Study evaluation report

Abstract:
In this report we investigate hypotheses for the music app's usage through studies to inform its design in pursuit of the design goal of aiding practice through structured practice sessions. For additional and minutiae of the study see the detailed study report. For the raw data, calculations, and additional charts see the form data, also see the evaluation form.

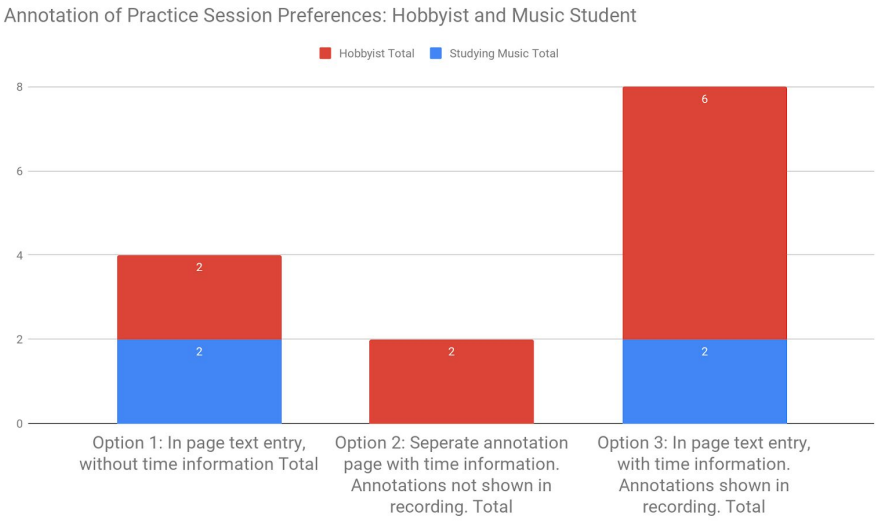
Goals and Hypotheses:
The overall goal of the project is to aid musicians through structured practice, in particular by providing feedback, a history of practice sessions, and through recording of practice sessions. We formulated hypotheses concerning features we consider important in the overall design for the usage of the app.

i. Greater Information density in the practice page is distracting for the user when practicing
ii. The user's experience with navigation within the app is a barrier to adoption of the app usage in practice sessions
iii. Overview of tasks during the practice session is required for structuring practice sessions
iv. Musicians are motivated by gamification of their practice sessions
v. Recommendations of tasks and practice sessions will be desired by users

Analysis:

Preferred annotation method:

Users were split in their preferred method for annotating their practice sessions, though favoured the in page text entries over having a separate entry page.



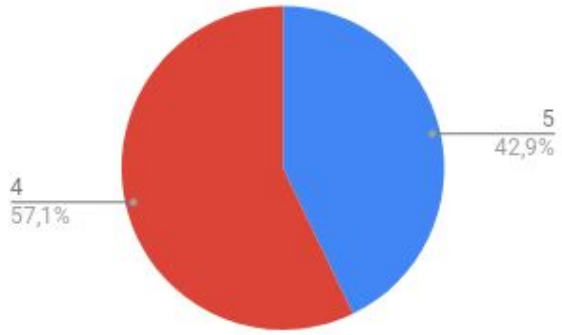
app navigation

With this test we tried to find the optimal method to navigate the app. We built a prototype featuring two different styles of navigating the app. The first one utilizes a drawer on the left side of the screen, whereas the second one uses an overview screen, that has big buttons to easily navigate the app.

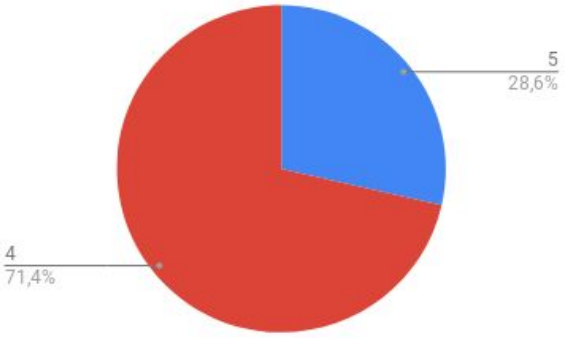
Both navigation styles were perceived quite positive, with the drawer based one having a bit of an edge. For us this is not very surprising, as the drawer is quite often used nowadays, both on apps and websites, and thus feels very intuitive for a lot of people.

