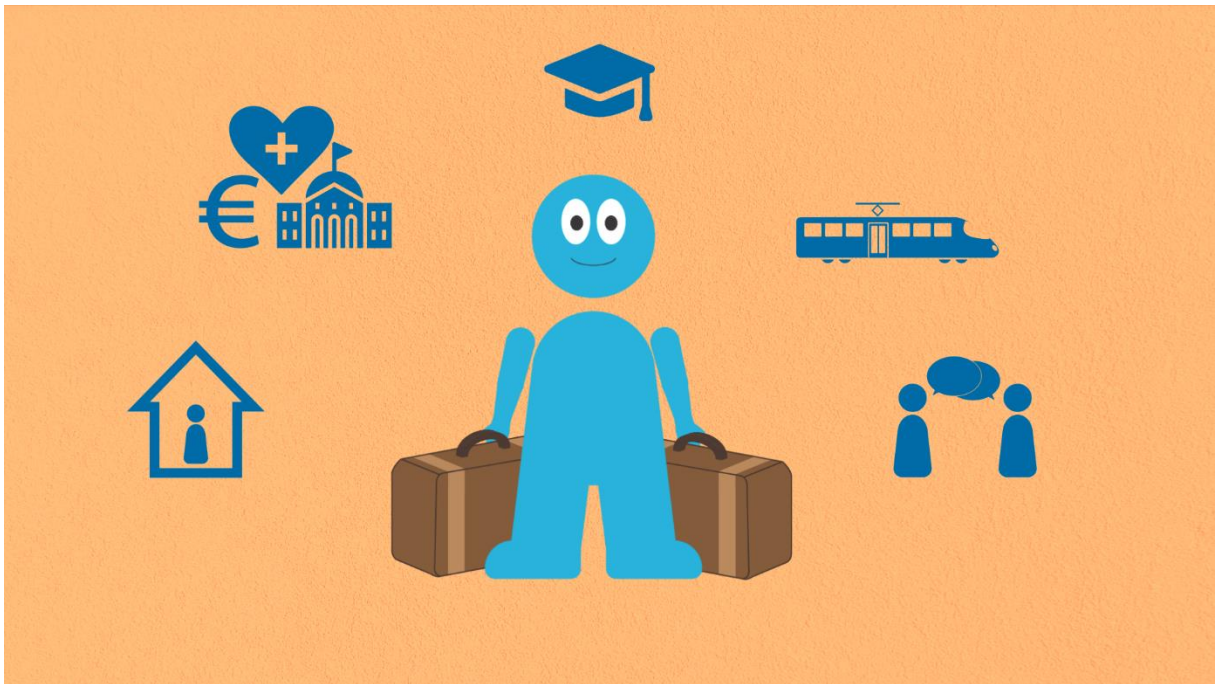


An introduction to the Dutch Culture



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Abstract

Over the last decades, the number of students studying abroad has increased. Becoming an international student brings significant changes to their lives. Research shows that these changes can cause international students to endure more stress, which could result in mental health problems. Therefore, there have been suggestions that there should be support for these students to help them adjust more easily to the new culture. This research focuses on creating support for international students who are coming to the Netherlands.

Two rounds of interviews were conducted with nine international students from various countries to gather user requirements. The first round identified twelve key aspects, and the second prioritized the most important ones. During the interviews, students also mentioned that they preferred an animation format. Based on these results, the concept for an animation video was created to address multiple aspects of Dutch culture, covering accommodation, educational system, health care and administrative processes, public transportation, and cultural and social interactions.

Two experts reviewed seven support formats and also preferred the animation concept. The script and storyboards were reviewed by six target group participants and revised accordingly. A proof of concept, which covers the introduction and accommodation, was created and evaluated through interviews. The feedback suggests that an animated video discussing different aspects of Dutch culture is an engaging and effective way to inform international students.

For future research, the concept could be developed into a complete animation video covering all five aspects and examining its effects. Additional suggestions could focus on the needs of students from a specific culture instead of looking at international students in general, or exploring differences based on level of study.

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Chapter 1: Introduction

1.1 Context

Over the last decades, the number of students studying in another country has increased [1], [2], [3], [4], [5], [6], [7], [8], [9]. Becoming an international student brings significant changes to their lives. They live in a different environment than they are used to. There are people around them who speak another language, eat different food and may differ in social and academic norms. These are just a few examples of the changes they encounter. Besides these practical changes, they also experience a change in their physiological well-being [9]. Research has shown that international students endure more stress, which could result in mental health problems [3][6]. Often this stress is caused by the big difference in cultures, in other words: “the culture shock” [3][9].

Adjustment could be understood as the opposite of culture shock. Adjustment could therefore lead to less stress and better psychological well-being [2][10]. It could also help the students to make friends more easily [2]. Having good relationships with fellow students and teachers could benefit students to achieve higher success in their education [2][3][7]. That is also true for students who are active in extra-curricular activities and who feel at home [3]. Moreover, better adjustment could increase their overall satisfaction with their experience [1][7][9]. Besides, if universities help the current international students to better adjust, it could attract more international students in the future [7].

Therefore, there have been suggestions that there should be support for these students to help reduce the culture gap [5][7][9][10].

1.2 Goal

How can we support international students to adapt more easily when they are going to study in the Netherlands? One approach is to provide them with information about what they will encounter in the country before they arrive, thereby hopefully reducing the culture shock. The goal of this study is to create support for international students to help them feel better prepared when moving to the Dutch culture.

1.3 Research Questions

The main research question is therefore as follows:

How can a support tool be created to help international students better prepare when coming to the Netherlands?

Two sub questions have been formulated to help answer the main research question. They will provide results that will give insight into how to inform international students.

- *What are the characteristics of the Dutch culture that should be discussed?*
- *What are guidelines for effectively conveying information to international students?*

1.4 Report Structure

Chapter 1 will serve as an introduction, which explains the relevance of this research and the questions which are going to be researched. Chapter 2 provides the background consisting of interviews with the target group and experts, a state-of-the-art analysis and a literature review. Chapter 3 describes the methods which will be used to help answer the research question. Chapter 4 talks about the ideation process. Chapter 5 will specify the final concept that will be realised. Chapter 6 describes the realization phase of the final prototype. The user evaluation is discussed in Chapter 7. Chapter 8 will discuss and conclude the results of the study. The final Chapter will provide suggestions for future research.

Chapter 2: Background Research

Before exploring broad information about the Dutch culture and various types of support formats, it is useful to gain insight into what the target group actually desires. Therefore, the first section will focus on the needs and opinions of the target group.

Next, the state-of-the-art will discuss what support about the Dutch culture is already available. It will also examine popular informative animation videos and analyse them to identify similarities between them that could serve as potential guidelines.

Thereafter, the literature review will focus on basic cognitive brain functions and how that knowledge can be used to benefit the design of an envisioned support tool, in order to create guidelines to ensure this tool efficiently conveys information.

2.1 Target Group Opinion

To understand what international students would have wanted to know before they came to the Netherlands, interviews have been conducted. The target group of this research are international students who are planning to come to the Netherlands. However, the interviews were conducted with international students who have already moved to and adjusted to life in the Netherlands because their firsthand experience provides insights into the challenges of adapting to the Dutch culture. There have been two rounds of interviews with the same nine participants each from a different country. The students came from the following countries: Spain, Croatia, Germany, Italy(/Austria), Indonesia, South Africa, Romania, Montenegro, and Poland. See Appendix B: Background research; First round interview questions for the questions.

2.1.1 First Round of Interviews

The goal of the first round of interviews was to get an overview of what international students encountered when they first arrived in the Netherlands. They were asked what stood out to them and if they could elaborate on why, it was different in their own culture. Moreover, they were asked what they would have wanted to know before they came to the Netherlands.

The interviews were held face-to-face on campus. There were semi-structured interviews which enabled flexibility to deviate from the prepared questions which provided room for the participants to go in-depth about certain topics. The length of the interviews varied, ranging from 25 minutes to 1 hour and 35 minutes.

When the students were asked what surprised them or what they would have liked to be more prepared for, they mentioned similar aspects. For example, multiple students said they had difficulty understanding public transport at first. They were not aware of the “ov-chipkaart” and the expenses of transportation in the Netherlands. The educational system was also mentioned by many students as something different from what they were familiar with. They were surprised that it is normal to address professors by their first name. Additionally, some students said that they were not used to working in groups and project-based, as opposed to only doing theoretical learning and exams. Many students indicated that they had to get used to the Dutch cultural and social interactions. Examples of these are the Dutch directness, the way the Dutch party, the way Dutch people build relationships, etc.

After a methodological/thematic analysis, the following twelve aspects, in arbitrary order, emerged from the interviews that students would have liked to have known beforehand:

1. Cultural and social interactions (Directness, social events & relationships, and language barriers)
2. Public transport
3. Accommodation
4. Educational System (Grading & academic culture and learning environment)

5. Health care and administrative processes
6. Bicycles
7. Food and eating habits (Eating schedule & meal preferences and types of food)
8. Work-life balance
9. Associations
10. Local traditions and festivities
11. Store hours and shopping
12. Weather

Many students brought up similar aspects they would have liked to receive (more) support for. Students explained they had seen support available, but for different reasons did not make use of it even though they would have wanted the information. Some students felt that the information was too scattered, which made it quite confusing. They gave as an example that the Dutch government had spread their information across different web pages. Several students explained that although the information was there, it was in text format, and they did not feel like reading long texts. One student mentioned that they could have benefitted from something in the form of a checklist. Multiple students emphasized a preference for a short, easy-to-watch video. Some specified it by saying they would prefer an easy-to-watch animation video. A few mentioned they would like to watch an overview of the most essential tips when coming to the Netherlands. While other students indicated that they would benefit from a video about a specific subject, which could be a tutorial for instance.

2.1.2 Prioritization of the Aspects

The first round of interviews resulted in twelve aspects international students would have liked to have known before they came to the Netherlands. However, are all twelve aspects equally relevant and important for the international students? Certainly, each student is an individual with their own preferences and opinions, but there may be aspects that they collectively find more important than others. Therefore, it is useful to find out which aspects are the most important and to prioritize them when developing support. Besides, it would not be efficient to design support for all twelve aspects as it could be overwhelming to get this much information, making it difficult for the students to absorb and use it effectively. In addition, it might be challenging to create support for all twelve aspects considering the available resources and timeframe.

2.1.2.1 Estimation of Priority

To determine which aspects international students find most important, a second round of interviews was conducted. However, before conducting the second round, an estimation was made regarding the prioritization of the aspects that emerged from the first round of interviews. Comparing the estimated order of aspects to the actual responses from the second round of interviews could give valuable insights. The estimation was based on the frequency of the aspects mentioned in the interviews, multiplied by a weight factor, resulting in a numerical value (see Appendix C: Estimation Table). The frequency is the number of times the aspect was mentioned in the interviews. The weight factor is a number ranging from 1 to 3, determined by the emphasis that participants put on the aspect, where 1 represents the least emphasis and 3 represents the most. The emphasis was judged based on the participants' responses during the interviews. To illustrate, when a participant expressed that knowing certain information beforehand would have significantly helped them, the aspect got a weight factor of 3. On the other hand, when participants indicated that a certain aspect was different, but not important or impactful, it received a weight factor of 1.

The aspect with the highest total score (frequency multiplied by weight factor) indicates the highest priority and the one with the lowest total score indicates the lowest priority. The result of the estimation regarding the priority of the aspects is shown in Table 1.

Ranking Aspects	Estimated Ranking number
Cultural and social interactions (Directness, Social events and relationships and Language barriers)	1
Public transport	2
Accommodation	3
Educational system (Grading and academic culture and Learning environment)	4
Health care and administrative processes	5
Bicycles	6
Food and eating habits (Eating schedule and Meal preferences and Types of food)	6
Work-life balance	6
Store hours and shopping	6
Associations	6
Local traditions and festivities (Sinterklaas, Koningsdag, 21 dinner etc.)	7
Weather	8

Table 1: Estimated ranking

Five aspects ended up with the same numerical value after the multiplication, resulting in all of them being assigned ranking number 6. This is because some aspects were frequently mentioned but were also considered not as important, while others were mentioned rarely but were highly emphasized. As a result, they ended up with the same numerical value after the multiplication and were therefore assigned the same ranking number.

2.1.2.2 Validation

The goal of the second round of interviews was to get an understanding of which of the twelve aspects is the most important to know before coming to the Netherlands according to the international students. The set-up of the second-round interviews (Figure 1) was made in Miro [11]. The nine students who participated in the first round of interviews also took part in the second round.

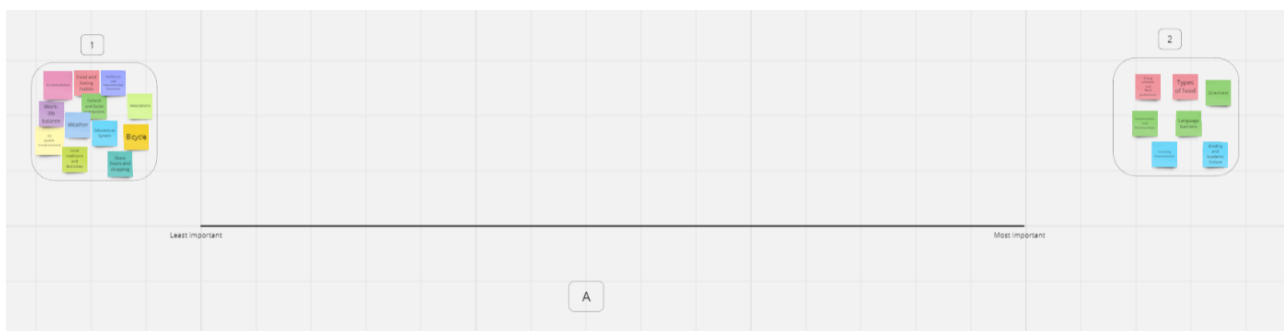


Figure 1: Set-up for the second round of interviews

This interview round was split into two parts, part 1 and part 2.

In part 1, the general twelve aspects were written on Post-it notes and placed in a box with the number 1 above it (Figure 2). The students were asked to place the Post-its above a horizontal line in order of priority, from the aspect they considered the least important to most important in regard to what they think is helpful to know before coming to the Netherlands. The least important aspect is placed on the left, and the most important aspect on the right.



Figure 2: Part 1

Part 2 was a similar process, but the students were asked to use the Post-its from box 2 (Figure 3). These Post-its represent sub-aspects of one of the general aspects. For example, the general aspect “Educational system” has two sub-aspects: “Learning environment” and “Grading and Academic Culture”. Both the general aspect and the sub-aspects have the same colour to indicate their connection to each other. So, in the case of the “Educational system” aspect, the colour is a bright blue.

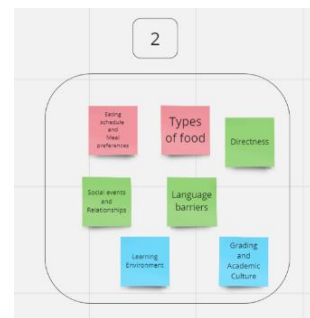


Figure 3: Part 2

The results of the second round of interviews are shown in Table 2. Each student’s ranking was noted beside the corresponding aspect. The aspect which was the most important got number 1 and the least important aspect got number 12. Then, the ranking numbers given by the students for each aspect were added up. The aspect with the lowest total was seen as most important, and the one with the highest total was seen as least important. The same method to distinguish the order was used for part 2.

The estimated results are also shown in Table 2 and can be compared with the actual results. It is visible that the top five aspects are the same in both rankings, with a slight change in order. Moreover, the aspects that received number 6 are also close to each other. However, because so many aspects received ranking number 6 in the estimation, it doesn’t give that much additional insight. The validation however does make the distinction between these aspects. Finally, the least important aspect is the same in both rankings, namely “weather”.

As for the sub-aspects, there was no estimation made. The results of the order of priority of the sub-aspects within the general aspect are shown in Table 3, Table 4 and Table 5.

Final Ranking Aspects	Validated Ranking number	Estimated Ranking number
Accommodation	1	3
Educational system (Grading and academic culture and Learning environment)	2	4
Health care and administrative processes	3	5
Public transport	4	2
Cultural and social interactions (Directness, Social events and relationships and Language barriers)	5	1
Associations	6	6
Store hours and shopping	7	6
Bicycles	8	6
Local traditions and festivities (Sinterklaas, Koningsdag, 21 dinner etc.)	9	7
Work-life balance	10	6
Food and eating habits (Eating schedule and Meal preferences and Types of food)	11	6
Weather	12	8

Table 2: Final ranking compared to estimated ranking

Educational System	Final Ranking number
Learning Environment	1
Grading and Academic Culture	2

Table 3: Sub-aspect "Educational System" ranking

Cultural and Social Interactions	Final Ranking number
Language Barriers	1
Social Events and Relationships	2
Directness	3

Table 4: Sub-aspect "Cultural and Social Interactions" ranking

Food and Eating Habits	Final Ranking number
Eating Schedule and Meal Preferences	1
Types of Food	2

Table 5: Sub-aspect "Food and Eating Habits" ranking

2.2 State of the Art

Before creating new support for the international students, it is good to consider the information already available about Dutch culture. The first part of the state of the art will therefore discuss various examples of sources of information that students could use as support about Dutch culture.

During the first round of interviews, the students mentioned they would prefer their support in a video format, specifically animated videos. Therefore, the second part of the state of the art will focus on guidelines for designing an informative animation video by comparing popular examples. By analysing these videos, the goal is to find common features that can help design the support in a later stage.

2.2.1 Support about Dutch Culture

Various sources of information about the Dutch culture already exist.

There are books produced about Dutch culture. For example, “Why the Dutch are different” by Ben Coates (Figure 4) [12], “Proud to be Dutch” by Deborah van Meuren (Figure 5) [13], “Dutch I presume?” by Martijn de Rooi [14] and “The Undutchables” by Colin White & Laurie Boucke [15].

