also took great part in writing the final Report.

**Irem:** What i did in M4 was changing the background colours for uniformity, re-designed the navigation bar and the account settings, added a logout option, optimized button positions and search functions in the single – and group chats, fixed the shape of the profile pictures, wrote parts of the report Even if I think that certain things/symbols are obvious and easy to understand, they probably are NOT. They might seem intuitive to me since I literally designed them but other people still might find them confusing or even misleading. No matter what you do, some people will always dislike certain design choices. You could have changed certain aspects of your design because of an interview and somebody else might criticize exactly that. Working in groups is not easy and only works if there is good communication between everyone. Especially when designing an app it's very important that you always communicate about the intermediate steps since otherwise the designs might not be uniform. It is very important to talk exactly about how the app is supposed to look and create a clear prototype to work on. If not then the same issues with the uniformity of the design will come up again.

**Philipp:** I learned a lot by only the Single Task 2 for creating an app that processes data of the MusicBrainz API, there I learnt a little bit about the programming language Kotlin and how to parse Json files with different libraries. In the group project at milestone 3 and milestone 4 i learned how to mainly design with XML and how to populate Json Files. I know how to activities can interact with each other and how to load image files through Picasso. Also, the concept of a specific adapter for a class object and the necessary recyclerView for viewing that class object was also mind boggling.

Initially my role from milestone 3 to milestone 4 was mainly the programming of the application. The main tasks for me were introducing a forum for specific courses for our application. And providing a possibility to view more course details, for example like a course evaluation (difficulty, preparation, tips and tricks, etc..). And allowing the user to upvote and downvote messages and posts by other users. The homepage creation with the necessary data was also part of my tasks, as

well as the communications between various activities, so that the username of our user can be viewed at the homepage. And another task of mine was the function of discovering Study-Buddies and LearnGroups to provide a functional matching system between users and the ability to join Learngroups.

For a detailed breakdown of task allocation from all four milestones, please refer to the Appendix.

## CONCLUSION AND FUTURE WORK

### Strengths and Weaknesses

**Strengths:** Our application excels in fostering communication - offering one-on-one chats, group chats, and a forum. Additionally, the swipe feature makes finding new study friends and groups a quick and effortless process. Our primary objective is to facilitate the connection and communication between study buddies, a goal we believe we have successfully achieved. We also implemented a reward system that incentivizes active participation, such as answering questions in the forum or asking questions that gain upvotes. By incentivizing our users through BuddyPoints, we aim to increase the number of active users. The BuddyPoints also serve to distinguish between experienced students and beginners.

**Weaknesses:** However, the application still has areas for improvement. Currently, it does not provide an efficient method for notifying users about matches with Study-Buddies or joining LearnGroups. Certain features are also absent, such as the option to save a field of study. For now, our prototype assumes that the user studies both Computer Science and Psychology. The capability to modify user data is also currently unavailable. Additionally, there are features and functions that still need to be added, and problems related to the 10 usability heuristics that have not yet been addressed.

### Next steps

Give an outlook concerning interesting next steps that could be done building up on your work There are still several aspects of the Buddy App that could be improved in the future. For instance, the user interface could be enhanced by adjusting the spacing and placement of the elements, as well as by improving the contrast. Creating a real-time chat feature with actual users and dedicated storage for messages is another crucial step. The implementation of all marked "not implemented" functions, such as adding friends, creating groups, and editing account/profile information, is essential for full functionality.

We could further improve the Discovery function by introducing a 'Looking For' feature that allows users to search and add tags based on learning preferences, study location, online or in-person preference, residency, and field of study. This would enable a more personalized and efficient matching process.

Enhancing social interactions through the inclusion of emojis, GIFs, and stickers could also make communication more engaging. The ability to add friends, coupled with the provision of a feedback mechanism for courses, would enrich the user experience. Features to input tips and tricks for individual courses could serve as a valuable resource for users.

The existing BuddyPoints system could be expanded by introducing ranks, rewards, and corresponding symbols to represent

the rank of a user, thereby incentivizing active participation. Furthermore, we'd like to introduce settings for notification preferences, dark mode, and blocking options.

Additional features could include a filing system for old posts and answers, and the ability to mark certain posts for easy retrieval later. Security is paramount; hence, providing secure features for processing and storing user data to prevent privacy issues is crucial.