How easily the user can navigate:

Drawer



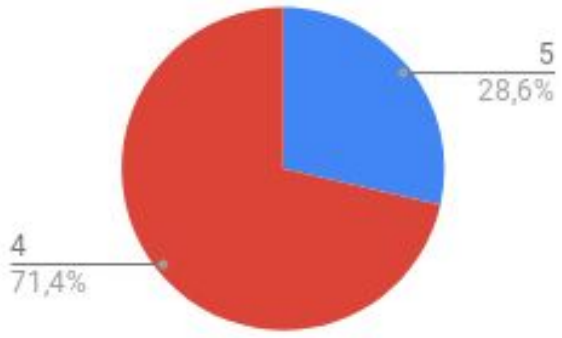
Buttons



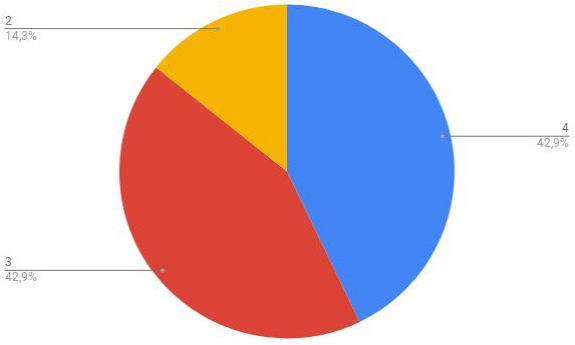
AVG:	4.42	3.85
MEDIAN:	4	4

User overall rating

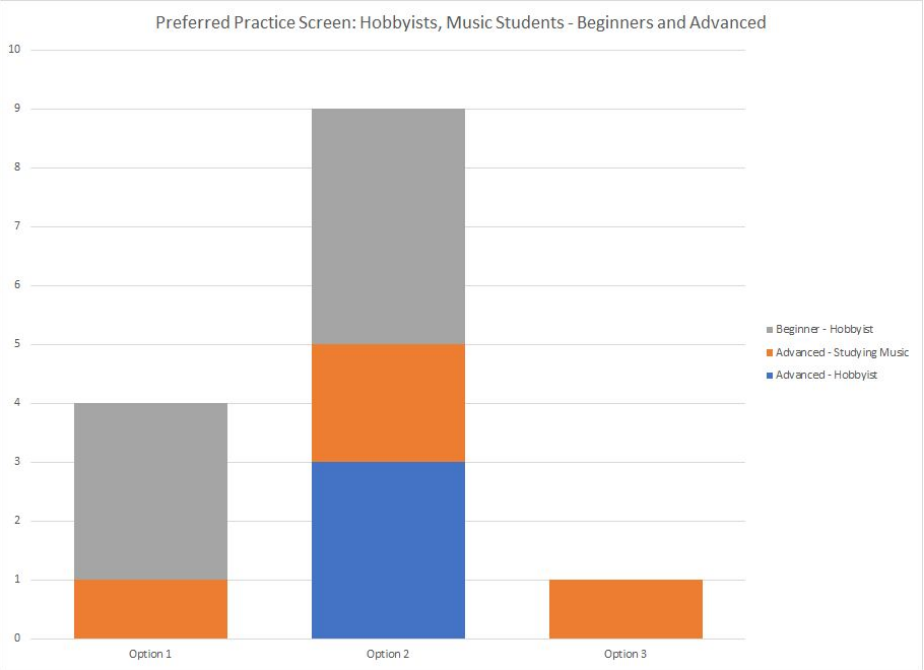
Drawer



Buttons



AVG:	4.28	3.28
MEDIAN:	4	3



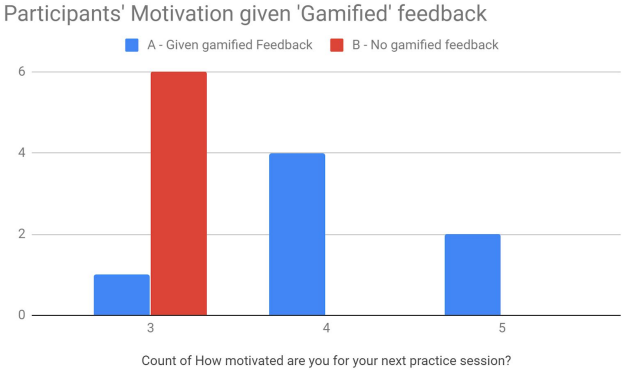
Preferred practice screen information density

With this section we searched for the optimal amount of information on the practice screen.

- Option 1: Only minimum information to be able to navigate and mark tasks complete.
- Option 2: Includes additional information to give the user a better idea of when what has to be done and his history.
- Option 3: Even more information is given to the user and additional functionalities (metronome etc) are presented on the screen.

