

IDE Master Graduation

Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

! USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT

Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

STUDENT DATA & MASTER PROGRAMME

Save this form according the format "IDE Master Graduation Project Brief_familyname_firstname_studentnumber_dd-mm-yyyy". Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !



family name Wang
 initials J given name Jia
 student number 4691385
 street & no. Roland Holstlaan 395
 zipcode & city 2624HK Delft
 country Netherlands
 phone +31 617966463
 email J.Wang-30@student.tudelft.nl

Your master programme (only select the options that apply to you):

IDE master(s): IPD Dfl SPD
 2nd non-IDE master:
 individual programme: - - (give date of approval)
 honours programme: Honours Programme Master
 specialisation / annotation: Medisign
 Tech. in Sustainable Design
 Entrepreneurship

SUPERVISORY TEAM **

Fill in the required data for the supervisory team members. Please check the instructions on the right !

** chair Natalia Romero Herrera dept. / section: DCC
 ** mentor Niko Vegt dept. / section: DA
 2nd mentor
 organisation:
 city: Delft country: Netherlands
 comments (optional)

Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v..



Second mentor only applies in case the assignment is hosted by an external organisation.



Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

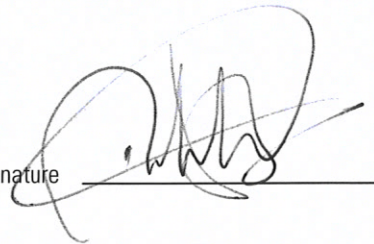
Procedural Checks - IDE Master Graduation

APPROVAL PROJECT BRIEF

To be filled in by the chair of the supervisory team.

chair Natalia Romero Herrera

date 28 - 2 - 2019

signature 

CHECK STUDY PROGRESS

To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: 27 EC

Of which, taking the conditional requirements into account, can be part of the exam programme 27 EC

List of electives obtained before the third semester without approval of the BoE

YES all 1st year master courses passed

NO missing 1st year master courses are:

name D. Slander

date 11 - 3 - 19

signature 

FORMAL APPROVAL GRADUATION PROJECT

To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked **. Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content: APPROVED NOT APPROVED

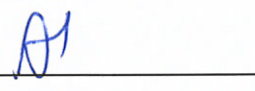
Procedure: APPROVED NOT APPROVED

abbreviation not allowed in title. Adapt the title.

comments

name A. A. Kruwe

date 19 - 3 - 2019

signature 

Engaging tool to increase food-related literacy of people with low SES project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 21 - 02 - 2019 11 - 07 - 2019 end date

INTRODUCTION **

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

Research on digital media and healthcare envisions the role of e-health systems to empower patients taking their responsibility for their health [1]. In line with the definition of 'positive health' [2], this vision addresses a shift to support the active involvement of people in their health condition.

Food informatics is a specific e-Health area, and it relates to understanding what do we eat and why we eat what we eat. In the context of health nutrition, E-health systems could support people and their informal and formal care network to engage in the day to day management of food behavior, which defined by Axelson and Brinberg[3] as the act of making choices of one's eating habits, excluding the intake of nutrients.

This graduation project is part of the FoodSampler project, funded by ZonMw's Create Health programme to support healthy and active aging. The FoodSampler research project aims to explore food informatics strategies to engage people in generating contextual knowledge of their food behavior.

So far the FoodSampler Project already has research data about the contextual factors that influence food behavior of low SES people, which includes individual factors (appetite, mood, lifestyle), environment factors (economic, media misleading), social factors and physical factors (location, sensory attributes). According to the preliminary outputs of contextual research, people struggle with self-reporting activity due to constant judgment and immediate effort of reporting yet unclear direct benefits (positive feedback). Based on the theories and research result, possible mechanisms will be explored and tested during the project to engage people with low SES in food-related data collecting, integrating, and self-reflecting. The overview of how the design intervention will work and the desired consequences are illustrated in figure 1.

The project focuses on vulnerable groups, especially adults with low socio-economical-status (SES) who are commonly low data, health, and technology literate, and the goal is to increase their food literacy by making them feel engaged in collecting relevant and meaningful data around food behavior and its context. One way to prompt people to be more active in data collecting and reflecting is to create design intervention based on the self-determination theory, which claims that competence, autonomy, and relatedness are the three innate psychological needs that motivate people to initiate behavior and specify nutrients that are essential for well-being. It also posits that there are two main types of motivation—intrinsic and extrinsic—and that both are powerful forces in shaping who we are and how we behave[4].

[1] Gregory Mone. 2014. The new digital medicine. Commun. ACM 57, 9 (Sep 2014),18–20. <https://doi.org/10.1145/2641227>

[2] MHuber,MvanVliet,MGiezenberg,BWinkens,YHeerkens,PCDagnelie,and J A Knottnerus. 2016. Towards a "patient-centred" operationalisation of the new dynamic concept of health: a mixed methods study. BMJ Open 6, 1 (Jan 2016), e010091. <https://doi.org/10.1136/bmjopen-2015-010091>

[3] Marta L. Axelson and David Brinberg. 1989. Measures of Food-Related Behavior. Springer US, New York, NY, 5–29. https://doi.org/10.1007/978-1-4613-9661-1_2

[4]Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. Canadian Psychology/Psychologie canadienne, 49(3), 182-185.

