# **DIEP Final Report**

# **Describe**

As a visual communication design undergraduate, my approach to design has long focused on aesthetics and artistic expression, with relatively limited attention to user needs. However, during my postgraduate studies, my indepth study of user experience design in my courses, especially the introduction of the PACT model (People, Activities, Contexts, Technologies) of user research in the UI design process, has made me gradually realise that design is not only a visual art, but also a kind of functional creation for users. The PACT model focuses on 'People', 'Activities', 'Contexts', and 'Technologies', which are the most important elements in the design process. provide a comprehensive and systematic framework for analysing design. For example, the People dimension emphasises understanding the characteristics, needs and behaviours of the target user; the Activity dimension focuses on the user's actions and tasks in a particular context; and the Contexts dimension covers the physical, social and cultural contexts. The PACT model helped me realise that these four elements not only exist in isolation, but also interact with each other to influence the functionality of the design and the user experience. This approach allowed me to reshape my design thinking from a personal aesthetic to a user-centred approach, and to understand how systematic research can provide a solid foundation for design.

# Interpret

During my university years, my design studies focused on visual communication, and the course content focused more on formal aesthetics, such as colour matching, typography and graphic creativity, and less on user needs research and analysis. Due to the lack of experience in user research, my design works are often orientated to personal aesthetics and lack full consideration of actual usage scenarios and user needs. For example, in a class project during my undergraduate studies, I designed a reading app targeting the younger generation. I focused on the visual appeal of the

interface and designed many complex graphics and colour schemes. However, due to the lack of in-depth research on user needs, the application was not clear enough in terms of functional logic, and was seriously out of touch with the actual needs of users. User feedback indicated that they were confused when using the app and could not quickly find the functions they needed. This made me deeply realise that the value of an aesthetically pleasing design will be greatly reduced if it lacks functionality and user orientation.

After entering graduate school, I was gradually exposed to the core concepts of UX design, especially the PACT model that I studied in depth in the 'Design and New Media' course, which made me realise the importance of user research. In one of the UI design projects in this course, 'Apple Focus', I conducted in-depth research on the target user group (teenagers) through interviews and questionnaires. I found that many teenagers were resistant to traditional constraint-based focus apps, believing that they were too coercive and brought extra pressure. Based on this finding, I re-adjusted the design strategy by adding gamification mechanisms and adopting a cartoonish page style to make the app more relaxed and fun. The final user feedback showed that this design approach significantly improved user satisfaction. Through this practice, I not only realised that user research can identify potential problems, but also appreciated that it can directly guide design optimisation.

# **User Personas**



Age: 14

#### Background:

Enjoys short videos and games but often gets distracted from homework by mobile phones.

#### Goals:

Reduce phone usage and focus on completing assignments.
Discover fun, non-phone-based activities.

# Pain Points:

Lacks time management skills and gets easily distracted by notifications. Struggles to start difficult tasks and often procrastinates.

#### **Characteristics:**

Interested in gamified designs and challenges.
Needs simple guidance features like screen time reminders.

# **Background:**

Faces study pressure and struggles to balance study and relaxation time.

#### Goals:

Improve study efficiency by reducing phone distractions. Stay motivated with app-based rewards for completing tasks.

## Pain Points:

Late-night phone use affects sleep.
Constant interruptions from social media and chat apps.

## Characteristics:

Prefers interactive features and reward systems.
Likes vibrant and fresh designs with study aids.



Name: Lily Age: 17 In the course of my study, I have gradually integrated the theoretical knowledge learnt in the course with practical design. For example, Meredith Davis and Jamer Hunt (2017) in Visual Communication Design: an Introduction to Design Concepts in Everyday Experience suggest that 'design must respond to the specific characteristics of audiences and contexts', which fits highly with the core idea of the PACT model. These theories made me realise that the goal of design should not only be to create aesthetically pleasing interfaces, but also to pay attention to the actual user experience. In addition, Donald A. Norman's reflection on user emotions in Emotional Design also helped me a lot in how to address user needs in UI design. It made me think more from the user's point of view in my future design and understand the user-centred design thinking.