It is clear that users do not like the most information dense display, reasons cited were that it was difficult to navigate and they thought it may be distracting. Even though some participants liked Option 1 for its simplicity, the biggest number of participants preferred Option 2. They explained there was some information they would actually like to see during practice. There were also one participant who liked Option 3 better, but was unsure how it would fit in a normal smartphone screen.

Further ,we were not able to identify statistically meaningful differences in preferences between advanced musicians or beginners.



Gamification and Motivation

As is well known, users are more motivated by gamification. We were surprised to see how apparent this was for such a small study.

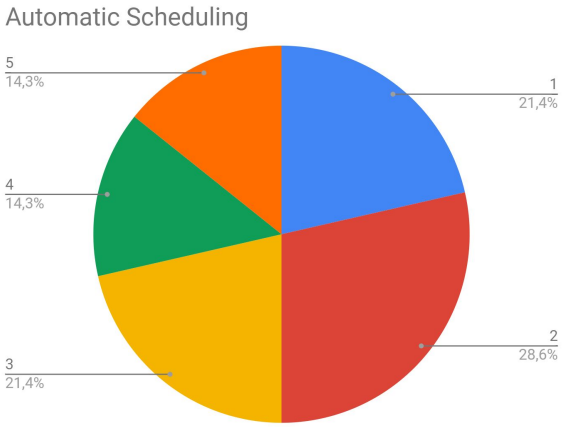
Participants given ‘points’ for their imagined practice session reported they were more motivated for their next practice session

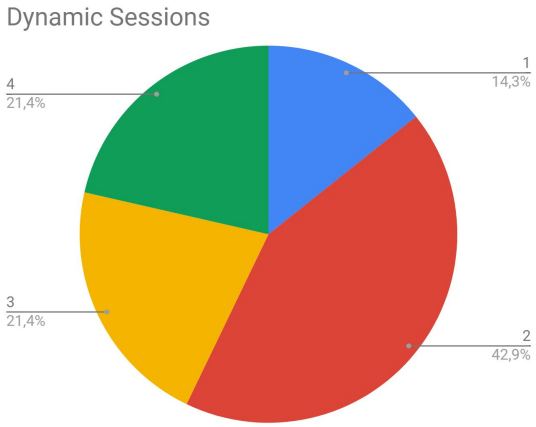
Automatic Scheduling

Here we tried to find out whether the participants would like to have a built in function, that automatically schedules more practice sessions, or an invariant of this feature we call dynamic sessions. Dynamic sessions automatically alters and streamlines planned session, to further improve the users learning experience.

The study has shown, that automatically scheduling new practice sessions is mostly perceived as negative. While a few people really liked the idea, most others preferred having full control over the scheduling. They think this behaviour is too intrusive and aggressive, and would most likely turn the feature off, if given the choice.

Furthermore, changing already planned sessions (dynamic sessions) was liked even less , not one participant '*5 - Strongly liked'* this. Most of them said they disliked that a computer changes their already tuned session plan, and thereby actually disturbs their sessions.





Preference for scheduling/changing practice sessions: 1 - Strongly dislike, 5 - Strongly Like

AVG:	2.71	2.5
MEDIAN:	2.52	
VAR:	2	1.03

Surprisingly however, participants who already organise their practice on average were slightly more supportive of dynamic sessions (2.75 vs 2.4) - this is not a significant result and possibly spurious there were few participants (4) that already planned their sessions.

Implications on the design:

Our design should be intuitive and flat in sense of navigation. The feedback of users stated clear that the app is seen as a "sophisticated notebook", helping them while (!) practicing and not helping them to practice. Clearly some form of motivation-gamification should be introduced, but it would be too much to conclude exactly how to do so from this study. However, we believe some of the features the participants reported they did not like so much may be a result of the limitations of our study (e.g. the mostly hypothetical scenarios), see below for more details.

Limitations:

All the conclusions we made from the data and the discussion with the test subjects are made with a very limited test set of 14 participants, whom likely changed their responses due to knowing the evaluators prior. Additionally we were not able to find participants to perform a practice session while using the app - doing so would also likely too obtrusive to draw meaningful results with our Lo-Fi prototype. To draw statistical conclusions we would require more participants. Furthermore, due to the reduced functionality of paper prototypes, and hypothetical scenarios, many explanations had to be made that will have varied between participants - influencing their behavior. For investigating the motivational aspect of the app while the data suggests we should have some form of gamification, how to do so is not entirely clear as situation was too hypothetical and the test scenario too influential.

User demographic:
A total of 14 participants, Aged between 18-23 (8), 23-26 (6).