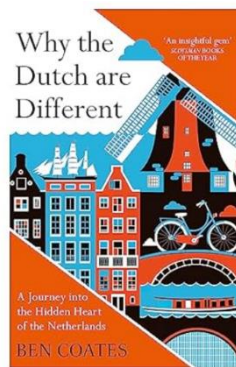


Figure 4: “Why the Dutch are different” by Ben Coates



Figure 5: “Proud to be Dutch” by Deborah van Meuren

Multiple articles on Dutch culture can be found on the internet. These articles are mostly lists of things you should know about Dutch culture and just general fun or interesting facts about the Netherlands [16], [17], [18], [19], [20].

Websites have been created with the main purpose of providing information about the Netherlands. These websites are meant for people who want to work, go on vacation or are in general interested in the Netherlands and its customs [21], [22], [23], [24].

The Dutch government has various websites that give information about several topics interesting to international people. The topics go from cultural events to personal matters to the Dutch business climate [25], [26], [27], [28], [29].

There can also be a lot found about Dutch culture on social media. There are Instagram accounts focused on sharing content about Dutch culture. They post pictures and videos about Dutch cultural aspects and write information about the picture in the description. This is a great source of information about Dutch culture and history or general traditions and events [30], [31], [32], [33]. Some accounts post humorous pictures about Dutch culture. They make silly jokes which still contain a hint of truth, which makes them enjoyable as well as informative such as the Instagram accounts *@stuffdutchpeoplelike* [34] Figure 6 and *@dutch_affirmations* [35] Figure 7. Furthermore, there are multiple accounts that are focused on learning the Dutch language [36], [37], [38].



Figure 6: Instagram account @stuffdutchpeoplelike



Figure 7: Instagram account @dutch_affirmations

2.2.1.1 Dutch Culture in Video Format

There will be numerous results if you search for “Dutch culture” on YouTube. Some videos are general information about the Netherlands and Dutch culture [39], [40]. However, most of the results are people talking about their personal experiences with moving to the Netherlands and encountering Dutch culture [41], [42], [43], [44], [45]. There are also many videos to be found about learning the Dutch language. Some popular Dutch learning channels are “Learn Dutch with Bart de Pau”[46], “Dutchies to be – Learn Dutch with Kim”[47], “Learn Dutch with DutchPod101.com” [48] and “Easy Dutch” [49].

In regards to Dutch culture in animation videos, there is not much to find. There are multiple animation videos about the Netherlands. There are videos about the history of how the Netherlands came to be as it is today [50], [51], [52] and about how the Dutch water systems work [53], [54], [55]. Other topics for animation videos have been: how the Dutch school system works [56], how Dutch business culture is [57] or what the Netherlands’ history in regards to the World Cup is [58].

2.2.1.2 Current Support from Universities

Many universities in the Netherlands are already providing various kinds of support for international students, such as Universiteit Leiden [59], University of Twente [60], Rijksuniversiteit Groningen [61], Wageningen University & Research [62], Erasmus Universiteit Rotterdam [63], Vrije Universiteit Amsterdam [64], Maastricht University [65], Tilburg University [66], Radboud Universiteit [67], Universiteit Utrecht [68]. On their websites, there can often be found information about how to prepare for their stay in the Netherlands. This contains explanations about topics like a visa and a residence permit, housing, insurance, healthcare and a Dutch bank account. For instance, the University of Twente have a get started guide [69], an extensive international student handbook [70] and useful checklists [71] to help the students in their preparation.

Some universities have a page on their website which highlights some aspects of Dutch culture (Universiteit Leiden [72] Figure 8, University of Twente [73], Wageningen University & Research [74]). Those aspects are topics like the kind of weather, transportation, food, celebrations etc.

Others have workshops or courses devoted to Dutch culture (Erasmus Universiteit Rotterdam [75] Maastricht University [76], Rijksuniversiteit Groningen [77], VU Amsterdam [78]).

Some universities have YouTube videos about the Netherlands meant for international students. The University of Twente has a few videos about Dutch culture, food, weather and language [79], [80]. Radboud Universiteit has its own international student vlogs. These vlogs are intended for international students and are made by international students. They are talking about their experience concerning different subjects in relation to the Netherlands [81].

A lot of universities give international students the opportunity to learn Dutch. They provide a range of options from free online courses (Universiteit Leiden [82], Universiteit Utrecht [83] Figure 9)

to paid university courses which could earn the students EC (University of Twente [84], Maastricht University [85], Tilburg University [86]).



Figure 8: Highlights Dutch culture by Universiteit Leiden



Figure 9: Online Dutch course by Universiteit Utrecht

2.2.2 Informative Animation Videos

Animation is widely being used as an informative and educational tool, especially for the younger generation, which is also the target group of this study. For example, the blood bank organisation *Sanquin* [87] has an animation video on their website which explains the importance of donating blood to save lives. Moreover, the video illustrates what to expect from the process of donating. This video could not only motivate a watcher to donate blood, but it could also help them to prepare mentally when they are about to donate blood for the first time.

Nasa (National Aeronautics and Space Administration) has used animation to demonstrate or explain space-related concepts, such as "How do you land on Mars" [88]. The organization *National Geographic* has used animation with the same purpose but in the field of science and nature. For instance, they have made an animated video which illustrates "the history of the Bible" [89].

In the Netherlands, a program had been developed to educate children. This program is called *Schooltv* [90] and is often shown to students during their classes from primary school up to high school. *Schooltv* also created a series named *Clipphanger* [91][92], where they ask questions and answer them with a funny animation video.

TED [93] is well known for its famous *TED-talks* [94], where thinkers, visionaries and teachers can speak and help to gain a better understanding of the world and life for people all over the globe. The talks cover a diversity of disciplines. *TED* also created *TED-Ed* [95], which has informative, award-winning animated videos as its signature content. These videos can be found on their website as well as on their YouTube channel [96]. *TED-Ed* animations are excellent examples of what a good informative animation video should look like. Besides that they are a trustworthy source of information, due to the fact that *TED-Ed* animations are often created by the collaboration of various experts, *TED-Ed* has received recognition and awards for their educational content and innovative approach to visual storytelling [97].

Another YouTube channel with great examples of how informative animation videos should look is *Kurzgesagt – In a Nutshell* [98]. *Kurzgesagt* [99] has won or been nominated for multiple awards, including the *Webby Awards*, *Streamy Awards*, and *YouTube Creator Awards*. They are known for their high-quality animation, clear explanations, and their ability to make complex subjects understandable to a broad audience. They have well-researched content about topics related to science and the world in general. One of their videos is "Can You Trust Kurzgesagt Videos?" [100] There is explained that they reach out to experts or scientists to fact check their scripts and correct them. In another video "How to Make a Kurzgesagt Video in 1200 Hours" [101] they explain briefly step by step the process that occurs when making a *Kurzgesagt* video. But the conclusion is that it's a well thought out thorough process, which takes a lot of time and work but leads to a great result.

There are numerous YouTube channels dedicated to spreading information and explaining complicated concepts in an easily accessible way with the use of animation videos. Here are another few popular channels which are worth mentioning: *AsapSCIENCE* [102] has videos focused on science, *Thug notes* [103] is a series created by *Wisecrack* which summaries and analyses literature, *Jake Doublyoo* [104] explains mythology, *minutephysics* [105] talks mainly about science and physics. Some channels do not classify to a certain category, instead they discuss a variety of subjects in a wide range of topics, for example *CrashCourse* [106] or *The Infographic Show* [107].

2.2.3 Similarities in Popular Informative Animation Videos

Even though the topics of these videos may differ, and the animation styles are unique, there are still some similarities to be found in the way these videos are created. The following aspects are going to be discussed: Simplicity, background music and sound effects, voice overs, entertainment, and duration and pacing.

2.2.3.1 Simplicity

Many animations use simplified language and visuals which makes the videos very accessible. The message that the videos aim to convey is clear for the target audience. Great examples are *AsapSCIENCE* and *minutephysics*, both channels have a minimalistic style with a white background. It makes the videos seem very clean and organised. In informative animation videos, often a metaphor is used to explain more challenging phenomena. In *TED-Ed* video about “How playing an instrument benefits your brain”, they animated a head opening like a box containing organized, coloured folders. To illustrate your brain can contain, store, and retrieve memories [108] (see Figure 10: *TED-Ed* "How playing an instrument benefits your brain"). Another great example by *TED-Ed* is how they depict the battle in the body between a cell and a virus. They illustrated the battle as a small war between little soldiers [109] (see Figure 11). Or how *Crash Course* illustrates Economics as an America-shaped machine that produces oil and goods [110] (see Figure 12).



Figure 10: *TED-Ed* “How playing an instrument benefits your brain”



Figure 11: *TED-Ed* “Cell vs. virus: A battle for health”



Figure 12: *Crash Course* “Intro to Economics”

2.2.3.2 Background Music and Sound Effects

Auditorial aspects to be considered are the background music and sound effects. In case background music was used, the music is instrumental. *AsapSCIENCE* often use the same recognizable, instrumental background music for their videos [111]. *Minutephysics* also frequently uses similar background music for their videos. Their music is simply a walking bass [112]. Some animators additionally use sound effects in their videos, which could increase the viewers' engagement in the animation. *The infographic Show* use both instrumental music in the background and sound effects in their animations. For instance, they added a bouncing noise when a character was jumping up and down or a hissing sound when the snake was in the frame [113]. Another example is how *CrashCourse* use sound effects sometimes to highlight words on the screen. In their video about cultures, subcultures, and countercultures, they sum up different counter-cultures of the 1960s. Every time another counter-culture pops up on the screen, it is accompanied by a “ping” sound effect [114].

2.2.3.3 Voice-Over

The majority of the videos use a voice over. This contributes to make the story more organized and easier to understand. The voice overs also contribute to keeping the viewers' attention. For example, *minutephysics* support their voice over by simultaneously animating what they're explaining. In their video about how airplanes fly, they talk about forces being balanced at the same time four opposite arrows from the same size appear which shows the balance they talk about. Or when they talk about the molecules pushing the plane up, "F-lift" is illustrated (upward force) and when they talk about gravity, "F-gravity" is illustrated [115] (see Figure 13). *Thugnotes* uses vocabulary that resonates with their audience. In their video about "Lord of the Flies" they use slang words like: "homies", "snag", "holler", "gangsta" and "my boy". [116]. *Jake doubleyou* uses the voice over not only for the structure but also as part of the story he's trying to convey by voice acting the characters [117].

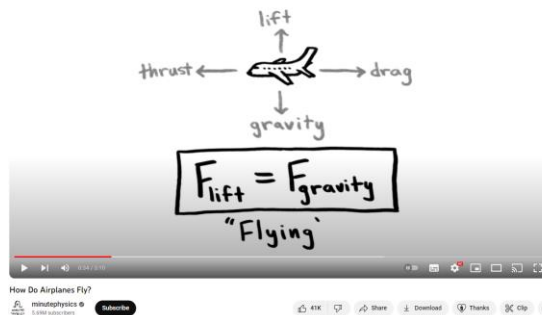


Figure 13: *minutephysics* "How Do Airplanes Fly?"

2.2.3.4 Entertaining

The animation videos are entertaining. They engage the viewer and help to keep their attention. Little jokes are made, the voice over is engaging and visually it looks very appealing. Generally, the colours are fairly colourful and within a certain colour theme. For example, *Kurzgesagt* has always a bright design for their videos [118] (see Figure 14). Meanwhile, *Clipphanger* designs their videos in more muted colours [119] (see Figure 15).

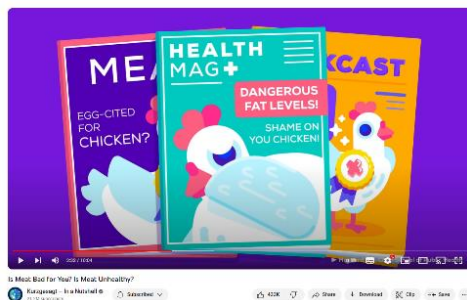


Figure 14: *Kurzgesagt* "Is Meat Bad for You? Is Meat Unhealthy?"



Figure 15: *Clipphanger* "Wat is een blindedarmontsteking?"

The animations are often exaggerated to increase the amount of impact on the viewer. Take for example the character from *TED-Eds* video about staying calm under pressure. They illustrate the person being under pressure as a juggler almost falling inside the mouth of a crocodile [120] (see Figure 16). And even though *Red Dwarfs* are relatively young stars, they do not actually have baby faces as *Kurzgesagt* depicts them in their video [121] (see Figure 17).



Figure 16: TED-Ed “How to stay calm under pressure”

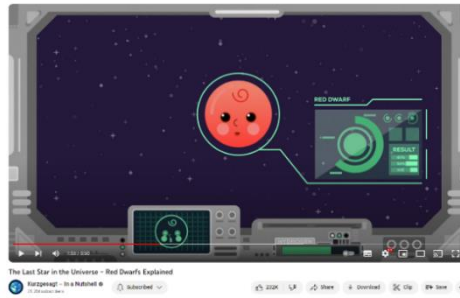


Figure 17: Kurzgesagt “The Last Star in the Universe – Red Dwarfs Explained”

2.2.3.5 Duration and Pacing

The duration and the pacing are also noticeable. Most of the animation videos are very concise. The pacing varies and it is generally high enough to keep the viewers’ attention, but it is still easy to follow. The parts where the pacing is lower are often the parts where the information is more complex. Sometimes the slow pacing is used to emphasize certain information. Overall, the animation videos are relatively short.

In *Sanquins* video, which has been mentioned before, they explain what the process of donating blood will be like. They patiently tell and show us the general steps you will go through before you are going to donate blood. These steps include: filling in a questionnaire, hemoglobin measurement and blood test. Later in the video, they mention that you go through these steps again when you’re going to donate for the second time. But instead of discussing each one individually, they’re named within a few seconds. *Sanquins* video state clearly what to expect when you’re going to donate blood for the first time and it is all shown in a timespan of two minutes.

Thug Notes is also a great example of a concise animation video. Generally, they summarize a whole novel into a 2 to 3 minute animation. In their video about “The Outsiders” they take 26 seconds to explain a key scene where the main character and his friends have a conflict with two other characters. This longer duration allows them to slow down and highlight the importance of this moment in the story. At the same time, they take only 4 seconds on other plot points, such as the main character’s brother dying in the hospital, to keep the summary concise while still covering the essential details.[122].

TED-Ed also just uses a few minutes to illustrate what depression is. They say that depression is among other things associated with the abnormal transmission or depletion of certain neurotransmitters. They then specify by saying it’s especially serotonin, norepinephrine and dopamine. The next two factors which are associated with depression, also go one step more into depth than just a general overview of what depression is. Instead of saying that people experience bad nights of sleep, they talk about blunted circadian rhythms or specific changes in the REM and slow-wave parts of your sleep cycle. And as opposed to simplifying by saying it’s related to hormone abnormalities, they specify by giving examples such as high cortisol and deregulation of thyroid hormones. Still, the video is just 4.28 minutes long with a clear and general overview of what depression comprehends [123].

2.2.4 State of the Art Conclusion

In conclusion, much information about the Dutch culture is already available in many different formats. Books and articles have been written, websites and videos have been created, and even Instagram accounts have been dedicated to Dutch culture. Dutch Universities have also paid attention to providing their foreign students with information about the Netherlands and Dutch culture. Even though a lot of information can be found about Dutch culture, there was not an animated guide on what to expect of Dutch culture for international students who are moving to the Netherlands for their studies.

Regarding the use of an animation video as a medium to spread information, several organizations already use them to educate people, especially targeting the younger generation. Moreover, numerous YouTube channels explain a variety of complicated subjects in an accessible way through animations. Multiple similarities were found between these popular informative animation videos, and they were discussed under the following categories: simplicity, background music and sound effects, voice overs, entertainment, and duration and pacing. These similarities can be expressed in the following list, which could serve as helpful guidelines when designing the new support tool:

1. Provide information in a clear way.
2. Include non-vocal background music.
3. Include sound effects.
4. Include narration.
5. Provide information in a way that international students stay engaged.
6. Provide information in a concise way.

2.3 Literature review about informative visual communication of information

When designing a support tool for international students, it is useful also to consider how the human brain processes information. Keeping that knowledge in mind could be beneficial when designing the new support tool. Therefore, the first part of the literature review will focus on this topic.

Since the students indicated during the first round of interviews that they would have preferred to receive the information about the Netherlands through animated video format, the second part of the literature review will focus on design aspects for animation videos. Particularly, it will explore the sound and visual elements that can be beneficial for creating the new support tool.

Therefore, the objective of this literature review is to gain a basic understanding of how the human brain processes information and to discuss aspects that should be considered when creating an informative animation video. These insights could serve as guidelines for designing new support tool.

2.3.1 Cognitive Load

Cognitive load theory is based on the processing of information in the limited capacity of the working memory (commonly known as short-term memory). There are three types of different loads: intrinsic load, extraneous load and germane load [124], [125], [126], [127], [128]. Intrinsic load is as Tabbers [126, p. 9] explains, "... caused by the complexity of the learning task, and it is the basic amount of processing required to understand the instructions." Wouters [125] states that the intrinsic load cannot be altered considering it will have a negative influence on the understanding of the material. In a later publication, Wouters et al. [128] adds that the intrinsic cognitive load increases with the complexity of the skill. Secondly, extraneous load is the irrelevant information which puts a burden on the working memory. It depends on the design of how the material is presented [124]. Plass et al. [127] specify that it is especially directed at the nonessential or unrelated information which is a form of unnecessary processing. Lastly, there is germane load. While Brame [124] explains the germane load to be the minimal level of cognitive activity to reach the desired outcome. Wouters [125] describes it as the load that promotes the learning process. Overall, the germane load means the mental effort that is required to understand the material [127]. Even though the types are each different from another, Wouters et al. [128] explains that they are associated with each other and that they can be used to complement one another. According to the cognitive load theory, the goal is to make efficient use of the limited capacity of the working memory [126]. This implies that in the design of a support tool, it is desirable to minimize the extraneous load and to increase the germane load to achieve the most efficient way for conveying the information [125].