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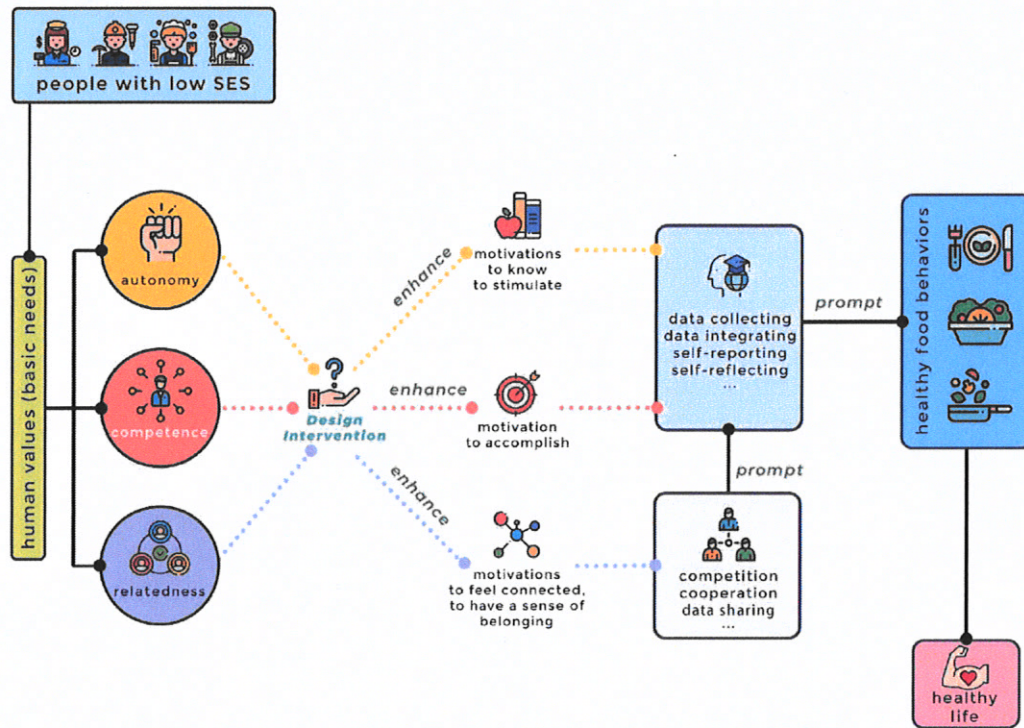


image / figure 1: Introduction

image / figure 2:

PROBLEM DEFINITION **

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

In the current situation, individuals having a low- SES tend to have a less healthy lifestyle compared to medium and high SES individuals. Their eating habits are a part of their unhealthy lifestyle. A number of food tracking tools has been proved ineffective, given their lifestyle, social, environmental and individual factors, which often take priority over their need for a lifestyle change. The preliminary contextual research also shows that people struggle with self-reporting activity and both intrinsic and extrinsic motivations are low in the current context.

The goal of this project is to evoke active engagement in getting and processing food-related data by enhancing users' motivation based on the self-determination theory and gamification strategy and try to explore how the current value (autonomy, competence, relatedness) people have can be used to increase food literacy for low SES people.

During the project, the following questions will be explored:

1. Does adding fun, attractiveness, and excitement work effectively on motivating users and increasing their autonomy to collect and reflect on food data ?
2. Can users' competence be enhanced by providing clear (positive) feedback and short-term benefits and making the using experience of food informatics tools less effort?
3. Will users be prompt to gain knowledge if they can socialize (share, cooperate, compete, etc.) with friends and families through food informatics tools?

The project will try to wrap food literacy in an enjoyable and gameful way to help the user learn food knowledge.