Incorporating user-generated content sections, where users could share study resources or plan study sessions, might further foster a sense of community. Also, considering the global usage of the app, incorporating multi-language support could widen its reach. More uniformity in design would be beneficial, as would be features to create and manage swiping profiles, creating groups, and providing course tips, tricks, and evaluations.

In conclusion, the evaluation of the app provided us with valuable insights, which have helped in identifying the areas that require improvement. The possible next steps outlined above could be instrumental in driving the development of the app forward. Our goal was to create an application that is not only efficient and reliable but also inclusive, user-friendly and intuitive. Overall the project was fun and created lots of learning and application opportunities of theoretical knowledge.

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## Appendix

**Tabelle 1:** Personen bezogene Daten

	Interview 1	Interview 3	Interview 5	Interview 7	Interview 2	Interview 4	Interview 6	Interview 8
<b>Geschlecht</b>	w	w	m	w	m	m	w	m
<b>Interviewdauer</b>	20	13	14	15	19	16	15	15
<b>Uhrzeit</b>	10:20~10:40	11:03~11:16	11:45~11:59	12:25~12:40	10:42~11:01	11:25~11:41	12:05~12:20	12:45~13:00
<b>Alter</b>	23	22	21	24	21	24	25	23

**Tabelle 2:** Dauer pro Aufgabe in Sekunden

Gruppenunabhängige	Gruppe 1	Gruppe 1	Gruppe 1	Gruppe 1	Gruppe 2	Gruppe 2	Gruppe 2	Gruppe 2
<b>Aufgabe 1</b>	16,06	6,59	8,65	8,95	29,06	11,71	18,07	21,63
<b>Aufgabe 2*</b>	27,62	21,29	22,32	13,87	32,23	28,94	34,94	21,35
<b>Aufgabe 3</b>	5,43	3,69	10,51	6,65	12,47	5,25	0,81	5,26
<b>Aufgabe 4</b>	32,32	21,05	20,83	23,77	31,12	28,95	32,17	16,55
<b>Aufgabe 5</b>	4,32	2,76	4,04	4,78	13,29	7,21	6,27	2,38
<b>Gruppenaufgabe 1</b>	13,69	12,32	19,19	18,18	9,42	7,03	2,62	18,13
<b>Gruppenaufgabe 2</b>	<b>50,71</b>	27,24	24,53	19,41	23,01	24,61	39,79	15,5
<b>Gruppenaufgabe 3</b>	14,62	12,19	13,76	11,53	32,15	18,67	13,49	8,29
<b>Gruppenaufgabe 4</b>	17,72	13,24	14,62	16,18	41,81	28,43	37,34	15,74
<b>Gruppenaufgabe 5</b>	30,56	7,03	12,35	12,63	45,52	25,59	32,44	25,99
<b>Gruppenaufgabe 6</b>	19,49	7,61	10,43	11,34				
<b>Aufgabendauer</b>	85,75	55,38	66,35	58,02	118,17	82,06	92,26	67,17
<b>Gruppenaufgabendauer</b>	146,79	79,63	94,88	89,27	151,91	104,33	125,68	83,65
<b>Summe total</b>	<b>232,54</b>	135,01	161,23	147,29	<b>270,08</b>	186,39	217,94	150,82
<b>Total Mouseclicks</b>	135	98	118	89	240	120	85	101

**Tabelle 3:** Bewertungen

	Interview 1	Interview 3	Interview 5	Interview 7	Interview 2	Interview 4	Interview 6	Interview 8
	Gruppe 1	Gruppe 1	Gruppe 1	Gruppe 1	Gruppe 2	Gruppe 2	Gruppe 2	Gruppe 2
<b>App Design</b>	3	5	4,5	5	5	4	4	4,5
<b>Funktionalität</b>	3	4	5	5	1	5	5	3,5
<b>Intuitivität</b>	3	4	5	5	1	5	3	4,5
<b>Plastore Rating</b>	4	4	5	5	1	5	4	5