2.3.2 Dual Coding and Split-attention

Dual coding theory is based on the idea that there are two “channels” for processing material: verbal and visual [125][128][129]. In case there are too many elements that simultaneously should be processed (either verbally or visually), there is a chance that the working memory is overloaded, which leads to elements not being processed. Mayer and Moreno [129] state that this separation of processing channels could be taken advantage of to maximize the limited capacity without overloading the working memory too much. Brame [124] elaborates by pointing out that the combination of using the verbal and the visual channel to convey information could improve the germane load. Especially if the specific sort of information is transferred by the most appropriate channel. Wouters [125] expands this theory by stating that the visual and verbal information should be simultaneously represented in order for it to have a meaningful impact. If the working memory is overloaded, it could result into the split-attention effect which, as the name implies, means people have to split their attention in order to understand the material. This happens especially when the material gets too complex, because then the working memory gets more easily overloaded as a result of the increase in intrinsic load [125], [126], [127], [128], [129]. In sum, it is beneficial to make use of the dual coding theory to convey your information more efficiently. However, split attention could occur when the cognitive load becomes too much for the working memory. Therefore, it is important to be conscious about how you offer the information you convey over each channel.

2.3.3 Animation as an Educational Tool

In the past 20 years, animation has become more prevalent in our day to day lives [130]. It is frequently used in the entertainment field. For example, in online video games, movies or television shows. Furthermore, animations are used in the field of education. There have been researches about the use of animation as a tool for learning [131][132]. Moreover, animations are used in the medical field. Take for example the Dutch site “KIJKsluiter”, which shows the prescriptions for a medication by the use of an interactive animation [133].

There are many different styles in regards to animating videos [134]. Specifically in their methods to convey information. Thus, it’s important to analyse which aspects according to research contribute to conveying information effectively in an animation. This analysis will help identify the best approaches for designing animations that enhance understanding and retention of information.

2.3.4 Sound Design

The paragraph sound design is divided in two sub-chapters: narration and supporting background music. Narration refers in this research context to the spoken commentary to deliver information to the viewer, guiding the viewer through the content. The background music is the music to provide atmosphere in the video.

2.3.4.1 Narration

Narration may help viewers make connections between visual and verbal information, which enhances their performance in comparison to isolated visual or verbal input. This was concluded in a study by Mayor and Anderson [135] conducted in 1991 on the effect of narrations in animations videos. The name for this phenomena is “the modality principle” [125], [126], [127], [128], [129]. In a later study in 2002, Mayor and Moreno [129, p. 114] reached a similar conclusion: “Thus, the positive effect of simultaneous presentation across eight studies was consistent and large.” They also noted that students learn more deeply when extraneous words and sounds are excluded, optimizing the efficiency of the working load. Brame [124] elaborates by stating that using visual input while the video is being narrated has a complementary effect and could be used to highlight features. Wouters [125] adds that information can be more easily recollected from memory when it has been processed in two different ways. He also argues that “written texts automatically receive less attention than spoken texts.” [8, p.117]. Tabbers [126, p. 12] concurs, stating: “...the visual channel is not over loaded. As a result, extraneous load is decreased compared to the situation in which text is presented

visually.”. Not everybody found narration to be beneficial. Golke et al. [136] observed no influence from informative narratives on the learning compared to the expository texts. Nevertheless, most findings suggest that narration could certainly aid the ability to take in information.

2.3.4.2 Background-music

Multiple studies have shown that music can have a positive influence on the learning ability of people [137], [138], [139], [140], [141], [142]. Research by Fassbender et al. [137] concludes that participants remembered significantly more number of facts while listening to background music compared to not listening to background music. Rauscher [15, p. 4] explained that “Listening to the Mozart Sonata should produce short-term performance enhancement of the analytic chess exercises”. Jausovec et al. [139] did further research on the brain activity while listening to Mozart. In their experiment they also discovered increased performance results. Therefore, they affirmed that Mozart’s music has beneficial influence on learning. Anderson et al. [141, p. 30] observed that “the stress levels of our students was decreased, while their ability to focus and retain information increased.” when classical music was played during school activities. However, Angel et al. [143] empathize the fact that background music could also have a negative impact when there is vocal content in the music.

Vocal presence in background music should be considered further. Kang and Lakshmanan [144] examined the effect of the difference in background music with vocals against background music without vocals on the working memory capacity. Their paper shows when two spoken tracks are playing, people generally can only focus on one spoken track (split-attention principle). They conclude that “due to the presence of lyrics, vocal background music draws consumers’ attention away from vocal ad matter and towards itself ... In such situations, repetition of vocal music ... may offer an avenue to mitigate its negative effect on consumers’ cognitive processing.” [144, p. 46]. Therefore, it is preferred to use background music without vocals. Opposed to the previous statements, Richards et al. [145] claim that background music has minimal effect. Their results show that for all but one specific track, the music groups and the non-music group did not have a statistically significant difference in the amount of correctly answered questions. In short, background music could be beneficial on the cognitive performance. However, the music should be without vocals to avoid the split-attention principle.

2.3.5 Visual Design

Because human visual perception is selective in nature (cognitive load theory) [146], it is desirable to steer the viewer’s attention. To achieve this, cues can be used to guide attention to highlight a specific part of the animation [124][127][147]. There are different forms of cueing. One form of cueing is inherent content cues, which is a natural attribute of the object that automatically catches attention, think of bright colours or aggressive movements within animations [146]. Another form of cueing is when a contrast occurs. In other words, when object differs in one single attribute compared to other objects [128] [146]. For example, in colour (five yellow circles and one purple circle), form (five circles and one square), size, etc. One more example of cueing is abrupt or gradual changes in objects over time. De Koning et al. [146] emphasize it works best when they occur rapidly. An extreme example of this is flashing the object. Wouters et al.[128] divide cues into three types: transformation (e.g., colour, shape, size), translations (movements) and transitions (appearance and/or disappearance). There are also instructional cues like arrows or pointing eyes. These cues are not part of the information, but serve to direct the attention towards it [146].

Cueing can be used to reduce cognitive load [128], because it diminishes the load for locating the important information according to De Koning et al. [146]. Highlighting important information can reduce extraneous load and it can enhance germane load [124]. The results of Yung and Paas [148] also indicate that cueing does indeed have a positive effect on learning. Interestingly, Lowe and Boucheix [149] argue that cueing does direct the attention, but after a while that influence disappeared. Furthermore, in a later study De Koning et al. [150] concluded cueing does not necessarily improve learning. Plass et al. [127] state that key information should be represented in

pictorial form rather than only textual form, since pictorial representation requires less mental effort to process than descriptive information. Tabbers [126] elaborates on that statement by explaining integrating spoken text and pictures are a more passive process as opposed to the more active process of integrating visual text and pictures. Mayer and Moreno [129] explain when words are presented in combination with the visual animation, it could easily lead to overloading the visual working memory.

In sum, there are different forms of cueing to guide the viewers' attention. There is evidence that suggests that cueing can help reduce the cognitive load, which could be used to make more efficient use of the limited capacity in the working memory. Processing pictorial representation of information happens passively, which requires less mental effort than textual representations. Therefore, pictorial representation could be beneficial for conveying information efficiently.

2.3.6 Literature Review Conclusion and Discussion

The aim of this literature review was to understand how the brain processes information. It could be beneficial to use this knowledge to design support effectively. Effectiveness can be reached mainly by reducing the extraneous load and increasing the germane load. Using both verbal and visual input (dual coding) could reduce the amount of processing for each channel, which increases the germane load. However, there is still a chance of overloading the working memory which could result in only processing a part of what is given (split attention effect).

Animations are already a popular tool to educate and inform people. It could be an effective way to convey information. However, there are aspects to be considered in order to do so. Concerning sounds, most findings agree that narration has a positive influence on learning from an animation video, because it could help make connections between the visual and verbal input (modality principle). Furthermore, narration could be used to highlight important information. Thus, narration can decrease extraneous load and increase germane load. The use of background music could have a positive influence on learning. However, the music must be without vocals, otherwise the music could have a negative influence due to the split attention effect.

Concerning visuals, cueing could help to guide the viewer's attention to important information in the video. Distinct characteristics or contrasts could highlight key information. Transformations, translations, transitions and instructional cues are also frequently used forms of cueing. Cueing can reduce extraneous load and can enhance germane load. Moreover, the use of visual text should be minimized to avoid overloading the visual working memory. Instead, pictorial representations are preferred, because they require less cognitive processing. This also decreases extraneous load and increases germane load.

In sum, the following can be considered guidelines for an animation video:

1. Make use of a narrator.
2. Include background music without vocals.
3. Use cues to guide the viewers' attention.

However, there are shortcomings to this review. The focus in the visual part of this literature review was mainly on cueing, however the visual part of an animation video is way broader. Take the many different drawing styles in which videos could be animated or cultural differences in style and structure of animation video. It is also important to engage the audience. Therefore, it's important to know what your target group will be, because each group has their own preferences. For instance, the language to intrigue students will be quite different from the language for the elderly. These topics could be considered for further research.

2.4 Conclusion

The background research can be used to answer the two sub-questions.

First sub-question: What are the characteristics of the Dutch culture that should be discussed?

According to the interviews it turned out that the students found the following five aspects the most important to know before coming to the Netherlands:

1. Accommodation
2. Educational system
3. Health care and administration processes
4. Public transport
5. Cultural and social interactions

Accommodation was mentioned because many students reported having difficulty finding suitable housing. Regarding the education system, students expressed that they would have liked more information about the Dutch grading system and, for example, that it is common to use professors' first names. Students also explained it would be helpful to have all the information related to healthcare and administrative processes in one place, rather than scattered, especially since these processes are mandatory when moving to the Netherlands. Public transportation was highlighted as an important topic because students felt it would be useful to have an introduction to the "OV-chipkaart" [151] and guidance on navigating public transport routes. Finally, cultural and social interactions was brought up, as students appreciated having an idea of how Dutch people interact. This helps newcomers, as outsiders, understand how to respond and engage appropriately in social situations.

Second sub-question: What are guidelines for effectively conveying information to international students?

While there is already a lot of support to find about the Dutch culture, it was not always used by students. They expressed a preference for an easy-to-watch video, with some specifically mentioning an animated video. In the state of the art, the analysis of popular informative animations revealed possible design requirements that could guide the design of the new support:

1. Provide information in a clear way.
2. Include non-vocal background music.
3. Include sound effects.
4. Include narration.
5. Provide information in a way that international students stay engaged.
6. Provide information in a concise way.

The literature review emphasized the importance of design visuals and audio in a way that does not overload the viewer's working memory. The following points can be considered as guidelines for designing an animation video according to the literature review:

1. Make use of a narrator.
2. Include background music without vocals.
3. Use cues to guide the viewers' attention.

These suggestions align with aspects from the analysis of the popular informative videos.

In conclusion, the characteristics of Dutch culture that could be discussed are now clear. There are various aspects that can be used as guidelines when designing the support. Although the background research shows that animation is one of the favourite ways to convey information, the ideation will not be limited to it.

Chapter 3: Methods & Techniques

This project will use the Creative Technology Design Process developed by Mader and Eggink [152]. This approach serves as a guideline in the design process. It uses diverging and converging models for developing concepts. By using spiral models, it creates a cycle design approach that allows for reiteration and improvement of ideas. Additionally, this study is a user-centred design process, involving regular input from stakeholder to ensure alignment with their needs and expectations. frequently checking in with the stakeholders. The Creative Technology design process consists of four different phases: Ideation, Specification, Realisation and Evaluation.

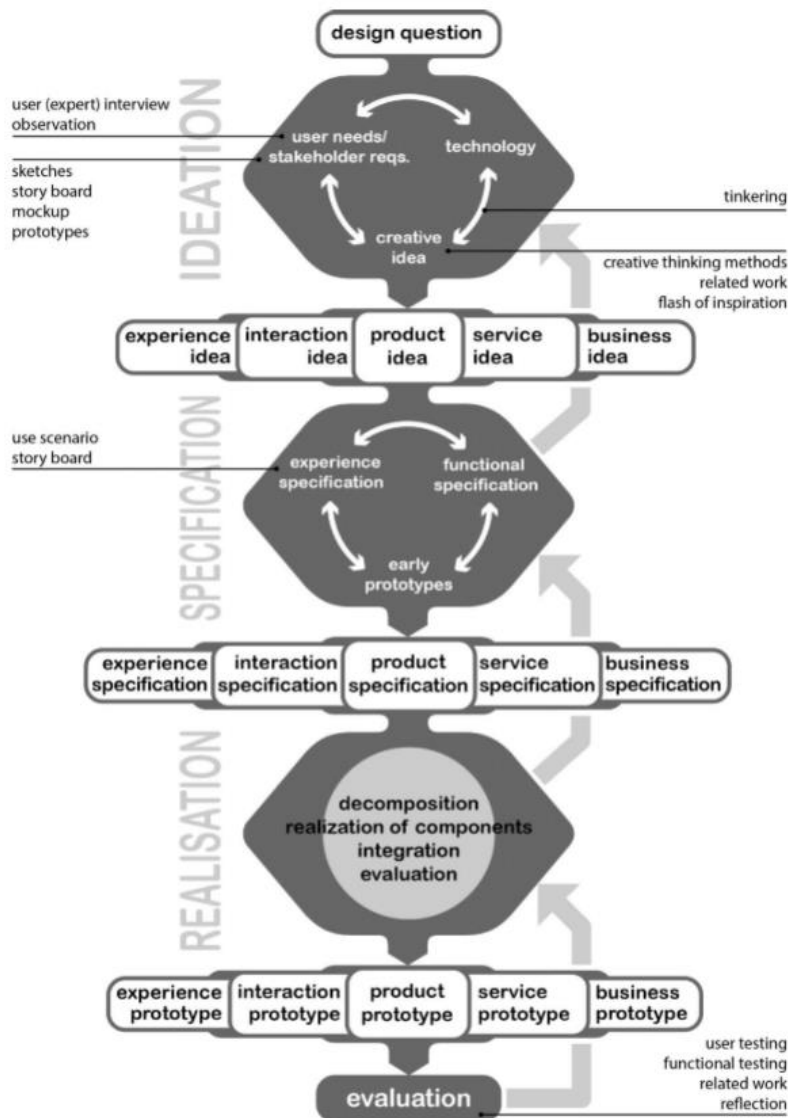


Figure 18: Creative Technology Design Process

The Creative technology design process starts with the ideation phase. In this phase, the designer identifies the stakeholders and analyses them and their requirements. This analysis is important because it ensures that the design aligns with the preferences of those who the support is meant for. The analysis will utilize the power/interest matrix, a tool that categorizes the stakeholders based on their level of power and interest in the project. By organizing stakeholders in this matrix, it can help to make decisions in the design process. The preliminary requirements use the MoSCoW [153] method to define priorities which could be categorized as *Must* have, *Should* have, *Could* have or *Won't* have. Based on these requirements concepts are created. These concepts will then be

discussed with experts. The result of this phase is to have one final concept that will be the format for the support. This concept will be further specified and elaborated upon in the next chapter.

The specification phase focuses on design decisions. To start, personas and their associated scenarios will be created to help understand the needs and experiences of the users. The preliminary requirements will be used as a starting point for the design. The voice-over script and corresponding storyboards have been created and revised after receiving feedback from international students, both students who participated in the interviews for the background research and new participants in this study.

In the realisation phase, the concept transitions from conceptual design into a proof of concept. This phase refines and elaborates on the specification phase, making it into a tangible prototype. The goal is to develop a preliminary version of the animation that demonstrates the main features, providing a clear vision of what the final product could look like. This includes recording the voice-over, editing the audio, creating the assets, animating and finally bringing it all together.

The final phase of the Creative Technology Design method is the evaluation phase. In this phase, the proof of concept is evaluated to determine if it meets the functional and non-functional requirements. The evaluation sessions involve participants watching the proof of concept, and questions are asked afterwards. The requirements are assessed from both qualitative and quantitative perspectives.

Chapter 4: Ideation

The Creative Technology Design method [152] starts with the ideation phase. In this phase, the stakeholders of this project will be identified and analysed. Afterwards, the requirements will be formulated. Once the requirements have been established, concepts for support for international students will be brainstormed. Expert interviews will be conducted and discussed, including their opinions on the concepts. To conclude this chapter, the final concept will be chosen and further elaborated upon.

4.1 Stakeholder Needs and Requirements

4.1.1 Stakeholder Identification

The stakeholders are the people who are interested in the support. In this research, the stakeholders are international students who are going to the Netherlands for their studies, universities (both those in the students' countries of origin and Dutch universities), the supervisors and the designer.

The international students are the ones who are coming into a new environment. They could benefit from having pre-knowledge of what they will encounter once they move to the Netherlands. This pre-knowledge can help reduce culture shock, ease their transition, and improve their overall experience.

Next to the students, the universities could be stakeholders since they play a part in guiding international students. The term "universities" includes various roles such as study advisers, exchange coordinators, and international officers. It is part of their job to help the students prepare, and therefore it would be helpful to be equipped with resources they could provide to the students.

The supervisors of this project, Kasia Zalewska and Richard Bults, could also be considered stakeholders. Beside the fact that they are staff members who work with international students, they help guide the designer in the process of this project by sharing their opinions and providing feedback.

Lastly, the design of the support will be based on the designer's interpretation of the requirements and needs of the other stakeholders, as well as the findings from the literature review and state of the art research.

4.1.2 Stakeholder Analysis

It is important to get an idea of what the stakeholders influence is concerning this project.

To illustrate how the stakeholders stand in relation to each other in terms of power and interest in this project, a graph was made (Figure 19).