ASSIGNMENT **

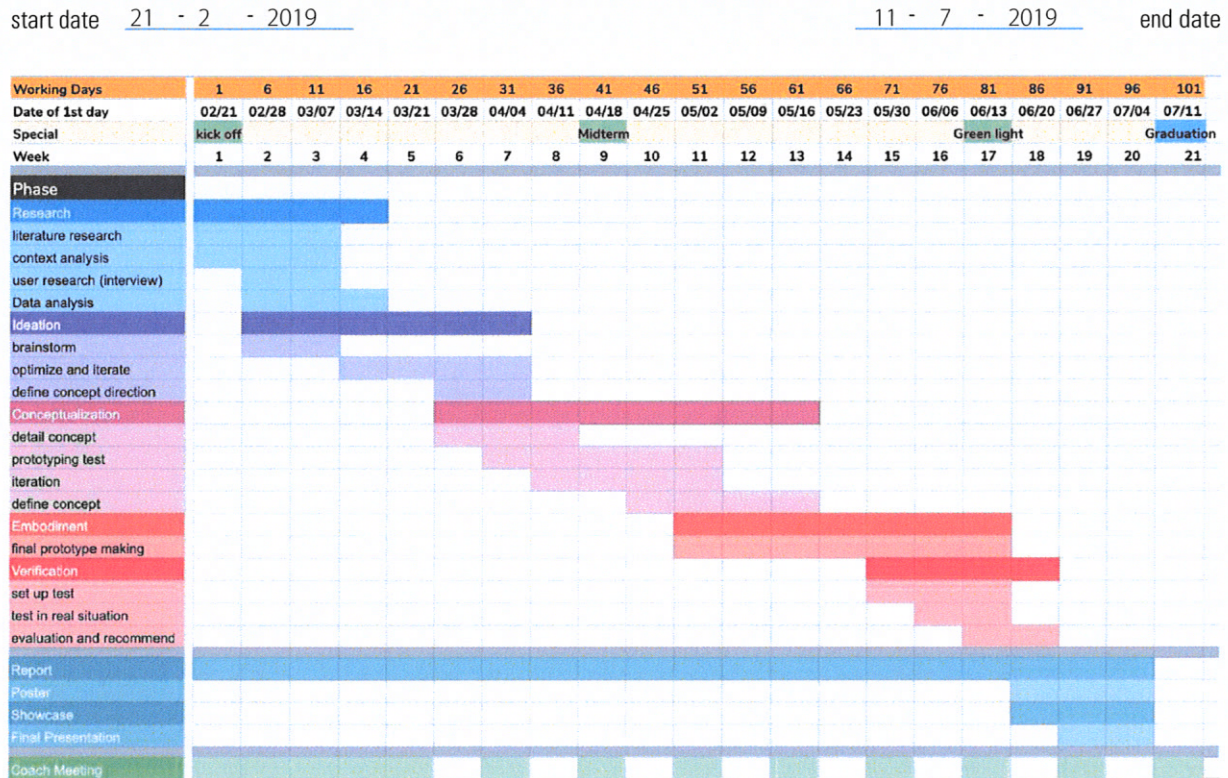
State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

Design a tool to increase food-related literacy of people with low SES by addressing people's competences, needs and preferences to engage in data in their daily life.

Persuasive and motivation theories, gamification strategy and self-determination theory and behavior change techniques will be used in this project to trigger motivation of providing and consuming knowledge. The final deliverable would be a gamelike product or system that support the active engagement of low SES people in data collecting (self-reporting) and reflecting and finally enable them to increase food literacy.

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.



In the Gantt Chart, it shows that the total amount of working days is 100.

The planning is divided into 5 phases: research, ideation, conceptualization, embodiment, and verification. Each phase will take approximately five weeks but are overlapping. Meanwhile, the documentation, meeting, and deliverables are stretched over the full project.

- Research stage (4 weeks): For this stage, I will start from the desk research about the low SES group, food literacy, self-determination theory, and gamification strategies. A benchmarking to analyze existing food informatics tools, as well as gamified healthcare product, will also be conducted. Meanwhile, since the low SES target group is difficult to reach, I will conduct user research by means of design intervention (booklet, scenario, etc.) to reduce the language barrier. In this way I aim to provide information to prompt users and see their reaction instead of asking them for information directly.

- Design stage (12 weeks): At this stage, I will keep coming up divergent ideations for prototyping test and iteration. Later the insights from test and iteration will be integrated to give a direction for the final concept. The interventions will be based on SDT, gamification theories and behavior change techniques, etc.

- Finalizing stage (6 weeks): This stage is mainly for verification and formulating recommendations of the final design. The final deliverables like poster and video will also be finished during this stage.

MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, Stick to no more than five ambitions.

During my DFI program, I mainly focus on exploring the interaction between users and products and gained knowledge of user experience research. I learned different research methods from the DTM and RM courses. I practiced user interface face design in the UXAD course and graphic design in the EFVI course. During the EI and the ITD courses, I was able to learn about prototyping test and to change the current situation to the desired situation by enriching user experience.

For the graduation project, I am motivated to execute this assignment because I am very interested in the connection and relation between human and food and want to know more about the reason behind people's food behavior. I want to apply the methodologies I learned from DFI program into a graduation project to create meaningful Interaction and user experience.

It's inspiring and challenging to research a complicated context, and I hope to contribute to this project not only for a healthier lifestyle of low SES people but also for others lack of knowledge about food.

I hope my design could make people with low SES be aware of the relation between their health and food behavior and encourage them to integrate and reflect on food-related data in a more interesting and gameful way. Since food is something that affects everyone in every day, I wish the users could get a better understanding of their food behavior through my design and have autonomy to change or improve their lifestyle to a healthier level.

The personal learning ambitions during the graduation:

- Learn the methodologies of motivation theories and gamification design.
- Have the ability to use a variety of persuasive design method in a real context.
- Conduct user research in a complex context of low SES people.
- Improve the skill of using suitable prototypes in a realistic test.
- Improve graphics skill for communication and presentation.

FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.