**Tabelle 4:** Durchschnitte

	Mittelwert	Min.	Max.	Range	Mittelwert	Min.	Max.	Range
<b>Aufgabe 1</b>	15,09	6,59	29,06	22,47				
<b>Aufgabe 2</b>	25,32	13,87	34,94	21,07				
<b>Aufgabe 3</b>	6,26	,81	12,47	11,66				
<b>Aufgabe 4</b>	<b>25,85</b>	16,55	32,32	15,77				
<b>Aufgabe 5</b>	5,63	2,38	13,29	10,91				
Gruppe 1					Gruppe 2			
<b>Gruppenaufgabe 1</b>	7,92	12,32	19,19	6,87	4,65	2,62	18,13	15,51
<b>Gruppenaufgabe 2</b>	<b>15,24</b>	19,41	50,71	31,3	<b>12,86</b>	15,5	39,79	24,29
<b>Gruppenaufgabe 3</b>	6,51	11,53	14,62	3,09	9,08	8,29	32,15	23,86
<b>Gruppenaufgabe 4</b>	7,72	13,24	17,72	4,48	<b>15,42</b>	15,74	41,81	26,07
<b>Gruppenaufgabe 5</b>	7,82	7,03	30,56	23,53	<b>16,19</b>	25,59	45,52	19,93
<b>Gruppenaufgabe 6</b>	6,11	7,61	19,49	11,88				
<b>globale Aufgabendauer</b>	78,15	55,38	118,17	62,79				
<b>Gruppenaufgabendauer</b>	109,52	79,63	151,91	72,28				
<b>Summe total</b>	187,66	135,01	270,08	135,07				
<b>Total Mouseclicks</b>	123,25	85	240	155				

**Figure 5. Start-screen; Sign In; Account; Chat**

## **Interviewleitfaden**

### **Einleitung:**

Vorstellen und Bedanken für die Teilnahme

Erklärung über Zwecks des Interview

Aufklärung über Datenschutz (Anonymisierung) und Art der Aufzeichnung (Notizen)

### **Lerngewohnheiten:**

Lernst du hauptsächlich alleine, zu zweit oder in einer Gruppe?

### **Erfahrungen mit ähnlichen Apps?**

Wenn ja: Welche? Länge der Nutzung? Likes und Dislikes?

### **Vorführung des Prototypen**

- "let them play around with it" für 30 secs
- Darauf hinweisen, das Proband dabei **laut denkt!**
- Erkläre die Funktionen und Features der App.

### **Aufgaben:**

#### **Für jeden:**

1. Finde und benutze die "Discover Learngroup" Funktion.
2. Lese die Beschreibung der Lerngruppe
3. Like und dislike je eine Gruppe.
4. Finde und benutze die "Find-Study Buddy" Funktion.
5. Gib sowohl einem "Like" als auch einem "Dislike" zu Buddies deiner Wahl.

#### **Gruppe 1**

1. Besuche das Forum und interagiere mit den Inhalten.
2. Gehe speziell zum HCI-Forum.
3. Wähle einen Post aus und bewerte ihn.
4. Hinterlasse auch einen Kommentar.
  
1. Suche und finde die Bewertungen für die Lehrveranstaltung "Programmieren 1".
2. Suche und finde die Tipps & Tricks für die Lehrveranstaltung "Entwicklungspsychologie".

#### **Gruppe 2**

1. Sehe deinen Account ein.
2. Wähle eine Person aus und besuche ihren Chat. Führe eine Konversation mit ihr.
3. Schreibe auch kurz mit dem User "Ciao Kakao".
4. Schreibe eine Nachricht in die Gruppe "C++ Übung".
5. Füge Lucca & flrn zur Gruppe "C++ Übung" hinzu.

## **Quantitative Befragung**

Bitte bewertet jede der folgenden Fragen auf einer Skala von 1 bis 5, wobei 1 sehr schlecht und 5 sehr gut ist: (*Wenn 3 oder weniger bewertet, nachfragen weshalb*)

1. Wie würdest du das allgemeine App-Designs bewerten?
2. Wie bewertest du die allgemeine Funktionalität der App?
3. Wie bewertest du die Intuitivität der Benutzeroberfläche und die Bedienung der App?
4. Wenn du die App im Playstore bewerten würdest, wie viele Punkte würdest du ihr geben?