1. International students
2. The universities
3. The designer
4. Supervisors

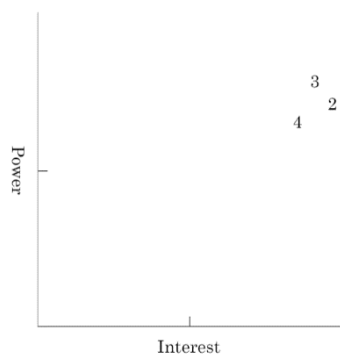


Figure 19: Power-interest matrix

The international students who are coming to the Netherlands are stakeholders with high interest. As the intended target group, their needs and preferences greatly influence the final design. Therefore, their power is significant because they provide the input that directly impacts the design. Thus, they can be considered as the main stakeholders.

The universities have a medium to high interest, with medium power. While they play an important role in helping the students prepare and acclimate, they mainly serve as the middleman for the international students. This makes them important, but secondary to the international students.

The designer has both a lot of power and interest. Since the designer is the one who is doing this research and they will make the final decisions.

Finally, the supervisors also have a medium to high interest, given that their jobs also involve working with international students. In addition, as the supervisors of this study, they guide the research process, giving them relatively high in interest and moderate power.

4.1.3 Preliminary Requirements

Before designing concepts for the new support, it is useful to define the needs and requirements. The list of requirements serves as a guideline for designing the new support. These requirements are based on the background research, including the interviews with the target group, the state-of-the-art analysis, and the literature review. Using the MoSCoW method, the preliminary requirements were formulated and are shown in Table 6.

MoSCoW	No.	Requirement	Stakeholders
Must have	1	Must provide information about Dutch aspects (accommodation, educational system, health care and administrative processes, public transport, cultural and social interactions)	International students
	2	Must be in a format that is accessible from within the Netherlands and abroad.	Designer
	3	Must provide the information in a clear way.	Designer (State-of-the-art/Literature Review)
	4	Must provide different kinds of information in one place.	International students
Should have	5	Should provide information in a way that international students stay engaged.	International students/Designer (state-of-the-art)
Won't have	6	Won't have too much text.	International students

Table 6: Preliminary requirements

4.2 Preliminary Concepts

As mentioned in 2.1.1 First Round of Interviews, the students were asked in what format they preferred to receive their information. Inspired by their answers and combined with the requirements (4.1.3 Preliminary Requirements), seven concepts were created.

4.2.1 General Animation Video

The idea of this concept is to make a short video (approximately 2-5 minutes) with highlights of things that could be helpful to know before coming to the Netherlands. Something along the lines of: "What to expect when you're going to study in the Netherlands." or "Things you should know before you come to the Netherlands" or "How to prepare before going to the Netherlands". Different aspects will briefly be discussed. This should give a broad overview of things you could expect in the Netherlands.

For example, there could be a voice-over explaining these aspects in maybe some form of a story: "You come to the Netherlands, but what now? Let's start by making sure you get from the airport to the right address using public transport. But how does that work you wonder?..."

Or the aspects could be summed up in a clear and organised matter (Figure 20): The first thing that is important to know before coming to the Netherlands is what the educational system would be like... Second, the importance of bicycles in the Netherlands?..."

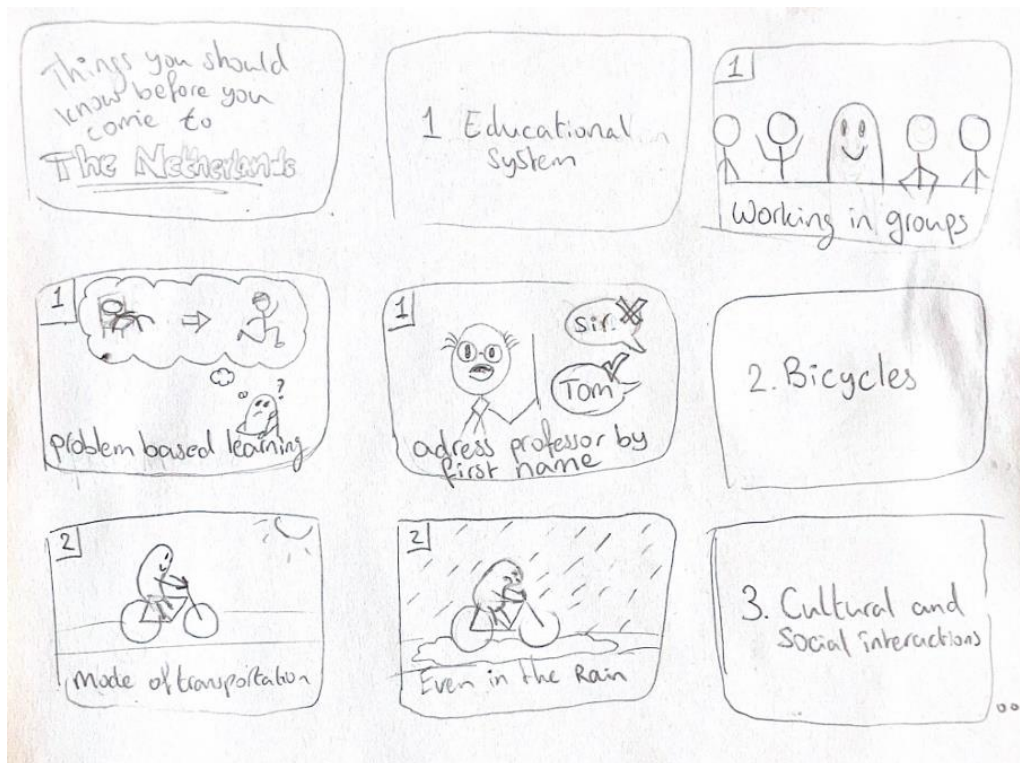


Figure 20: Concept of general animation video

4.2.2 (Animation) Video/Tutorial per Aspect

This idea is a more specified version of the first concept. Instead of one video that gives a general overview of different aspects, this concept consists of multiple videos each focusing on one specific aspect. So it is possible to go into a bit more depth and therefore give more detailed information about each aspect. It will be a somewhat shorter video ranging from approximately 1-3 minutes.

To give a few examples, one video could provide a step-by-step guide on how to travel with public transportation in the Netherlands, while another video could focus on tackling administrative processes such as health insurance or work permits. A different video could then inform about associations (Figure 21) or a tutorial on how to interact with Dutch people (Figure 22).

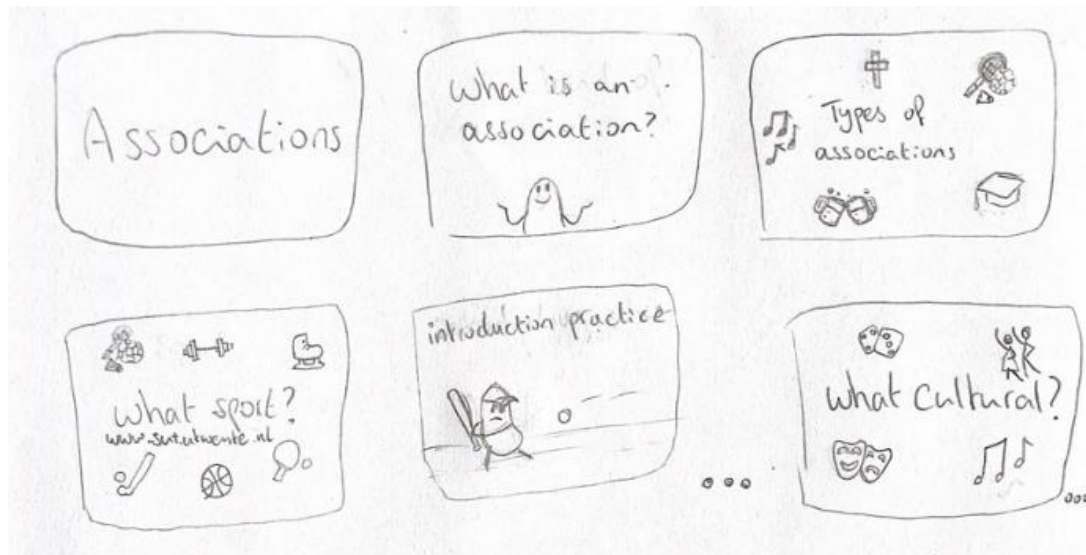


Figure 21: Concept of specific animation video about associations



Figure 22: Concept of tutorial on how to interact with Dutch people

4.2.3 Short Documentary

This concept is more about giving international students a glimpse into the life of a Dutch student. It is a documentary of “the day”/“the week”/“the life” of a Dutch student. This could help prepare the international students for what they could expect when they start living in the Netherlands. The documentary could include a Dutch student's morning routine, addressing concerns such as food (Figure 23), accommodation, and transportation such as bikes and public transport (Figure 24). It could also include sitting in a lecture, illustrating the educational system and cultural interactions. The documentary would be longer in comparison to the previous two concepts. It will be more in the range of 5-15 minutes.



Figure 23: Dutch breakfast



Figure 24: Public transportation

4.2.4 Podcast Series

The fourth concept is a podcast series, with each episode about a different topic (Figure 25). Topics could range from Dutch cultural and social interactions to tips on finding accommodation. It could feature international students who have already moved to the Netherlands, they could share their firsthand experiences and offer insights into what they wish they had known before moving. Furthermore, it could also feature faculty members, local experts, or even Dutch students. With this wide perspective, it could hopefully provide a broad picture of what international students could expect when they move to the Netherlands.

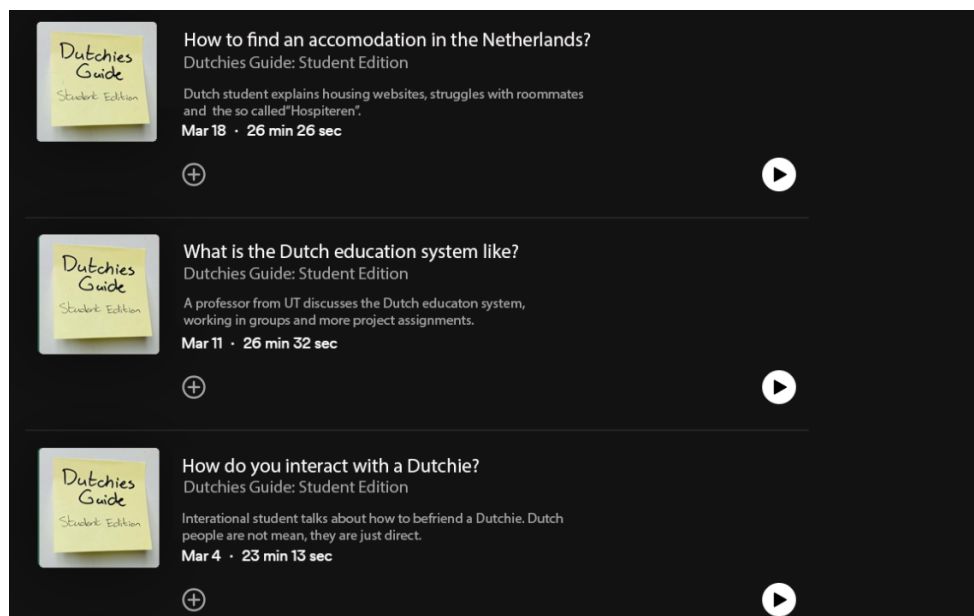


Figure 25: Concept of podcast

4.2.5 Checklists

This concept is a checklist of things you could prepare before coming to the Netherlands. This could help organize all the things international students should do when coming to the Netherlands. Also, it helps them keep track of what they already have done and what they still need to do. There could be different kinds of checklists. For example, a checklist that focuses on necessities to be even able to live in the Netherlands. Think of visa, health insurance, valid passport, bank account, etc. (Figure 26). Another (part of the) list could focus on what items you should pack when coming to the Netherlands (e.g. warm socks and a raincoat).

There could be an additional list with information on where to buy certain products (Figure 27). For example, you can buy non-prescription drugs like cold medicine at Kruitvat [154] or Etos [155]. And if you're looking for cutlery or pans you could go to IKEA [156] or Blokker [157]. Bol.com [158] is a website where you can buy all sorts of stuff. It is kind of the Dutch version of Amazon [159]. Another website that could be useful to mention is Marktplaats [160] where you can buy second hand stuff.

Checklist: Necessities

- Visa
 - <https://www.netherlandsworldwide.nl/visa-the-netherlands>
- Residence Permit
 - <https://www.government.nl/topics/immigration-to-the-netherlands/question-and-answer/how-do-i-apply-for-a-residence-permit-for-the-netherlands>
- Health insurance
 - <https://www.government.nl/topics/health-insurance/standard-health-insurance>
 - Healthcare benefit <https://www.government.nl/topics/health-insurance/applying-for-healthcare-benefit>
- Valid passport
- Dutch bank account

Figure 26: Concept of necessities checklist

Checklist: Where do I buy what?

- Kitchenware
 - Ikea
 - Blokker
- Drugstores (for non-prescription drugs, personal care items, cosmetics etc.)
 - Kruitvat
 - Etos
- Supermarkets
 - Albert Heijn
 - Jumbo
 - Cheap: Lidl
- A diverse range of products
 - Cheap: action, Wibra, Zeeman
 - Web shop: bol.com, amazon, Marktplaats (secondhand)

Figure 27: Concept of "where to buy what" checklist

4.2.6 Flowchart

This idea is inspired by the educational flowchart by Proto. A flowchart could provide students with guidance on where to find specific information about various aspects, because it could be a bit of a maze to find the answer to their problems. The flowchart could direct students to specific government websites or email addresses of study advisers or it could guide them on where to go in case of emergency. Additionally, it could be used for simple matters, such as determining which mode of transportation you need (Figure 28).

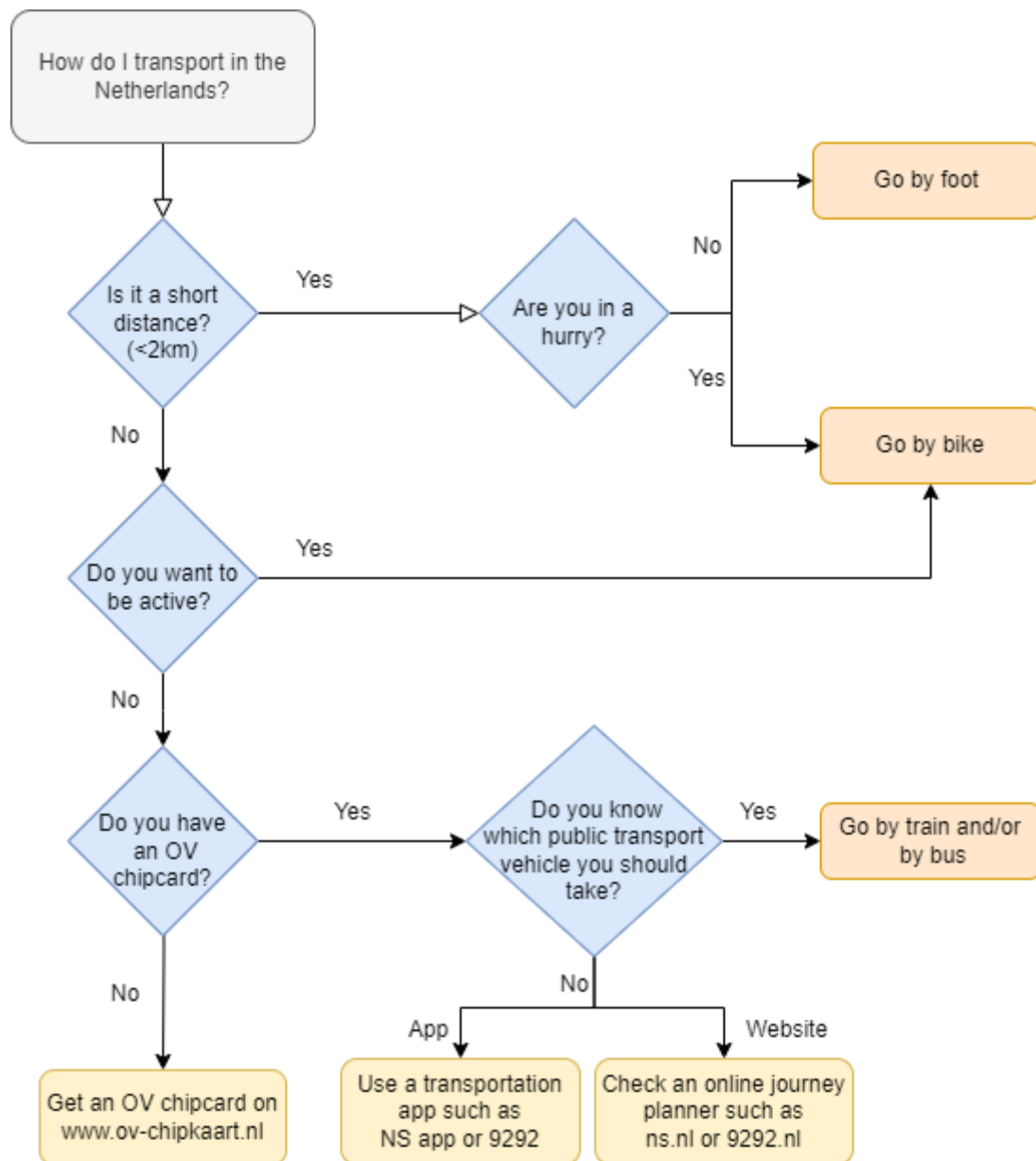


Figure 28: Concept of a flowchart about Dutch transportation

4.2.7 Website

A website could integrate multiple concepts which are discussed above (Figure 29). For example, there is a video with complementary text beneath it so students can easily look up things they saw in the video. The text could also supply additional information regarding the aspects that were discussed in the video. Besides, a website could have not only videos (with text underneath) but also flowcharts and checklists that give the user a variety of options to choose from when seeking helpful resources. And it hopefully serves as a clear overview of information about the Netherlands.