# Evaluate

In the Flourish project, my research further focused on the deeper relationship between user needs and design. In this project, I was tasked with designing an intelligent plant management application. During the research phase, I learnt from online data collection and interviews that users generally wanted a clear and intuitive interface for presenting plant health data, such as soil moisture, light intensity, etc. I translated these needs into my design. In my design, I translated these needs into specific interface features, such as health status scores, trend charts, and notification alerts, so that users could quickly understand the health status of their plants. User tests showed that this intuitive design approach made them more likely to use the app and stick with the plants. This project gave me a deep sense of the practical value of the PACT model, and it also made me better understand the indispensability of user research in the design process.

#### **PACT** Target Users Main Activities Beginners-Interested in keeping plants but lack professional knowledge Daily monitoring-Check the growth status of plants (e.g. humidity, Urban white-collar workers-Busy at work and need a simple and convenient plant temperature). Manual Adjustment-According to the prompts to set the temperature and humidity control of the planter, watering frequency and other International students-such as myself, need extra help to keep plants alive due to Daily watering-Even with automatic watering, some users may still be climate and environmental differences. willing to participate manually. Forgetting to water or over-watering causes plants to die. Value ease of use and intuitiveness of products. Prefer high value design, products need to be both practical and decorative. Not sure of the ideal environment the plant needs. Sensitive to plant health and easily frustrated by plant deaths. Home environment-placed in the living room, bedroom, balcony, etc. Built-in sensors-soil moisture, light, temperature and humidity monitoring. Office environment-as decoration to enhance the comfort of the environment. Intelligent regulation-Humidification, fan, automatic watering, etc. Holiday or business trip scenarios: remote monitoring and management of plants to avoid unattended problems for a long time. Technical Challend Ensure sensor accuracy and device stability. Limited space-planter needs to be compactly designed but with strong functions. Battery life or power supply design needs to meet the demand of long time conditioning, etc.



However, when applying the PACT model, I also found some areas for improvement. Firstly, the representativeness of the research sample. For example, in the 'Flourish' project, due to the small number of interview samples, my research results did not fully cover the needs of the target user groups. This made me realise that in future projects, I need to combine more diversified research methods, such as adding quantitative data analysis and observation records in different user scenarios, in order to improve the comprehensiveness and accuracy of the results. In addition, the reliability of the research data is also a challenge, and how to obtain high-quality data under time constraints is a direction I need to learn more about.

In another personal project 'EaseTrack', I tried to use the user journey map combined with PACT model to conduct research. This approach not only helped me to understand user behaviours and pain points more comprehensively, but also allowed me to see the opportunity points in the design more clearly. For example, users often get lost when switching between tasks, leading to inefficiencies. Based on my research findings, I adjusted the interface design logic and added a simplified task switching function, and user tests showed that this improvement effectively increased user satisfaction. This made me realise that the combined application of different theoretical approaches can significantly improve design efficiency and quality of results.

Through my postgraduate studies and practice, I have gradually enhanced my understanding of user research and the PACT model, and felt my growth in design thinking. From being unfamiliar with the complex research process at the beginning to being able to plan the research steps independently, my confidence has been significantly improved. At the same time, these practices made me better understand that designers need not only professional skills, but also the ability to listen to users' needs and provide solutions through design. This process has helped me to grow from a personal aesthetic-centred designer to a user-oriented design practitioner.

#### **Plans**

In the future, I plan to further improve my ability through the following aspects. I will continue to enrich my research methods, combining quantitative and qualitative analyses to ensure the comprehensiveness and reliability of data. For example, in future design projects, I will try to adopt methods such as user logging and contextual observation to obtain more realistic and specific data on user behaviour. In addition, I will explore how to integrate interdisciplinary methods more effectively, such as combining behavioural analysis models with psychology, in order to mine user needs more accurately. At the same time, I hope to demonstrate the research results more efficiently through indepth learning of data visualisation tools, so as to make the presentation of data more intuitive and provide stronger support for design.

In terms of the application of PACT model, I plan to further explore its practice in complex scenarios. For example, in service design, how to combine the PACT model to analyse the interactions between users and multiple touchpoints and propose more systematic solutions.

In the long run, my goal is to become a user-centred designer, creating truly valuable products and services for users through solid user research and systematic design methods. At the same time, I hope to combine my personal learning with cutting-edge industry practices in my future career, and continue to promote my development and innovation in the field of user experience design.

## References

Davis, M. and Hunt, J., 2017. *Visual communication design: An introduction to design concepts in everyday experience*. Bloomsbury Publishing.

Norman, D.A., 2005. Emotional design: People and things. *Retrieved February*, 1.