## **Qualitative Bewertung**

*Aus Zeitgründen und Lesbarkeit sind die Fragen nicht vollständig offen formuliert. Sind die Antworten kurz und knapp, fragten wir spezifisch nach dem "Wieso", "Warum" etc..*

### Effectiveness

- Wie gut konntest du die Aufgaben mit der App bewältigen? Gab es Schwierigkeiten oder Hürden?
- Wie fandest du die verwendeten Symbole und Sprache?

### Efficiency

- Empfandest du das Interface der App als effizient und hilfreich bei der Erledigung der Aufgaben?
- Wie leicht ist es dir gefallen, dich innerhalb der App zu orientieren und zu navigieren?

### Satisfaction

- Hattest du das Gefühl, dass das Design intuitiv gestaltet war?
- Welche Aspekte der App empfandest du als überladen oder verwirrend?
- Fandest du das Design der Group-Cards oder der Buddies-Card ansprechender?

### Abschluss

- Gibt es noch etwas, das du uns über deine Erfahrung mit der App mitteilen möchtest?

## **Soziodemographische Daten**

- Wie alt bist du?
- Mit welchem Geschlecht identifizierst du dich?
- In welchem Ort und Land wohnst du aktuell?
- An welcher Universität bist du eingeschrieben und welchen Studiengang belegst du derzeit?
- Wie Technikaffine würdest du dich beschreiben?

## Interview Protokol

Anmerkung: Eine **rote** Markierung Stellt negative Kritik dar, eine **grüne** Markierung positive Anmerkungen und eine **gelbe** Markierung Verbesserungsvorschläge. Die Kommentare der Testpersonen unter der Überschrift Quantitative Auswertung sind in Klammern gesetzt, da es uns beim Entwurf des Fragebogens lediglich um numerische Werte gegangen ist. Dennoch denken wir dass auch an dieser Stelle wichtige Informationen gewonnen werden konnten, weshalb wir sie trotzdem ausführen:

Frage	Antworten
Lernen in Gruppen oder Allein?	1.: Alleine 2.: Alleine 3.: Alleine 4.: Gruppe 5.: Gruppe 6.: Alleine 7.: Alleine 8.: Bei leichten Prüfungen Alleine, bei schweren in Gruppe
Erfahrungen mit ähnlichen Apps?	1.: Anki 2.: Nein 3.: kaum 4.: kaum, Studydrive 5.: Studo 6.: Studo, quizlet: Studo is alles in einer app, Fragen, Stundenplan, Mails, Noten,...; Quizlet kostenlos easy zum erstellen 7.: Studo: übersichtlich und verknüpfung mit uspace 8.: Studo: als Kalender

### Aufgaben

Vorführung des Prototypen	1 Minute ohne Aufgabe
Aufgaben Allgemein	<ol style="list-style-type: none"> <li>1. Finde und benutze die "Discover Learngroup" Funktion.</li> <li>2. Lese die Beschreibung der Lerngruppe</li> <li>3. Like und dislike je eine Gruppe.</li> <li>4. Finde und benutze die "Find-Study Buddy" Funktion.</li> <li>5. Gib sowohl einem "Like" als auch einem "Dislike" zu Buddies deiner Wahl.</li> </ol>
Gruppenaufgaben Gruppe 1	<ol style="list-style-type: none"> <li>1. Besuche das Forum und interagiere mit den Inhalten.</li> <li>2. Gehe speziell zum HCI-Forum.</li> <li>3. Wähle einen Post aus und bewerte ihn.</li> <li>4. Hinterlasse auch einen Kommentar.</li> <li>5. Suche und finde die Bewertungen für die Lehrveranstaltung "Programmieren 1".</li> <li>6. Suche und finde die Tipps &amp; Tricks für die Lehrveranstaltung "Entwicklungspsychologie".</li> </ol>
Gruppenaufgaben Gruppe 2	<ol style="list-style-type: none"> <li>1. Sehe deinen Account ein.</li> <li>2. Wähle eine Person aus und besuche ihren Chat. Führe eine Konversation mit ihr.</li> <li>3. Schreibe auch kurz mit dem User "Ciao Kakao".</li> <li>4. Schreibe eine Nachricht in die Gruppe "C++ Übung".</li> <li>5. Füge Lucca &amp; flrn zur Gruppe "C++ Übung" hinzu.</li> </ol>