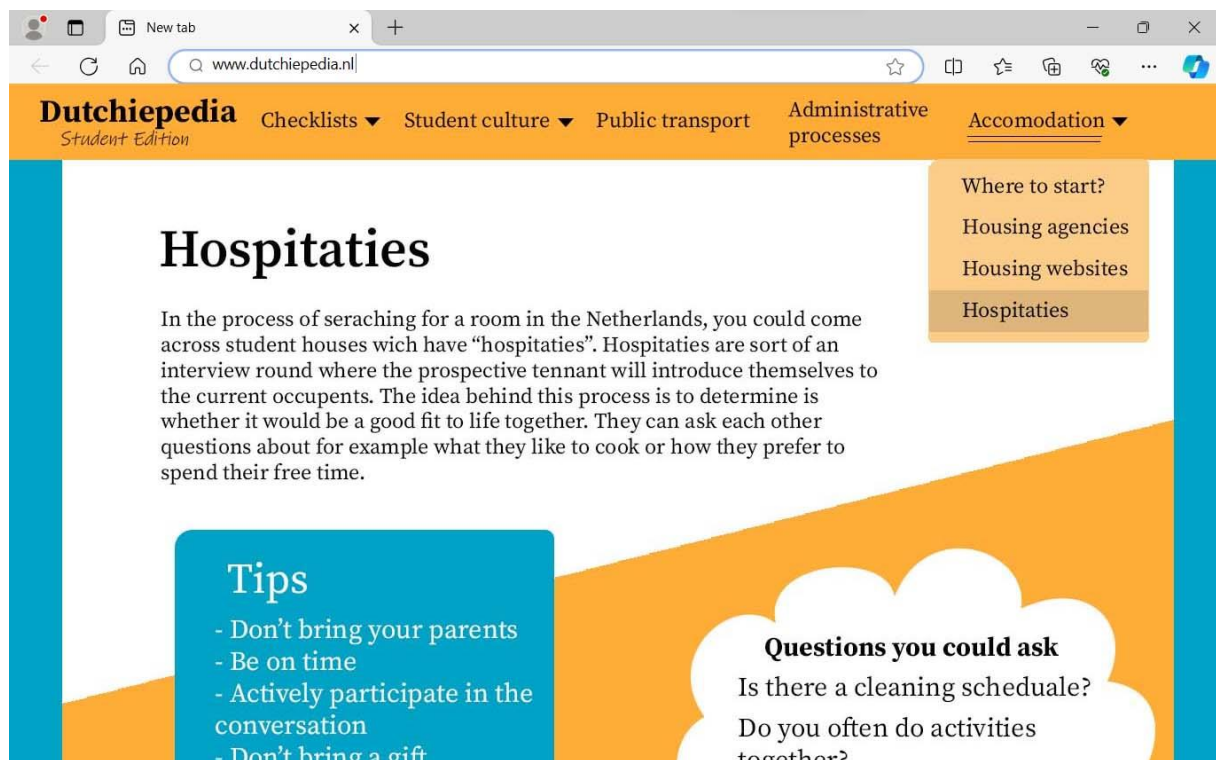


Figure 29: Concept of a website

4.3 Expert Opinion; International Officer and Exchange Coordinator

As the University of Twente (UT) already provides a variety of support for international students, it was beneficial to discuss the current support and potential improvements with the staff. Therefore, interviews were conducted with the international officer and the exchange coordinator. They are both invested in the process of international students coming to the Netherlands. Hence, they have a good perspective of the wants and needs of the international students. The interviews were held separately, but they both followed the same format. The goal of these interviews was to get their perspective on what the best way would be to present information about the Netherlands (specifically Enschede) to international students.

During the interviews, they were also presented with the concepts of formats for creating new support for international students. This allowed them to give their opinions and explain why certain forms of support might be more effective than others, as well as point out aspects to consider when designing the new support. Their feedback will be discussed in 4.3.2 Feedback on Concepts.

4.3.1 Experiences

The international officer explains that her function is within the Mobility Office. That applies to all incoming and outgoing students, but especially her role focuses on the international master students

who are coming to the UT. She is the students' first point of contact. The exchange coordinator describes that in her function, she guides the international students in their process from when they have made the choice of coming to the Netherlands for their minors or masters until the moment they leave and need to round up all records for the subjects.

They both were asked what kind of problems international students approach them with. They both gave a response that it is a variety of problems. The international officer spoke about students who come to her with study-related problems for example, the students didn't like the subjects they chose as much as they thought they would. But students also approach her to discuss personal problems such as homesickness or trouble with their accommodation. Similarly, the exchange coordinator gave examples that students came with questions about how the academic platform Osiris works, and she also pointed out the difficulties students experience while finding accommodation.

The UT already has different types of boards for different types of problems. There is for instance a housing board to help with the accommodation problems or a financial board to help the students when they have difficulties they come across while doing their finances. There are multiple ways the UT tries to tackle these problems. The exchange coordinator mentioned that the university website is an important place to make it as clear as possible for the students. And she thinks the foreign partners, the universities from the other countries, should inform the students better on certain matters before coming here. The international officer spoke about the great number of activities that already had been organized, but the turnout was minimal. She thinks it could possibly be because the threshold is too high, or the students are not motivated enough to attend. She finds it strange because she notices that students still have a desire for it.

4.3.2 Feedback on Concepts

Seven concepts were created inspired by the first round of interviews. However, the flowchart and the checklists were removed when shown to the staff members, as there is already similar support on the university website.

4.3.2.1 General Animation Video

The exchange coordinator was very enthusiastic about the use of animations. She believes they suit the current generation well, and it is a great way to keep it light but at the same time addressing more serious themes. She also argues that a picture could convey a lot of information in a short amount of time. She thinks this is what the students would want: something short, but still, something with a lot of information. The international officer liked the idea of a general animation video. She said she could already imagine sending the animation video to the students. From her experience, she cautioned that the video should be an appropriate length to maintain student's interest. Therefore, she also emphasized the importance of making the support playful.

4.3.2.2 (Animation) Video/Tutorial per Aspect

Although she said the version with the pictures gives a more realistic perspective, the exchange coordinator still prefers the animation version. She explains that it could be beneficial not to include all the information in one video, as some details might be missed. So according to her, per aspect, a video is a way you can try to include as much information as possible in a short piece. The international officer didn't choose this as one of her favourites. She generally commented that the concepts she didn't favour were because she felt similar things had been done before.

4.3.2.3 Short Documentary

The exchange coordinator argues that a short documentary could paint a good picture of what life in the Netherlands actually looks like. She explains that it is different than showing it through animation because animation is just a drawing, as opposed to actual footage from the Netherlands. Therefore,

video footage better illustrates what the students could expect from the Netherlands. The international officer also didn't count this one as one of her favourite concepts.

4.3.2.4 Podcast Series

The international officer thought a podcast is not a bad idea, but she worried it might be long-winded and it is not a "all-in-one" solution, which could make the students lose interest. The exchange coordinator said she would personally not have the patience to listen to a podcast. Nevertheless, she knows many people who do like to listen to podcasts.

4.3.2.5 Website

There is already information for international students on the university website, but according to the international officer, it requires a lot of clicking around. She mentioned that she herself sometimes struggles to understand the university website and find things as well. The exchange coordinator expressed her concern regarding this concept, that another website could be overshadowed because there are already so many different websites. She is not saying it is not necessary, but at the same time, the current websites are not always found by the international students.

4.3.3 General Design Considerations

When asked what factors should be taken into account when designing the support, the international officer answered the amount of information provided should be well-considered to avoid overwhelming the students. She is concerned that if too much information is given, the students will not absorb it. Therefore, she recommended prioritizing the subjects that need to be discussed. The same question was asked to the exchange coordinator. She mostly emphasized the importance of giving enough attention to each aspect. Not just providing superficial information, but also giving the students the important details. Therefore, she also recommended focusing on a few aspects instead of all of them, so there could be enough space to delve a bit deeper into them.

4.4 Elaboration of the Aspects

It is important to elaborate on the aspects that should be discussed in the video. After revisiting the answers from the interviews, the following information turned out to be important for the following aspects.

4.4.1 Accommodation

It is important to inform the students that finding accommodation can be challenging for internationals. First of all, it can be difficult for them to know where to look for housing. It is useful for the students to know that often universities provide some sources where the student can look for accommodation. Depending on the city, Facebook and other social media platforms can also be used as a platform to find housing.

Then, it would be useful for them to know what types of accommodation there are. Do they want to live in a studio or apartment by themselves or do they prefer a private room in a shared house? If they want to live in a shared house, are they aware that they will probably have to go through a procedure called "hospiteren"? Hospitaties are a sort of interview round where the prospective tenant introduces themselves to the current occupants. The idea behind this process is to determine whether it would be a good fit to life together. They can ask each other questions, for example, what they like to cook or how they prefer to spend their free time.

It could also be helpful to include some tips for when the international students initiate contact. For example, what the student should put in their message.

4.4.2 Educational System

The Dutch educational system is known for its practical orientation and informal culture. The grading system is typically stricter than in many other countries, and it's important for students to understand how their work will be assessed. The use of first names to address professors can feel impolite but is a norm in Dutch academia, allowing a more approachable and less formal environment. It could be important to mention that, in emails, it is customary to use the last name.

4.4.3 Healthcare and Administrative Processes [161]

International students have to go through various administrative processes, such as registering with the municipality, acquiring health insurance and optionally setting up a Dutch bank account for convenience.

Everyone who lives or works in the Netherlands is required by law to take out Dutch health insurance. A standard health insurance package is compulsory, covering consultation with a GP, hospital treatment, and prescription, while an additional package such as for dental check-ups is optional. Setting up a Dutch bank account is not required but could be very practical for handling rent, tuition fees, and other expenses. It is useful for the students to know that in the Netherlands payments are generally done by debit card. Cash is also used but is getting less popular. And therefore, not always an option.

4.4.4 Public Transportation [162]

In the Netherlands, the "OVchipkaart" system is used for travelling with public transport. To travel by public transport in the Netherlands, most people use the "OV-chipkaart". The "OV-chipkaart" is a contactless smart card, which serves as a convenient multifunctional payment method for trains, busses, trams and metro services across the country. Travellers can load credit onto the card or add travel products, such as season tickets, and then simply check in and out at card readers when entering and leaving the transport system. Also, be aware that you should check in and out when you switch from train operator or transportation vehicle. TIP: check for subscriptions, because public transportation in the Netherlands can be quite expensive. While there are no special discounts for international students, some travel scholarships might be available. Knowing this in advance can help in financial planning and managing expectations.

Furthermore, it could help the students to inform them about recourses like the NS app and website or 9292 to help them plan their travels. Additionally, it could be helpful to inform the students about the etiquette, such as not talking too loudly and allowing people to exit before entering or saying thank you to the Bus driver.

4.4.5 Cultural and Social Interactions

Dutch people are known for their direct communication style, which can be surprising for newcomers. This directness is not meant to be rude; it's a cultural norm that values honesty and clarity. For example, they provide honest feedback; so if they don't like something, they would communicate that. Another example of this directness is making direct requests. If they want something from you, they will ask or it straightforwardly, without much unnecessary fluff.

While Dutch people are friendly, forming deeper friendships often takes time. The Dutch tend to keep social circles smaller and more stable. Social events, especially those involving alcohol, can be quite different. The Dutch tend to drink a large amount of alcohol, but it is also socially acceptable not to drink alcohol. It could also be nice to know that is common to pay for your own share when you are going out (aka going Dutch). "Tikkie" is often used in these situations; it is a popular mobile app for quickly and easily requesting payments from friends.

Attending your study's introduction days is highly recommended since it offers a great opportunity to make friends which can help them to integrate more easily into their new Dutch social life. Although

it can certainly help to get into the Dutch social bubble by understanding and speaking a bit of Dutch, Dutch people generally speak English quite well.

4.5 Animation format

After investigating different formats for providing support, the conclusion is that an animation video is the most preferred format. During the interviews, students mentioned they would like an easy-to-watch video format. Additionally, the state of the art showed that animation videos are a popular way to convey information. Furthermore, the literature review also indicated that animation is an effective tool for conveying information. Moreover, during the expert interviews, it turned out that the animation format was also the favourite. Therefore, the support will be in the form of an animation video.

4.5.1 General vs. Specific

In the first ideation phase, there were two kinds of animation concepts: a general animation and an animation specific to one aspect. During the expert interviews, they warned that the information should not be too detailed, but at the same time, should not be too superficial. They were concerned that the students might lose interest if the animation takes too long, but they also emphasized the importance making sure that the students are well informed. Additionally, the students mentioned during their interviews that they would benefit from having support which has different kinds of information in one place. Based on the feedback from the experts and the desires from the international students, the concept of the general animation was more suitable, as opposed to the animation about a certain aspect. Therefore, the ideation will focus on the first concept: a general animation video about the Dutch culture.

4.5.2 Structure

In *4.2 Preliminary Concepts* two structures of a general animation video were briefly mentioned. Those structures will be elaborated on, but in addition to those two the concept of an interactive animation video will also be discussed. Thus, the following three structures will be discussed: storyline-based, summarised and interactive animation.

The benefit of using a storyline-based animation is that it could be more engaging since it could make the video more enjoyable. It could also help the viewers to identify more with the character, which can make it feel more relatable. Moreover, it could help the students to see the Dutch aspects in their context. It could illustrate more clearly how they could encounter them in real situations.

In the case of the summarized structure, it provides information clearly and in a more ordered manner, making it easy to follow without many distractions. This structure also allows the video to be more concise, which makes more room to delve a bit deeper into certain topics within a short amount of time.

Finally, both structures could be adapted into an interactive video. In a storyline-based animation, for example, the viewer could choose what the main character should do in a certain situation. In a summarized animation, viewers would be presented with different topics, and then they can select which topic they want to learn more about.

All three structures are possible to create with the requirements. However, during the interviews with the international students, they gave the impression that they would prefer to receive their information in a passive form. Thus, the interactive version will not be chosen. Furthermore, the experts emphasised the importance of not overwhelming the students while still providing enough information. Therefore, a summarized structure is a very practical way to efficiently convey a lot of information, while keeping it concise to maintain the viewers' engagement.

4.5.3 Revised Requirements Specified for Animation

Since the concepts are refined into an animation video, the requirements could now be defined more specifically. Table 7 presents the expanded version of the previous requirements table.

MoSCoW	No.	Requirement	Stakeholders
Must have	1	Must provide sufficient information about Dutch aspects (accommodation, educational system, health care and administrative processes, public transport, cultural and social interactions)	Experts/International students
	2	Must be in a format that is accessible from within the Netherlands and abroad.	Designer
	3	Must provide the information in a clear way.	Experts/ Designer (State-of-the-art/Literature Review)
	4	Must provide different kinds of information in one place.	International students
Should have	5	Should include non-vocal background music.	Experts/ Designer (State-of-the-art/Literature Review)
	6	Should include narration.	Designer (State-of-the-art/Literature Review)
	7	Should provide information in a way that international students stay engaged.	Experts/ Designer (State-of-the-art/Literature Review)
	8	Should be an appropriate length for the topics it covers.	Experts
	9	Should provide information in a concise way.	Experts/Designer(State-of-the-art/Literature Review)
	10	Should use cues to guide the viewers' attention.	Designer (Literature review)
Could have	11	Could include sound effects.	Designer (State-of-the-art/Literature Review)
Won't have	12	Won't have too much text.	International students

Table 7: Revised Requirements

4.6 Final Concept

After considering all the elicited requirements (Table 7), the final concept will be an animation video that discusses multiple aspects of Dutch culture (Figure 30: General animation video pre-liminary concept). It will focus on five key topics identified as most important through interviews with international students: accommodation, educational system, health care and administrative processes, public transportation, cultural and social interactions (Table 8). The structure of the video will be to summarise the aspects to convey the information concisely, while still having room to delve a bit more into certain aspects if necessary. One of the requirements is that the video must be accessible from both within the Netherlands and abroad. By posting the video on YouTube, it will be available worldwide. YouTube also offers a feature where you can add timestamps in the description, allowing viewers to click and skip to relevant chapters. Additionally, the description will include links to websites with more detailed information on specific topics.

No.	Aspects to be discussed
1.	Accommodation
2.	Educational system
3.	Healthcare and administrative processes
4.	Public transportation
5.	Cultural and social interactions

Table 8: Aspects to be discussed

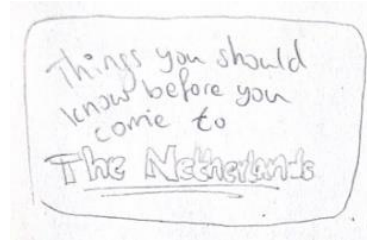


Figure 30: General animation video pre-liminary concept

Chapter 5: Specification

In the specification phase, the final concept from the ideation phase will be specified. The previously elicited requirements enable the designer to refine the user needs into functional and non-functional requirements. Moreover, these specifications lay the groundwork for the realisation phase, which helps to construct the final concept. Firstly, personas will be created to illustrate what kind of users could benefit from the support and how they would interact with the video. Next, the five most important aspects will be expanded with the relevant information. The section 5.3 Design specifications discusses the design specifications, with an emphasis on sound design and visual design. Finally, the last subchapter will cover the script and the storyboards.

5.1 Personas

To illustrate what different user types might use the support, three personas of international students have been created: one from Europe within the EU, one from Europe outside the EU and one from outside Europe. These personas help in understanding the needs and experiences of the users. Since each persona comes from a different background, these differences could provide insight into the possible varied needs of international students. The personas are made in Xtensio [163].

5.1.1 Persona 1: International student from Europe within the EU (Figure 31)

The persona of Sophie Martin is a student from France who is planning on moving to the Netherlands for her bachelor's. Sophie Martin represents a concerned, optimistic, international student who is nervous about moving to a different country. Sophie just wants to ensure she is prepared for what awaits her in the Netherlands to ease her mind.