### Quantitative Auswertung

Frage	Antworten
1. Wie würdest du das allgemeine App-Designs bewerten?	1.: 3 2.: 5 3.: 5 4.: 4 5.: 4-5 ( <b>angenehm übersichtlich geordnet</b> ) 6.: 4 (ansprechend schön <b>mehr farbunterschiede klare trennungen</b> ) 7.: 5 8.: 4-5
2. Wie bewertest du die allgemeine Funktionalität der App?	1.: 3 2.: 1 3.: 4 4.: 5 5.: 5 (vor allem für Studienanfänger nützlich) 6.: 5 7.: 5 8.: 3-4 ( <b>halt unausgereift, könnte noch überläufiger sein wirkt bissl holprig so, könnte noch smoother werden</b> )
3. Wie bewertest du die Intuitivität der Benutzeroberfläche und die Bedienung der App?	1.: 3 2.: 1 3.: 4 4.: 5 5.: 5 ( <b>nicht kompliziert</b> ) 6.: 3 (schwer weil man sich natürlich einfinden muss aber sonst gut) 7.: 5 8.: 4-5 (findet die <b>Unterteilung in Gruppen und Single-Chats super</b> , Courses hat Verwirrung gestiftet, Person dachte dort gibts Group-Chats; <b>In Home-Screen war es bissl schwierig zurechtzufinden</b> )

4. Wenn du die App im Playstore bewerten würdest, wie viele Punkte würdest du ihr geben?	<p>1.: 4 (verbesserungsvorschläge  <span style="background-color: red;">am anfang sehr viel Infos; courses ist verwirrend als info, erwartung dass sofort kursliste ist, überraschend dass das links oben anzutreffen ist, difficulty über info button ist verwirrend, sie erwartet sich eher infos über das forum bei dem i icon; unendliches downvote ist blöd, suchfunktion bei den courses wär super; Punkte werden nicht erklärt</span></p> <p>2.: 1  3.: 4  4.: 5  5.: 5  6.: 4  7.: 5  8.: 5 (für die Idee)</p>
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#### Qualitative Auswertung