Sophie Martin

Perfectionist | Adventurous | Organized | Open-minded

Goals

- Build lasting relationships.
- Learn to play an instrument.
- Go on a solo trip through Europe.
- Study abroad

Frustrations

- People who are late.
- Feeling like she is not prepared.
- Feeling stressed about fitting in.

Bio

Sophie is currently living in Lyon, where she is finishing her final year of high school. She has always had an interest in technology, and after researching various universities, she decided to study for her Bachelor's degree in Creative Technology at the University of Twente in Enschede. She is very excited about moving to the Netherlands; however, she is nervous about the cultural differences. But she is open to meeting new people and gaining new experiences.

Age: 18
Location: Lyon, France
Family: Mother, father, two younger brothers
Future study: Creative Technology

Introvert | Extrovert
Thinking | Feeling
Sensing | Intuition
Judging | Perceiving

Figure 31: Persona 1: International student from Europe with in the EU

5.1.2 Persona 2: International students from Europe outside the EU (Figure 32)

The second persona is the opportunistic Nikola Milic, he is from Serbia and therefore represents a Non-EU international student from Europe. He has finished his bachelor's in Novi Pazar, but he wants to pursue his masters in the Netherlands. Nikola is based on a student who wants to build a new social life in the Netherlands, but he also wants to successfully complete his master's degree.



Figure 32: Persona 2: International students from Europe outside the EU

5.1.3 Persona 3: International student outside of Europe (Figure 33)

The third persona is Seung-hoon Lee, a slightly pessimistic individual from South Korea. He studies Electrical Engineering at Sejong University in Seoul but wants to come to the Netherlands to pursue a minor in Artificial Intelligence. Although he is enthusiastic about this opportunity, he is also a bit anxious. He is concerned about finding accommodation and worries about the challenges that may arise from the language barrier.

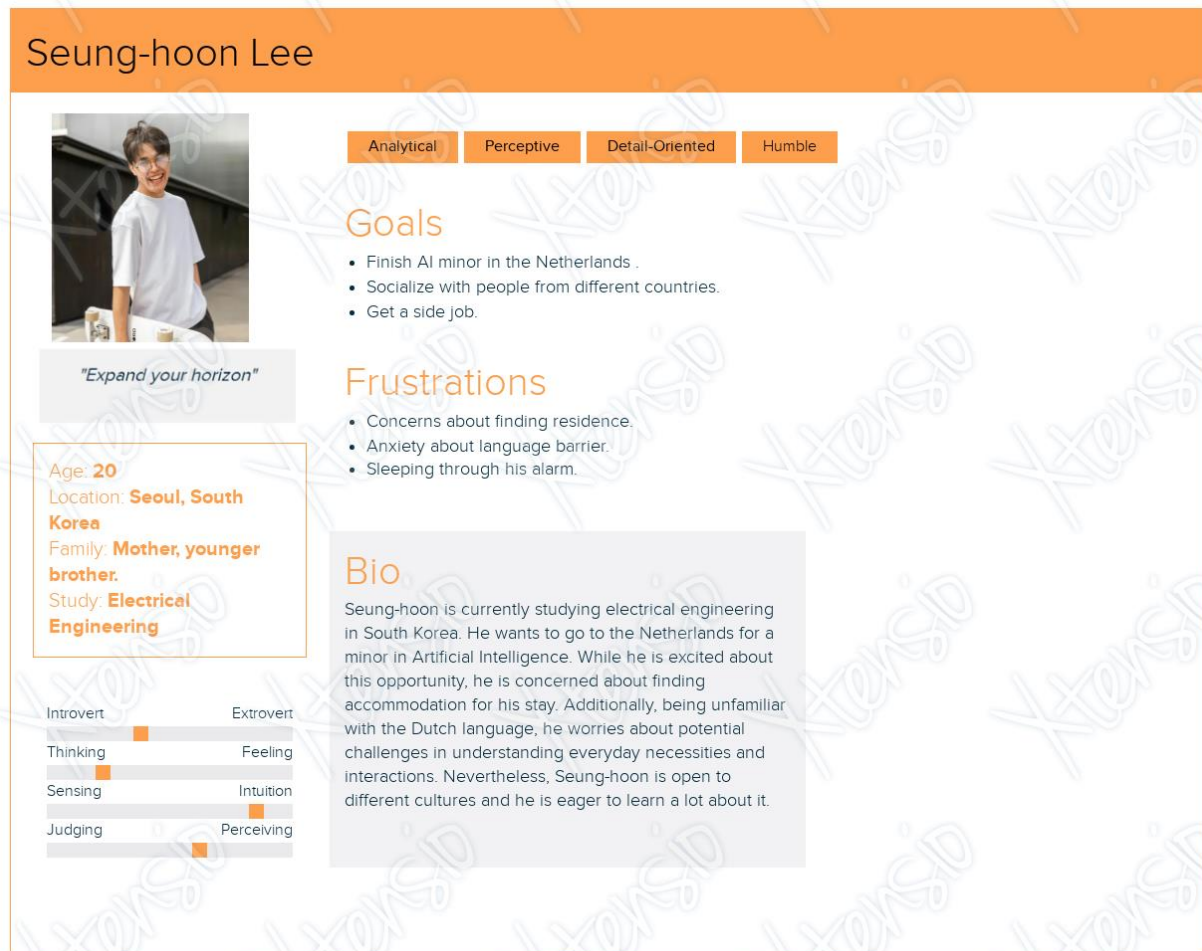


Figure 33: Persona 3: International student outside of Europe

5.2 Storylines

The personas have a storyline to see if the product would hypothetically work for the end users. The storylines help illustrate how the personas might experience the product, providing insights into user behavior and expectations.

5.2.1 Sophie Martin (European, EU student)

Sophie is at her home in Lyon, researching Dutch culture online to feel more prepared for her move to the Netherlands. She starts searching on YouTube for information about the Netherlands and finds the animation video that talks about different aspects of Dutch culture and decides to watch it. Since Sophie doesn't want to miss any piece of information, she decides to watch the whole video from beginning to end. She takes notes and pays close attention to everything that is explained. In the video, the Dutch transport system was discussed. Although, it gave a clear idea of what it will look like, she would still like to have more information about the OV-chipkaart. Sophie is for example curious about how to require such a card. She sees a link about the OV-chipkaart in the description of the video and clicks on it. The link refers her to the site of the OV-chipkaart where she can find more details about the OV-chipkaart, including how to request one. In the description of the video, she also finds a link that brings her to a site with information about the student travel product. There she finds if she is eligible for the student travel product and a step-by-step guide on how to require it. After watching the videos and clicking the links, she feels like she is more prepared. She experiences less stress now since she has a bit more understanding of what she can expect when she goes to the Netherlands.

5.2.2 Nikola Malic (European, Non-EU student)

Nikola is getting ready for his move to the Netherlands. He is not necessarily well-prepared; he plans to let things unfold once he arrives there. However, he was watching YouTube videos about soccer in the Netherlands. Subsequently, YouTube suggested to him an animation video about Dutch culture targeted at international students. Curious about the video, he decides to watch it. Nikola clicks on the video and it starts playing. He notices that you can also skip to certain parts of the video where specific aspects will be discussed, but he decides to just start at the beginning since he is curious to see what will be told. The video informs him that the Dutch educational system is more practically orientated than most countries and that it is common to have group projects. He didn't know that, but it was a pleasant surprise since he likes to work together with other people. Nikola is also surprised to learn that in the Netherlands they often address their professor by their first name. Furthermore, the video discusses that Dutch people tend to be very private, which could make it difficult to get into their social bubble. However, it is not impossible, it could just take a bit more time (and effort). Even though Nikola, was not actively searching for information about the Dutch culture, he is glad he has watched this video. He feels like he is prepared, and he is even more excited to start his master's.

5.2.3 Seung-hoon Lee (Non-European, Non-EU student)

Seung-hoon has scheduled an appointment with someone from the exchange office to discuss his future plans for taking a minor in the Netherlands. Since he has some concerns about what to expect in the Netherlands. During the meeting, Seung-hoon mentions his worries about finding an accommodation in the Netherlands. He does not know where to start looking and what he should be searching for. Additionally, Seung-hoon tells that he is anxious about the language barrier, since he does not speak a word Dutch. He is afraid it could lead to challenges in his day to day live. The exchange officer acknowledges Seung-hoon concerns. She tells him about a video that discusses various aspects about Dutch culture. He is intrigued and she sends him the link to the animation video to help him with his questions. As soon as Seung-hoon is home, he opens the video that the exchange officer sent him. However, he is not interested in watching the whole video, he is only

curious to know about accommodation and social interactions. He sees that the animation is separated into different aspects including, educational system, public transportation, healthcare and administrative processes and accommodation and social interactions. He clicks on the part that mentions accommodation in the Netherlands. There he learns that universities often provide resources where he can search for accommodation and that he can also use social media platforms to find housing. He also learns that there is this process called “hospiteren”. He discovers that it is a Dutch practice often used in student houses to determine if a potential resident is a good fit with the current residents. When he finished watching the part about accommodation, he clicks on the part about social and cultural interactions. In this part of the video, it is explained that speaking a bit of Dutch can be helpful, but it is not necessary, as the Netherlands is well-prepared for international people. The level of English spoken is generally relatively high. After watching the relevant parts of the video, he feels more confident about going to the Netherlands. He is less anxious and eager to start his new adventure.

5.3 Design specifications

5.3.1 Sounds

As explored in the literature review (2.3.4.1 Narration) and observed in the state-of-the-art (2.2.3.3 Voice-Over), narration can enhance the ability to comprehend information. This modality principle (2.3.4.1 Narration) helps reduce extraneous load and increase germane load, making learning more efficient. Therefore, there will be a voice-over presenting the information. To ensure clarity and fluency, a native English speaker is hired to record the voice-over, which hopefully also minimizes distractions and, consequently, extraneous load.

Additionally, the literature review (2.3.4.2 Background-music) concluded that, as observed in the state-of-the-art (

2.2.3.2 Background Music and Sound Effects), non-vocal background music could also have a positive influence on learning. The music chosen is a classical piece by Beethoven: *Country Dances for Orchestra 10-12* [164]. This instrumental not only sets a pleasant tone for the video, but its lively yet subtle nature creates a positive and energizing mood. It supports the overall experience without distracting from the visuals or the voice-over, helping to keep the focus on the content and avoid the “split-attention effect.” (2.3.2 Dual Coding and Split-attention).

Furthermore, it has been decided not to use sound effects. While they could potentially be beneficial in some cases, the intrinsic and germane load are considered to be already quite significant. Therefore, additional sound effects might increase the extraneous load that could lead to overwhelming the working memory.

Sound Requirements:

- Should include classical, non-vocal, uplifting background music.
- Should include narration by a native English speaker
- Won't include additional sound effects.

5.3.2 Visuals

The design style will be simplistic to avoid being overwhelming. This approach aligns with the observations from the state-of-the-art regarding popular informative animation videos (2.2.3.1 Simplicity). The assets will be basic yet understandable, which also helps reduce extraneous load. It is also important to ensure the design is visually appealing and coherent. The initial design of the video used a colour pallet consisting of various shades of blue to provide distinction without being overly contrasting or distracting (Figure 34).

According to colour psychology [165], [166], blue is associated with wisdom and reason. The colour blue is also considered a calming colour that reduces tension, making it well-suited for use in educational tools.

The background was a light shade of blue with a subtle wall-like texture to create some contrast. It was considered to use orange as the primary colour since it represents the Netherlands. However, orange is a bright, dominant colour that could potentially be overwhelming for the viewer. Nevertheless, complementary colours could be used to highlight certain elements if needed. Additionally, white and black will also be used as they are distinguishing yet neutral colours that won't be too distracting.



Figure 34: Initial colour pallet with RGB values

After consulting a visual communication expert, it was recommended to create more contrast with the colours in the foreground and background. Instead of using only shades of blue, the expert suggested altering the hue of one to make the character stand out more. Various colours, such as green, purple, and pink were tested, but the idea of using orange resurfaced. Since it still has a nice meaningful connection.

According to colour psychology [165], [166], orange symbolizes kindness and joy and is associated with optimism and self-confidence. In the context of students who may feel anxious about moving to a new country, this colour would be suitable for making the video feel welcoming. Although orange does remain a bold colour, a muted version was considered to provide the needed contrast without being overwhelming or too harsh. This approach successfully created the desired visual balance, making the characters and icons stand out while maintaining a harmonious overall design (Figure 35 and Figure 36).

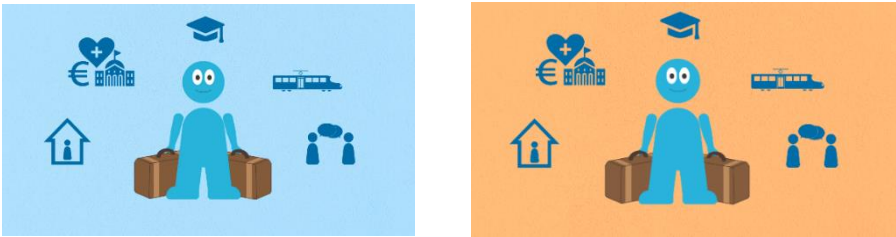


Figure 35: Colours before (left) and colours after (right) visual consult



Figure 36: Final colour pallet with RGB values

Roboto Slab
Helvetica

Figure 37: Fonts

The expert also recommended looking at sans-serif or slab-serif fonts for the animation. He suggested perhaps using different fonts for the speech bubbles and the title texts. This creates more of a contrast between different kinds of text and emphasizes what the speech bubble is supposed to represent. Therefore, the font of the text bubbles was selected as *Helvetica* and the titles were selected as *Roboto slab* (Figure 37).

The main character is designed as a loveable creature, preferably not resembling a human too closely, as the video is intended for a diverse audience, and should be equally relatable and unrelatable to everyone. The design includes a touch of wit to keep the viewer engaged, such as giving the character big eyes and no nose. Most importantly, the character (as well as the rest of the design) should be visually appealing. The main character has its own shade of blue to make it more unique and distinct, differentiating it from the other assets (Figure 3). Additionally, the eyes and the arms of the main character are used for cueing. That is also why the eyes are designed with white circles and pupils to clearly indicate where the character is looking, guiding the viewers' attention. The arms are also used to direct the viewers' attention by pointing at assets. Moreover, the separately animated arms can make the main character appear livelier, which should help to engage the audience more.

Furthermore, other forms of cueing that were discussed in the literature review (2.3.5 Visual Design) that could be used, is transformations in size, translations (movement) and transitions (appearance and/or disappearance).

Adobe has a webpage discussing various animation principles that can help give animations a more natural feel [167]. For example, using slow-in and slow-out techniques when moving assets can enhance realism, rather than moving them at a constant speed. As assets in real life do also not start or stop abruptly, they accelerate and decelerate. Using arcs in movement can also create a more realistic motion. Similarly, the principle of follow-through involves an asset moving slightly further and then pulling back. This principle also applies to increasing the size of an asset slightly beyond its intended size and then reducing it back. These techniques contribute to a livelier appearance, which can help keep the viewers more engaged.

Visual Requirements:

- Should have a simplistic style.
- Should use Roboto Slab font for the titles in 120px and Helvetica font for the text bubbles.
- Should have a contrast between the background and the foreground colour.
- Should use the following colours: background muted orange RGB (241, 181, 124), main character blue RGB (0,162,200), People blue RGB (1,138,170), icon/details blue RGB (11,109,160)
- Should have a main character that is visually appealing and equally relatable to everyone.
- Should distinguish the main character from the other characters.
- Should use cueing in the form of transformations in size, translations (movement) and transitions (appearance and/or disappearance).
- Could use the eyes and arms of the main character for cueing.

5.4 Script and Storyboards

This section contains the feedback from international students on the draft of the script with the corresponding storyboards, followed by the revised version of the script with the storyboards. Additionally, there will be extra links per aspect listed that will eventually go into the description box of the animation to help students who want to conduct further research on the aspects.

It is important to note that a segment from accommodation is heavily inspired by other work. It concerns the following three sentences: "Your name, age, study, hobbies etc. Give a motivation about why you want this room, in this house, specifically. It is a plus to add a photo of yourself,

because that will make it easier for them to remember you.” These sentences are derived from a project made by Sarah Jansen and Babet ten Hagen in 2021 for a Creative Technology subject on animated storytelling. Consequently, the accompanying visuals, such as the envelope and the self-photo, are strongly inspired by this earlier work.

5.4.1 Feedback from International Students

Before sending the script to the voice-over artist, the draft of the script with the corresponding storyboards was sent to six international students for their feedback (see Appendix D: Concept Draft Sent for Feedback). They were asked for their thoughts on the script, specifically whether it is a good balance between providing enough information without going into too much detail, and if they thought anything crucial was missing. Furthermore, they were asked for their opinions on the storyboard, including whether they were appealing and understandable.

Of the six international students, three had also participated in the interview rounds for the background research. Their nationalities are Montenegrin, Indonesian, and South African. Additionally, the feedback was gathered from three new participants of Danish, Spanish, and Romanian nationality.

Overall, the feedback was very positive. They noted that the information seems useful, and the visuals are very nice. One participant explicitly mentioned they really liked the explanation of the informal way of communication with the professor. Another participant said they really liked that the etiquettes for public transportation was explained such as not talking too loudly etc. However, there were also points that were adjusted based on their feedback, such as the inclusion of associations. Although the background interviews showed the associations were not a top priority, it was still useful to mention them. Therefore, they were briefly included under the aspect of social and cultural interactions. Additionally, the aspect of the educational system was expanded to include the suggestion that it could be beneficial for students to do research in advance on the course formats, such as whether grades will be based on assignments, exams, or attendance, and that the grading scale ranges from 1 to 10, with specific criteria for passing and failing grades. Furthermore, someone pointed out that it would be helpful to emphasize the importance of searching for accommodation well in advance.

The feedback on the visual aspects was very positive. Comments included remarks such as: “happy/understandable”, “very cool”, “very cute”, “nice and simple which is good, so it appeals to a wide audience”. They were also asked for their opinions on the design of the main character. Two drafts were presented, with a note explicitly stating that these are just two possible sketches and that changes are still possible (Figure 38).

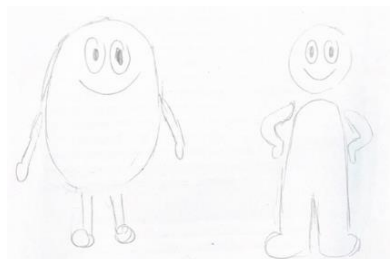

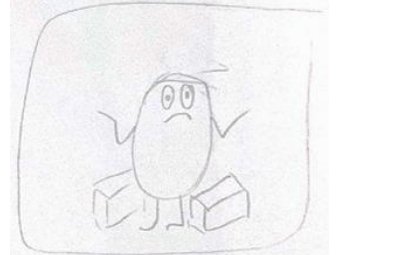
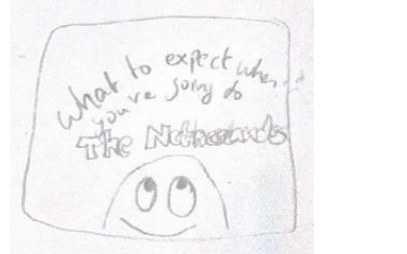
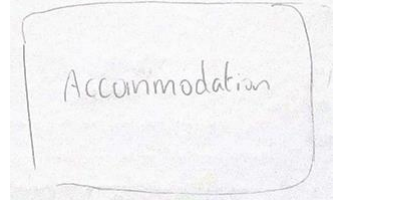
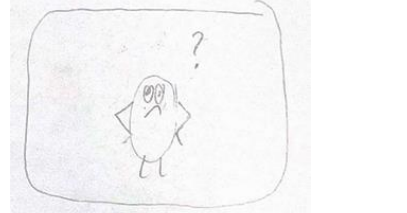



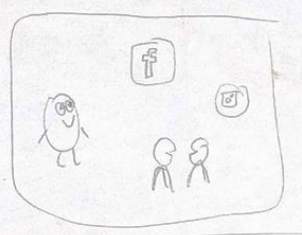


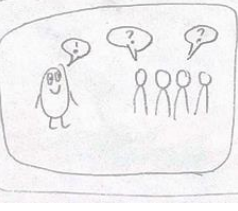
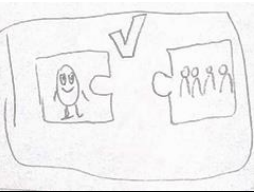
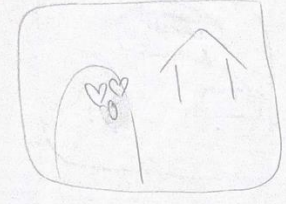
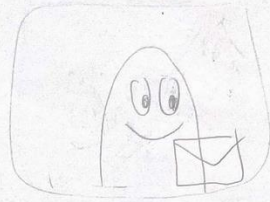
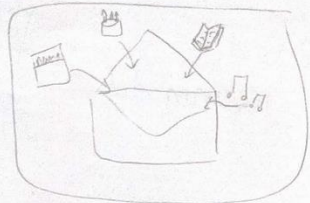
Figure 38: Sketches of designs for the main character

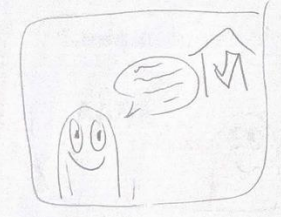
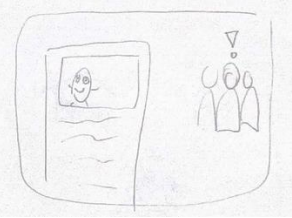


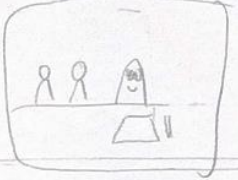

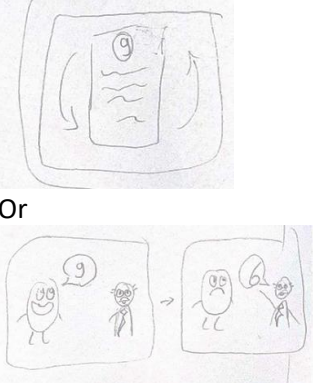
The opinions of the main character were divided. Some students liked the storyboards as they were, with the first character design. One participant worried that the first character appeared too childish and preferred a more human-like character, thus favouring the second design. The supervisors also expressed concern that the first character might seem too childish. Others liked both designs. Ultimately, the second design was chosen because it reduces the previous concerns. Additionally, it maintained a simple yet lovable appearance. Moreover, multiple students provided positive feedback on the second design.


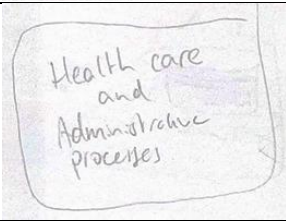
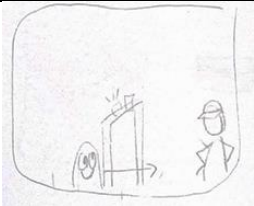

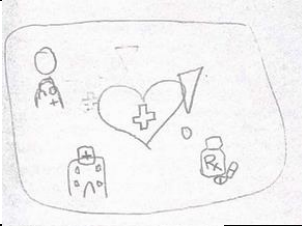
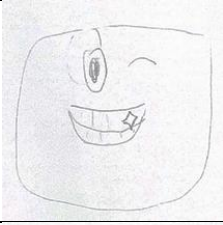
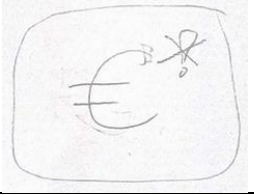
5.4.2 Script with Additional Storyboards


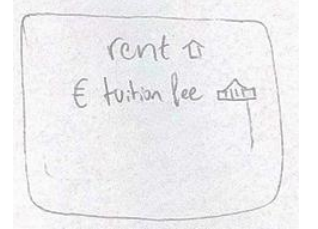
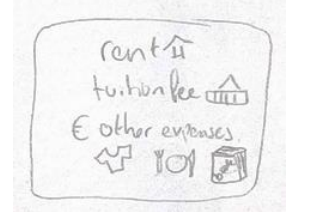

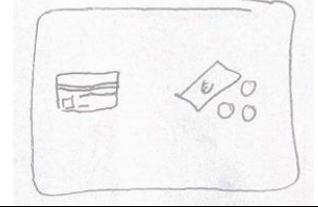
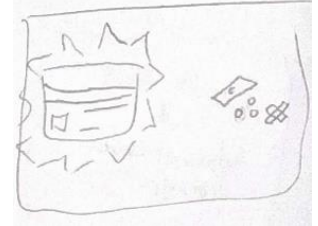
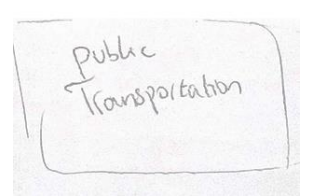
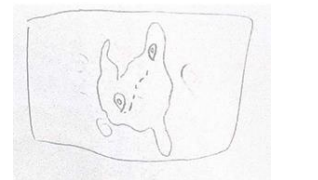
In the description of the video(s) will be links to sources with more information on certain topics. See the full script in Appendix E: Final Script.



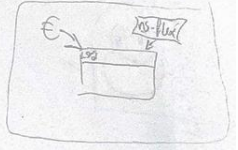
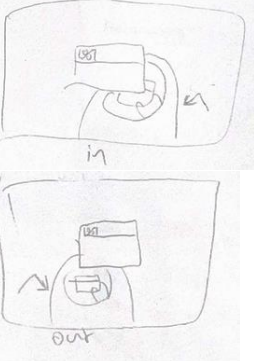
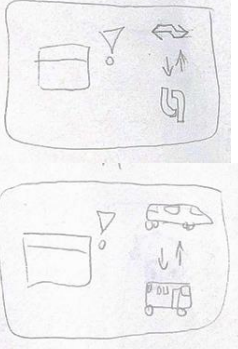
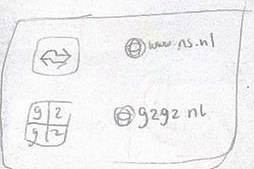

Scene	Script	Storyboard
1A	<i>So, you're planning on moving to the Netherlands for your studies?</i>	
1B	<i>Do you know what you will encounter there?</i>	
1C	<i>Here is some information about different aspects of the Dutch culture that can help you prepare for what to expect when you're going to the Netherlands.</i>	
2A	<i>Accommodation</i>	
2B	<i>Finding an accommodation can be challenging. Where should you look?</i>	
2C	<i>Often universities provide sources,</i>	

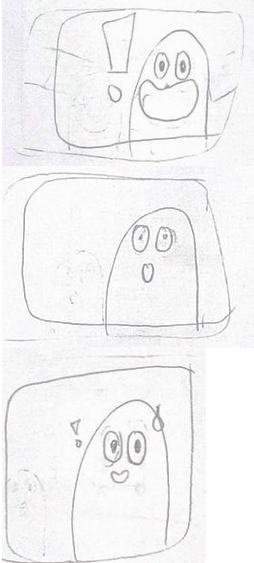
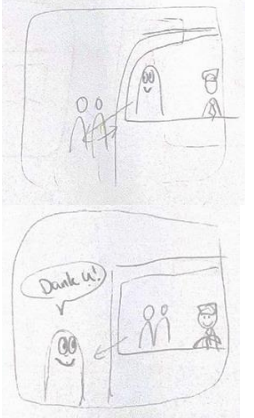
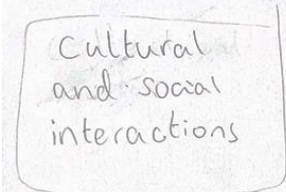

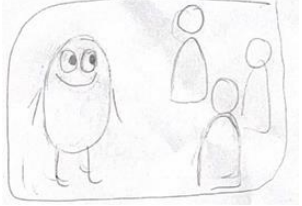
2D	<p>but social media platforms and social connections can also be used to find housing. Make sure that you start looking for accommodation well in advance since it could take some time.</p>	
2E	<p>And what type of accommodation do you want? Do you want a studio? Or do you prefer to live in a shared house?</p>	
2F	<p>If you want to live in a shared house, be aware that you will probably have to go through a procedure called "hospiteren".</p>	
2G	<p>Hospiteren is a process where you, as a potential roommate, meet with current residents to see if you are a good fit for the shared accommodation. The hospiteer process can differ between houses.</p>	 <p>Or</p> 
2H	<p>If you find a room you like,</p>	
2I	<p>send the house an email with a brief introduction about yourself,</p>	
2J	<p>such as your name, age, study, hobbies etc.</p>	

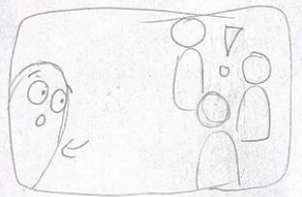
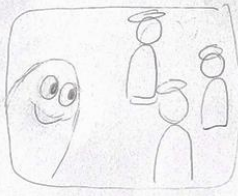


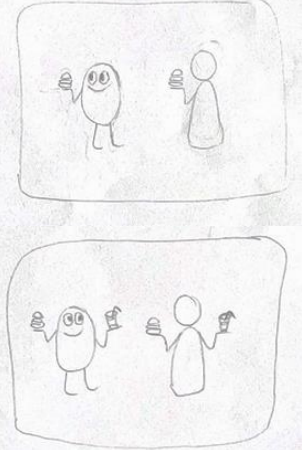
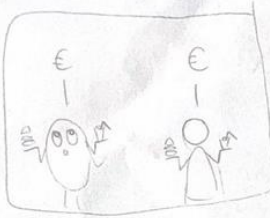
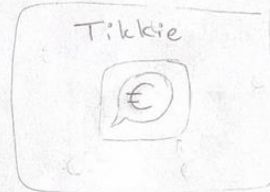
2K	<p>Include a motivation about why you want this room in this particular house. The goal is to distinguish yourself from others and show why the house should want you as a roommate.</p>	
2L	<p>Highlight how you can contribute positively to the house, whether it is through your personality, skills, or interests. Adding a photo of yourself is a plus, as it will make it easier for them to remember you.</p>	
3A	<p>Educational system</p>	
3B	<p>The Dutch educational system is known for its practical orientation and informal culture.</p>	
3C	<p>Students frequently work in groups,</p>	
3D	<p>and projects often use problem-based learning. Before enrolling in courses, it's a good idea to do some research on the course formats.</p>	
3E	<p>It can be helpful to know whether your grades will be based on assignments, exams, or attendance. The grading system is typically stricter than in many other countries and it uses a scale from 1 to 10, with specific criteria for passing and failing grades.</p>	 <p>Or</p>

3F	<p>The use of first names to address professors can feel impolite, but is a norm in Dutch academia, allowing a more approachable and less formal environment. However, in emails, it is customary to use the professor's last name.</p>	
4A	<p>Health care and administrative processes</p>	
4B	<p>You will have to go through various administrative processes,</p>	
4C	<p>such as registering with the municipality, acquiring health insurance and optionally setting up a Dutch bank account.</p>	
4D	<p>It is obligatory to be registered at a Dutch GP as well as to have a Dutch health insurance which covers GP visits, hospital care, and prescriptions.</p>	
4E	<p>Additional coverage, such as dental care, is optional.</p>	
4F	<p>Even though setting up a Dutch bank account is not mandatory,</p>	

4G	<i>it could be very practical for handling rent</i>	
4H	<i>tuition fees,</i>	
4I	<i>and other expenses.</i>	
4J	<i>Payments are generally made using a debit card.</i>	
4K	<i>Cash is also used but is way less popular,</i>	
4L	<i>and not always accepted.</i>	
5A	<i>Public transportation</i>	
5B	<i>If you want to travel by public transport in the Netherlands,</i>	

5C	it is practical to acquire an "ov-chipkaart".	
5D	The ov-chipkaart is a contactless smart card, which serves as a convenient multifunctional payment method for trains, busses, trams and metro services across the country.	
5E	You can load credit onto the card or add travel products	
5F	and then simply check in and out at card readers when entering and leaving the transport system.	
5G	Also, be aware that you should check in and out when you switch from train operator or vehicle.	
5H	There are apps and websites that could help you plan your travels.	
5I	TIP: check for subscriptions, because public transportation in the Netherlands can be quite expensive.	

5J	<p><i>When you travel, make sure to follow the etiquette, such as not talking too loudly,</i></p>	
5K	<p><i>allowing people to exit before entering and thanking the bus driver when leaving the bus.</i></p>	
6A	<p><i>Cultural and Social Interactions</i></p>	
6B	<p><i>Attending your study's introduction days is highly recommended since it offers a great opportunity to make friends which can help you to integrate more easily into your new Dutch social life.</i></p>	
6C	<p><i>On these days, you also have the opportunity to get in touch with sports, study, and cultural associations, where you can make many social connections.</i></p>	

6D	<p><i>Be warned: Dutch people are known for their direct communication style, which can be surprising for newcomers.</i></p>	
6E	<p><i>This directness is not meant to be rude; it's a cultural norm that values honesty and clarity.</i></p>	
6F	<p><i>Although it can certainly help to get into the Dutch social bubble by understanding and speaking a bit of Dutch,</i></p>	
6G	<p><i>Dutch people generally speak English quite well.</i></p>	
6H	<p><i>When you go out for food or drinks,</i></p>	
6I	<p><i>it's common to pay for your own share.</i></p>	
6J	<p><i>The Dutch often use a mobile app called "Tikkie". It is used to quickly and easily request payments from friends.</i></p>	

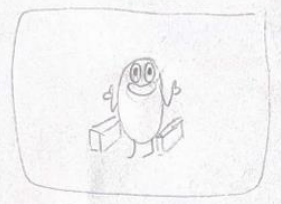

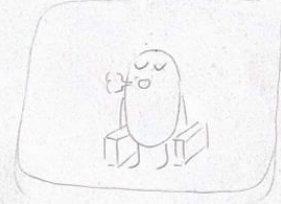

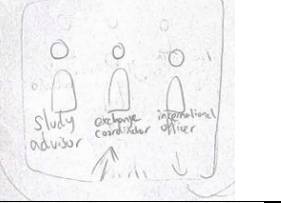


7A	<i>Hopefully, you feel a bit more prepared for your journey to the Netherlands.</i>	
7B	<i>While it may seem overwhelming at first,</i>	
7C	<i>you will eventually find your place.</i>	
7D	<i>Just take it one step at a time.</i>	
7E	<i>If you encounter challenges, there will be people ready to help you along the way.</i>	
7F	<i>Welcome to the Netherlands</i>	
7G	<i>and let it become your home away from home.</i>	

Table 9: Script with accompanying storyboard

5.4.3 Additional Links

In the description box below the video, additional links will be provided to help students who want to conduct further research on their own.