Frage	Antworten
<b>Fragen zu Effektivität</b>	
Wie gut konntest du die Aufgaben mit der App bewältigen? Gab es Schwierigkeiten oder Hürden?	<p>1.: es hat geholfen dass man zuerst frei herumspielen konnte um sich zurechtzufinden; <span style="background-color: red;">die fehlgeschlagene aufgabe ist an dem swiping gescheitert (hier ist die Aufgabe 'Finde und benutze "Discover Learnbuddies" gemeint), sonst schon gut</span></p> <p>2.: Teilweise unklar; <span style="background-color: yellow;">Scrollen in Courses war kompliziert, weil hälften des Bildschirms nicht benutzbar war, teilweise waren Icons einfach falsch (bell icon); funktionen könnten zusammengelegt werden, wie unterscheiden sich kurswahl und suchfunktion; mag den Feed im Forum nicht sieht es als useless an</span></p> <p>3.: <span style="background-color: yellow;">Studiengangwechselnktion war schwierig zum weiterklicken weils nur in eine Richtung geht</span></p> <p>4.: <span style="background-color: green;">Pfeil in der Discover Learn-Groups Funktion war nicht gut ersichtlich, swipen war erwartet, war eig intuitiv, weils tinder recht ähnlich war; glockenicon war blöd</span></p> <p>5.: am anfang ungewohnt, sonst <span style="background-color: green;">sehr einfach</span></p> <p>6.: <span style="background-color: green;">gut und hürde war das bell icon und scrollen weils am computer ist</span></p> <p>7.: <span style="background-color: yellow;">sehr einfach zu bedienen, Design von Pfeilen im Forum nicht imponiert</span></p> <p>8.: keine hürden; Seitliches Swipen oben im Home-Menü erkennbarer machen</p>
Wie fandest du die verwendeten Symbole und Sprache?	<p>1.: Sprache nicht besonders okay ig außer courses, unauffällig; <span style="background-color: red;">like und dislike symbol waren verwirrend, weil sie dachte dass man damit die seite schließt</span></p> <p>2.: <span style="background-color: red;">Glockenicon ist falsch; Sprache ist gut verwendet</span></p> <p>3.: eh gut</p> <p>4.: <span style="background-color: green;">sprache war einf und logisch, symbole glocke war irreführend sonst gut</span></p> <p>5.: <span style="background-color: green;">angenehme symbole, farbgebung und englisch ist toll; Study-Buddy statt learn Learnbuddy</span></p> <p>6.: <span style="background-color: red;">teilweise zu viel text, vor allem beim öffnen der app, bell icon war anders verstanden</span></p> <p>7.: <span style="background-color: green;">einfach verständlich und gut dargestellt</span></p> <p>8.: <span style="background-color: green;">gut benutzerfreundlich neutral und angenehm, für lernapp angemessen</span></p>
<b>Fragen zu Effizienz</b>	
Empfandest du das Interface der App als effizient und hilfreich bei der Erledigung der Aufgaben?	<p>1.: halb halb, z.B. <span style="background-color: red;">nach buddy suchen war nicht intuitiv, Matchingfunktionen im Chat wären intuitiver</span></p> <p>2.: <span style="background-color: red;">Nein nicht wirklich weil suchfunktion bei study buddies z.B. nicht funktioniert; Die unterschiedlichen suchfunktionen im Chat sind verwirrend</span></p> <p>3.: <span style="background-color: green;">ja denk schon</span></p> <p>4.: ja, verwirrend war die leiste unten, <span style="background-color: yellow;">dachte chat war nicht aktiviert weils zu dunkel war im vergleich zu den anderen</span></p> <p>5.: <span style="background-color: green;">übersichtlich fein</span></p> <p>6.: <span style="background-color: green;">ja denkt schon</span></p> <p>7.: <span style="background-color: green;">ja, alles recht einfach und unkompliziert gestaltet</span></p> <p>8.: <span style="background-color: green;">gut nicht zu viel, genugmöglichkeiten zu machen was man machen will</span></p>
Wie leicht ist es dir gefallen, dich innerhalb der App zu orientieren und zu navigieren?	<p>1.: <span style="background-color: red;">paar sachen waren verwirrend, also man musste schon bewusst drüber nachdenken was man wo findet</span></p> <p>2.: <span style="background-color: yellow;">navigation war nicht unglaublich schlecht, so gesehen findet er man könnte alles beim chat integrieren und die restlichen leisten sind etwas useless</span></p> <p>3.: <span style="background-color: green;">ging schon</span></p> <p>4.: <span style="background-color: green;">war ziemlich easy 4 punkte direkt verständlich</span></p> <p>5.: <span style="background-color: green;">man checkt sofort wies abläuft, ähnlich wie bei studio, usw.</span></p> <p>6.: <span style="background-color: green;">Einfindungsphase und dann kommt man gut umher und intuitiv</span></p> <p>7.: <span style="background-color: green;">ja auf jeden fall weils eben recht einfach designed, ist plus farben sehr schön</span></p> <p>8.: <span style="background-color: green;">sehr leicht gut</span></p>
<b>Fragen zu Zufriedenstellung</b>	
Welche Aspekte der App empfandest du als überladen oder verwirrend?	<p>1.: <span style="background-color: red;">die Homepage; courses: oben halbe seite Text und unten die Kurse bei Courses</span></p> <p>2.: <span style="background-color: red;">Home auf jeden Fall: Leiste oben schaut nach Werbung aus, das "Discover-Buddy" findet man auch nicht; courses we learn better together is unnötige info</span></p> <p>3.: <span style="background-color: green;">fix</span></p> <p>4.: <span style="background-color: red;">homescreen untere sachen war nicht direkt ersichtlich, aber <span style="background-color: green;">dann nach genauerer betrachtung schon</span></span></p> <p>5.: <span style="background-color: red;">Studiengang wechseln, nicht verstanden; mehr ausklappen unter Courses war auch nicht sofort verständlich</span></p> <p>6.: <span style="background-color: red;">Homescreen sonst nicht</span></p> <p>7.: <span style="background-color: green;">nichts überladen sondern alles recht klar</span></p> <p>8.: <span style="background-color: red;">zu viel text beim homescreen : v.l. überschriften größer machen und nur kleine stichpunkte beim Text</span></p>
Fandest du das Design der Group-Cards oder der Buddies-Card ansprechender?	<p>1.: <span style="background-color: green;">Gruppendesign ist besser, mehr infos ausklappen war nicht easy zu finden; das Buddydesign wurde als leer empfunden</span></p> <p>2.: <span style="background-color: green;">beide Formate sind ansprechend; findet Buddie-Cards ansprechender weils eingegrenzt nicht schwer lesbar ist aber grundsätzlich beide gut</span></p> <p>3.: <span style="background-color: green;">Gruppen discover funktion schaut einfach besser aus</span></p> <p>4.: <span style="background-color: green;">Gruppendesign besser, weils eher angenehmer ist wie tinder, buddies ist zu klein; lila ist nicht</span></p>

	<p>5.: Group card ansprechender, learn buddies zu lila beim anderen hintergrund gut</p> <p>6.: Learn buddys ist besser weil text dazu plus Bild oben</p> <p>7.: Group-Design erinnert an Tinder und ist super designed; findet beide cool, aber intuitiv gruppen besser, nach nachfragen dann aber aufteilung wegen unangebrachter Oberflächlichkeit in dem Kontext gut</p> <p>8.: für Lernapp findet Learnbuddy Karte besser für z.B Leute mit Beziehungen</p>
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#### Ergänzend allgemeine Anmerkungen

Gibt es noch etwas, das du uns über deine Erfahrung mit der App mitteilen möchtest?	<p>1.: nope</p> <p>2.: nein</p> <p>3.: Discover- Learnbuddy Funktion wurde als versteckt empfunden</p> <p>4.: Dark-mode wär cool</p> <p>5.: Wann launched es?</p> <p>6.: Farben cool</p> <p>7.: Nein</p> <p>8.: Buddie points sind cool, sagt bissl mehr über personen aus, ansonsten nix</p>
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#### Soziodemographische Daten

Wie alt bist du?	<p>1.: 23</p> <p>2.: 21</p> <p>3.: 22</p> <p>4.: 24</p> <p>5.: 21</p> <p>6.: 25</p> <p>7.: 24</p> <p>8.: 23</p>
Mit welchem Geschlecht identifizierst du dich?	<p>1.: W</p> <p>2.: M</p> <p>3.: W</p> <p>4.: M</p> <p>5.: M</p> <p>6.: W</p> <p>7.: W</p> <p>8.: M</p>
In welchem Ort und Land wohnst du aktuell?	<p>1.: Wien</p> <p>2.: Wien</p> <p>3.: Neunkirchen, Niederösterreich</p> <p>4.: Wien</p> <p>5.: Wien</p> <p>6.: Wien</p> <p>7.: Niederösterreich, Hochwolkersdorf</p> <p>8.: Wien</p> <p><b>Wien: Niederösterreich:</b></p>
An welcher Universität bist du eingeschrieben und welchen Studiengang belegst du derzeit?	<p>1.: Universität Wien/Psychologie</p> <p>2.: Universität Wien/Psychologie</p> <p>3.: Universität Wien/Psychologie</p> <p>4.: Universität Wien/BWL</p> <p>5.: Universität Wien/Linguistik</p> <p>6.: Universität Wien/Lehramt: Englisch/Psychologie u. Philosophie</p> <p>7.: Universität Wien/Lehramt: Psychologie u. Philosophie</p> <p>8.: Universität Wien/Psychologie</p>
Technikaffinität	<p>1.: Durchschnittlich</p> <p>2.: Niedrig</p> <p>3.: Niedrig</p> <p>4.: Hoch</p> <p>5.: Niedrig, Apps nutzung</p> <p>6.: durchschnittlich, Schulerfahrung und Apps</p> <p>7.: durchschnittlich, Social Media etc.</p> <p>8.: durchschnittlich</p>

#### Interview spezifische Probleme bei durchführung

##### Probleme

Grp Funktion finden 4/8, Discover Buddies finden 6/8, Zu räumlich konkrete Events aka Bei diesen Aufgaben wurden diese richtige Handlung ausgeführt aber das spezifische Feld wurde nicht geklickt Gruppenbeschreibung nicht finden 6 von 8 Leute der Gruppen hinzufügen 7 von 8 dabei nur 2 von 8 komplett

<b>Aufgabenverteilung</b>				
<b>M1 Problemanalyse</b>				
Thema	Value	Verantwortlich	Reviewed von	
<b>Literaturreview</b>	total 20%			
pro Quelle	5%	Irem, Philipp, Luca	Luca, Philipp, Irem, Flo	
<b>Requirement Analysis</b>				
Wettbewerbsanalyse	15%	Irem	Flo, Luca, Philipp	
Nutzeranalyse	15%	Luca	Flo, Irem, Philipp	
Taskanalyse	15%	Philipp	Irem, Flo, Luca	
Kontextanalyse	5%	Flo	Luca, Irem, Philipp	
<b>Nutzerprofile</b>	total 20%	Flo	Luca, Irem, Philipp	
pro Persona	5%	-		
<b>Projektmanagement</b>	total 10%	Luca	Irem, Philipp, Flo	
Projektbeschreibung	5%	-		
Teambeschreibung	2%	-		
<b>Aufgabenverteilung</b>	3%	-		

M2			
Themen	Value	Verantwortlich	Reviewed
1) Ideensammlung	30% 1 bis 2 Seiten Text	Live Gruppendiskussion & Brainwriting in Google Docs	Von Allen
Methodenwahl	10%	-	
Ergebnisse	20%	-	
2) Low-fi Prototypen	40% 1 bis 2 Seiten Text		Live Präsentation im Groupcall mit Feedbackrunde (Discord)
Prototypen I	7.5%	Luca	-
Prototypen II	7.5%	Irem	-
Prototypen III	7.5%	Florian	-
Prototypen IV	7.5%	Philipp	-
Zielgruppen Anpassungen & Bezug primäre Aufgabe	10%	Irem, Luca	Florian
3) Interviews	30% 1 bis 2 Seiten Text		Von Allen
Durchführung, Struktur & Dokumentation	10%	Jeder 1 Interview mit einem Probanden über alle 4 Prototypen	Live Präsentation und Diskussion im Groupcall (Discord)
Ergebnisse	20%	Von Allen	Von Allen
4) Projektmanagement			
Informationsaufbereitung		Luca ,Irem, Florian	Philipp
Informationspräsentation		Luca, Irem, Florian	Philipp
Absprachen und Zielsetzungen		Luca, Irem, Florian, Philipp	
Aufgabenverteilung		Luca, Irem, Florian, Philipp	

<b>M3</b>	
Discovery/Browse (Add User/Join Group), Kurse & Forum, Upvote/Downvote, Studienrichtung	Philipp
Single/Group Chat, Login/Register, Taskleiste, Account Settings; Search to add Friends/Groups; Manage Group Join Requests	Irem, Philipp
Json: Dummy Data Discover Buddy & Groups, Q&A Posts, Bilder, Bilder Courses, Merge und Finetuning der Dummy Data, Desing of Homecards, Course Motivation	Luca, Philipp
Dummy Data Courses	Flo, Philipp
Design Entscheidungen, Farbe & Design	Luca, Philipp, Irem, Flo
<b>3) Dokumentation &amp; Beschreibung</b>	
Designentscheidungen	Flo, Luca
Rückbezug auf frühere Meilensteine	Flo, Luca
Gruppenarbeit Reflexion	Luca
<b>4) Projektmanagement</b>	
To-Do/Checklist	Luca
GitLab Setup & Erklärung	Philipp
Informationsaufbereitung	Luca
Informationspräsentation	Luca
Absprachen und Zielsetzungen	Luca, Flo, Irem, Philipp
Aufgaben & Checklist	Luca

M4		
Tasks	Responsible	Review & rework
Project Management	Luca	
Interview/Study design, realization, evaluation	Florian, Luca	
Implication for realizable changes	Luca	
Implementation	Philipp, Irem (Luca)	
Text		
Abstract	Luca, Florian	
Motivation	Luca,	Florian
Related Work	Luca, Irem	Florian
Design	Luca	Florian
Implementation	Luca, Philipp, Irem,	Florian
Evaluation Study	Florian	Luca
Results	Philipp, Irem, Luca, Florian	
Reflection	Florian, Irem, Philipp, Luca	
Conclusion future Work	Irem, Philipp	Florian, Luca
Crafting Final Report	Luca, Florian	Irem, Philipp
ACM CHI Proceedings Formating	Luca, Florian	