Additional links for accommodation:

Finding a room

Kamernet: <https://kamernet.nl/>

Roomspot: <https://www.roomspot.nl/> (Enschede)

Dutch student union: <https://dutchstudentunion.nl/finding-a-room/>

Hospiteren

University of Twente: <https://www.utwente.nl/en/stories/student/1566214/finding-a-room-a-guide-to-hospiteren/?tag=internationals&tag=student-tips>

Groningen life: <https://www.groningenlife.nl/en/wonen-in-groningen/hospiteren/>

Additional links for Educational system

Nuffic: <https://www.nuffic.nl/en/education-systems/the-netherlands/higher-education>

Study in NL: <https://www.studyinnl.org/dutch-education>

Government: <https://www.government.nl/topics/secondary-vocational-education-mbo-and-tertiary-higher-education/tertiary-higher-education>

Additional links for Health care and administration processes

Health insurance

Octagon: <https://www.octagonpeople.com/dutch-health-insurance-101-a-beginners-guide/>

Study in NL: <https://www.studyinnl.org/plan-your-stay/healthcare-insurance>

Zorgwijzer: <https://www.zorgwijzer.nl/faq/students>

Government: <https://www.government.nl/topics/health-insurance/question-and-answer/when-do-i-need-to-take-out-health-insurance-if-i-come-to-live-in-the-netherlands>

Registering in the Netherlands

Study in NL: <https://www.studyinnl.org/life-in-nl/to-do-after-arrival>

IND: <https://ind.nl/en/living-in-the-netherlands-with-a-residence-permit/living-in-the-netherlands>

Dutch bank account

Student mobility: <https://studentmobility.nl/services/open-bank-account/>

College life: <https://collegelife.co/guides/banking-in-the-netherlands-a-complete-guide/>

DigiD

Dutchreview: <https://dutchreview.com/expat/guide-getting-a-digid-in-the-netherlands/>

Studielink: <https://www.studielink.nl/>

Government: <https://www.netherlandsworldwide.nl/digid-abroad/how-to-apply>

Additional links for Public transportation

Studenten reisproduct: <https://www.studentenreisproduct.nl/i-am-a-foreign-student/>

Ov-chipkaart: <https://www.ov-chipkaart.nl/en>

Ns: <https://www.ns.nl/>

9292: <https://9292.nl/>

Additional links for Social and cultural interactions

Introduction days: <https://www.kick-in.nl/en/> (Enschede)

Associations: <https://su.utwente.nl/en/get-involved/Associations/> (Enschede)

Tikkie

Dutch Review: <https://dutchreview.com/expat/tikkie-netherlands/>

Dutch Review (Tikkie etiquette): <https://dutchreview.com/culture/tikkie-etiquette-dos-and-donts-of-asking-for-money/>

Tikkie: <https://www.tikkie.me/>

5.5 Functional requirements and Non-functional requirements

A list of requirements provides a clear framework for evaluating whether the project meets the stakeholders' wants and needs. The requirements from Table 10 and Table 11 are revision and extension of the requirements in Table 7 from section 4.5.3 Revised Requirements Specified for Animation. Furthermore, the requirements are divided into functional (section 5.5.1 Functional Requirements) and non-functional requirements (section 5.5.2).

5.5.1 Functional Requirements

MoSCoW	No.	Functional Requirement	Stakeholders
Must have	1.	Must provide sufficient information about Dutch aspects (accommodation, educational system, health care and administrative processes, public transport, cultural and social interactions)	Experts/International students
	2.	Must be in a format that is accessible from within the Netherlands and abroad.	Designer
	3.	Must provide the information in a clear way.	Experts/Designer (State-of-the-art/Literature Review)
	4.	Must provide different kinds of information in one place.	International students
Should have	5.	Should be an appropriate length for the topics it covers.	Experts
	6.	Should provide information in a concise way.	Experts/Designer (State-of-the-art/Literature Review)
	7.	Should use cueing in the form of transformations in size, translations (movement) and transitions (appearance and/or disappearance).	Designer (Literature review)
	8.	Should have a contrast between the background and the foreground colour.	Expert (Visual Design)
	9.	Should have a main character that is visually appealing and equally relatable to everyone.	Designer (Visual Design)
	10.	Should distinguish the main character from the other characters.	Designer (Visual Design)
Could have	11.	Could use the eyes and arms of the main character for cueing.	Expert (Visual Design)
Won't have	12.	Won't have too much text.	International students

Table 10: Functional Requirements

5.5.2 Non-functional Requirements

MoSCoW	No.	Non-Functional Requirement	Stakeholders
Should have	1.	Should include classical, non-vocal, uplifting background music.	Experts/Designer (State-of-the-art/Literature Review)
	2.	Should include narration by a native English speaker.	Designer (State-of-the-art/Literature Review)
	3.	Should provide information in a way that international students stay engaged.	Experts/Designer (State-of-the-art/Literature Review)
	4.	Should have a simplistic style.	Designer (State-of-the-art/Literature Review/Visual Design)
	5.	Should use Roboto Slab font for the titles in 120px and Helvetica font for the text bubbles.	Expert/Designer (Visual Design)
	6.	Should use the following colours: background muted orange RGB (241, 181, 124), main character blue RGB (0,162,200), People blue RGB (1,138,170), icon/details blue RGB (11,109,160).	Designer (Visual Design)
Could have	7.	Could include sound effects.	Designer (State-of-the-art/Literature Review)

Table 11: Non-Functional Requirements

Chapter 6: Realisation

In the realisation phase the animation is created. This chapter describes how the animation will be realised and what tools are used. Additionally, a link to the proof of concept of the animation is provided.

6.1 Process

The flowchart (Figure 41) is a visual representation of the realisation process.

The realisation process begins with creating the audio track. The script was recorded, and then the background music is added. The voice-over and the music are altered to create a better flow. After that, the track is exported.

The next step is creating the individual assets, such as the icons, the people, and the main character. Additionally, the pupils and arm segments are exported separately so that they can be animated independently from the rest of the main character. Once the assets are created, they are exported as well.

All the relevant files are imported into the animation software, where the animation is created based on the audio. Each scene is animated separately, which makes it more flexible to adjust them later if necessary. This is also less demanding for the computer since it doesn't need to re-render the entire animation with each change. Additionally, some animations can be created in individual compositions and later added to the main scene, as they are not dependent on the audio track (Figure 40).

After animating the scenes, they are imported into the video editing software and their audio gets muted. The full audio track is then imported separately, and the scenes will be synced with this track. This makes sure that the animation and audio align without overlapping sounds (Figure 39). At the end of the video, a fade-out effect is applied to both the audio and the visuals to indicate that it is only a proof of concept.

Lastly, the proof of concept will be exported to YouTube. In the description of the video additional links are added for more information on each topic. Timestamps are also added in the description, which makes it easy for the viewer to skip directly to specific topics. Finally, a screenshot of the animation is taken and used as the thumbnail.

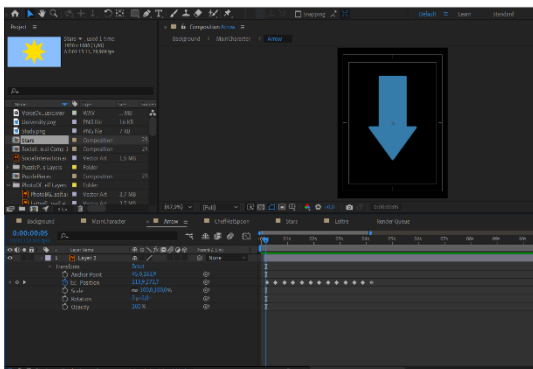


Figure 40: Individual composition of bouncing arrow

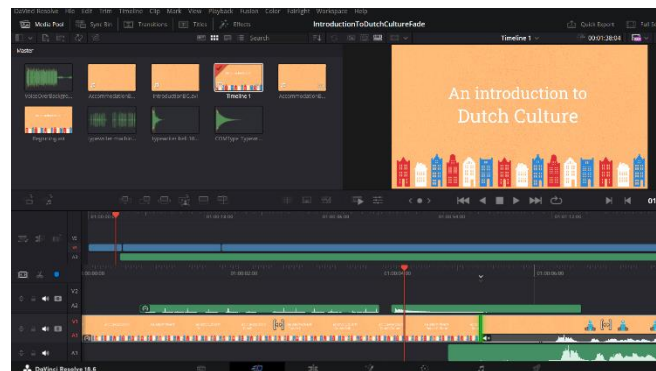


Figure 39: Scenes being muted and synced with the audio track

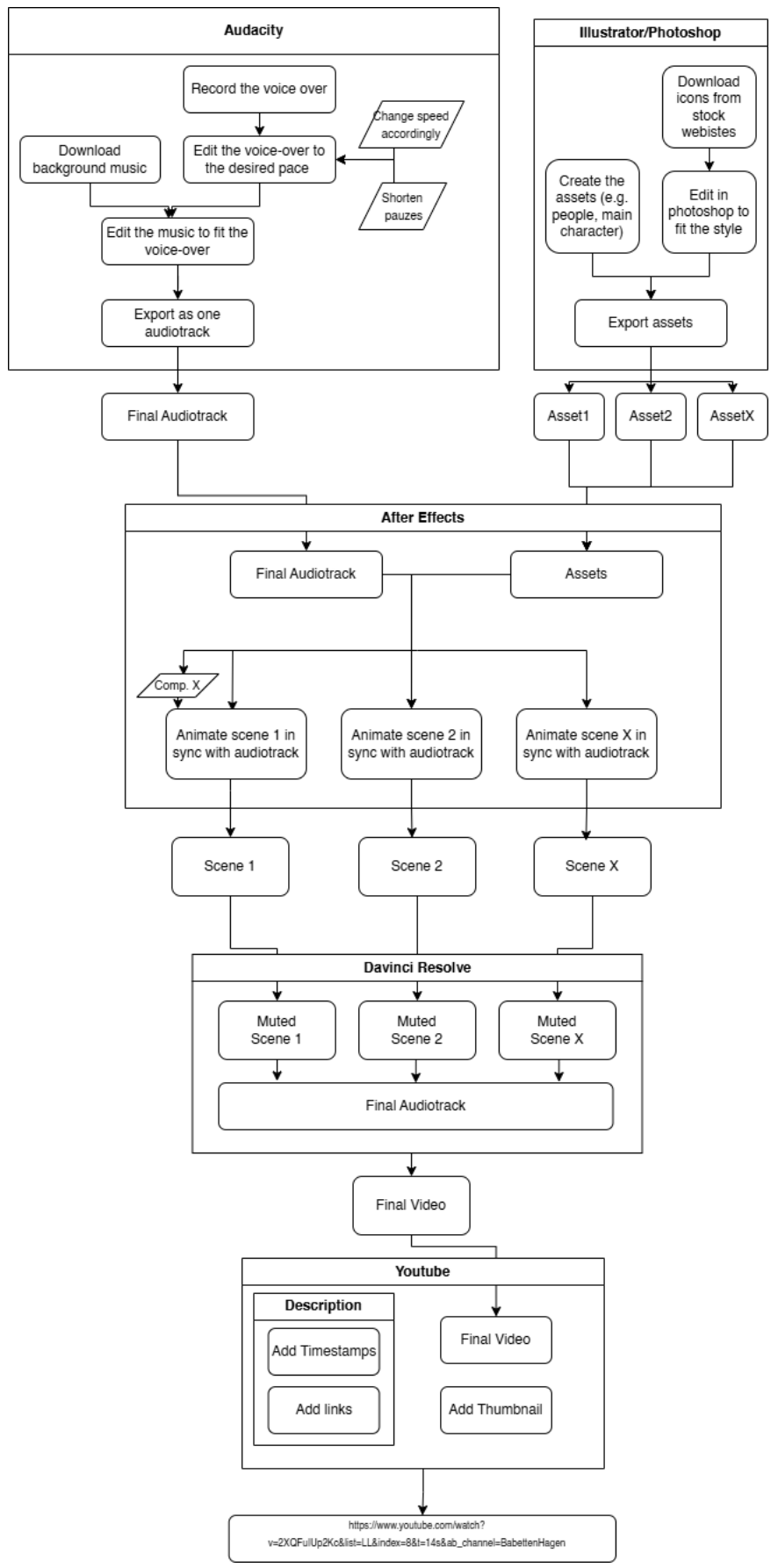


Figure 41: Flowchart of the realization process

6.2 Tools

6.2.1 Audio

6.2.1.1 Fiverr

As mentioned in 5.3.1 Sounds, a native English speaker was hired on Fiverr [168] to record the voice-over. His name is Jon White [169] and he was sent a script detailing what he should record, along with an additional audio track for the pronunciation of “hospiteren” and “hopsiteer”. Jon White was asked to record the voice-over in a friendly and lively manner, like the energy he displayed in his introduction video about himself. He was also sent the storyboards to provide context for the voice-over.

6.2.1.2 Audacity

Audacity [170] was used to edit the audio. The voice-over was edited, with some parts being sped up and some silences were shortened to maintain the pace. Additionally, the music specified in section 5.3.1 Sounds was slightly modified with a small cut to better align with the voice-over. A separate typewriter [171] was also added at the beginning of the intro scene. The voice-over and the music were then exported as a single audio file to animate the video. The volume levels were balanced with the voice-over at -21.0956 dB and the background music at -29.3129 dB.

6.2.2 Video

After conducting research, it seems that Adobe [172] offers one of the best software programmes for developing animation. Moreover, the software programs (Illustrator, Photoshop, After Effects) all work well together. Additionally, a significant advantage of using Adobe is that there are many tutorials and resources available online, which makes learning and using these programs more accessible.

6.2.2.1 Adobe Illustrator and Photoshop

Adobe Illustrator [173] is used for creating the assets in the animation video because it is vector-based, which allows for scaling assets without losing quality. Moreover, creating the assets from scratch in Illustrator provides greater control over their style, helping to ensure that the visual style remains consistent throughout the animation. Almost all assets were created from scratch in Illustrator, however in a few cases, Adobe Photoshop [174] was used. For specific assets, where it was the more practical approach, such as for the Facebook [175] and Instagram [176] icons, as well as seven other icons like city hall and music notes. In those instances, icons were downloaded from royalty-free websites [177], [178], [179] and modified to match the video’s aesthetics. Additionally, the background was made in Photoshop with the use of a stock photo.

6.2.2.2 Adobe After Effects

Once the assets have been made, Adobe After Effects [180] is used to animate them. The video is divided into different segments (for example, the introduction is a separate file for accommodation), and each segment is animated in a different After Effects project to keep things organised. After the animations are completed, the segments are exported and combined into a single video using video editing software.

6.2.2.3 DaVinci Resolve

DaVinci Resolve [181] is the video editing software used to merge the videos into one. The exported projects from After Effects are trimmed and arranged in sequence. Then, the audio track is added and synchronized with the audio tracks of the exported videos. Once synchronization is achieved, the audio from the exported video is muted, leaving only the single audio track.

6.2.2.4 Accessibility of Animation

The video will be uploaded to YouTube [182] to make it easily accessible for international students from all over the world. Additionally, the timestamp feature will be used, allowing viewers to easily skip to the section with information that is relevant to them. The YouTube video description includes additional links to sources where the viewers can find more information.

6.3 Proof of concept

Due to available project resources, the animation will not fully be developed. However, a proof of concept will be created, which includes the introduction and the accommodation aspect. The goal of the proof of concept is to give an impression of what the video will look like when fully developed. It will, among other things, illustrate the visual style of the video and the pacing of the information presented. Additionally, the proof of concept, along with the written information detailing how the product could have been developed, will enable future researchers to fully realize the product.

YouTube link to the proof of concept:

https://www.youtube.com/watch?v=2XQFulUp2Kc&list=LL&index=8&ab_channel=BabettenHagen

Chapter 7: Evaluation

In the Evaluation phase, the animated video was evaluated by nine international students. Two participants (from South Africa and Montenegro) had been involved since the beginning of the project. Two others (from Ukraine and Denmark) had participated since the consulting phase in 5.4.1 *Feedback from International Students*. The remaining five participants (two from Turkey, two from Italy and one from Ukraine) were recruited through WhatsApp group chats and communities and had no prior interaction with the research before the evaluation round.

The evaluation questions are designed to determine whether the requirements outlined in section 5.5 Functional requirements and Non-functional requirements (specifically Table 10 and Table 11, these requirements are originated from Chapter 2: Background Research and Chapter 4: Ideation) have been met. In section 7.2 Feedback from International Students, these requirements are evaluated from a qualitative perspective, while section 7.3 Requirements Evaluation assess them from a quantitative perspective.

7.1 Evaluation Method

The evaluation method is visually illustrated in Figure 42.

At the start of the evaluation session, the participants were informed about the aim of the research. They were then asked to sign a consent form. Once they gave their consent, the recording was started. This ensures that all feedback is captured, including any immediate reactions after watching the video, even before the questions are asked. It also helps avoid forgetting to start the recording. Next, the participants were informed about the goal of the research. It was explained to them what the final result would look like: an animated video discussing multiple aspects of the Netherlands. They were told that the video would cover the following topics: accommodation, educational system, health care & administration processes, public transportation and cultural & social interactions. Additionally, the participants were told that the video description would include links for more information on each topic, as well as timestamps to make it easy to go directly to specific sections.

Participants were then informed that they would watch the video and afterwards, be asked questions about their general impression, the introduction, the section on accommodation, the format and the relevance and usefulness (see Appendix F: Evaluation Questions). They were also informed that the video served as a proof of concept and, therefore, only included the introduction and the first topic: accommodation.

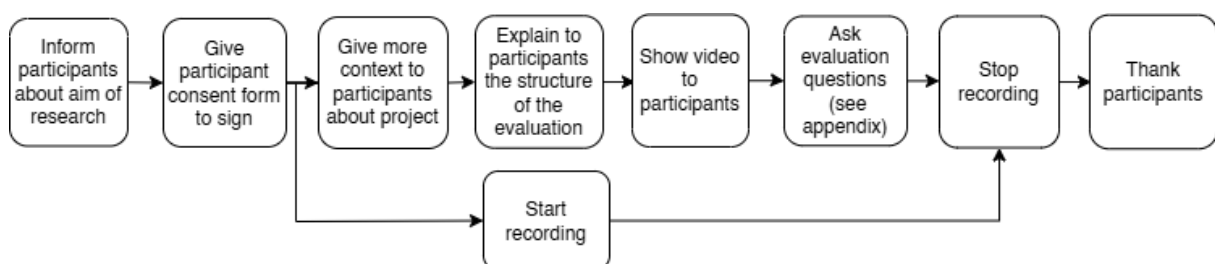


Figure 42: Evaluation Method Flowchart

7.2 Feedback from International Students

The evaluation was conducted using a qualitative approach. This means the focus was on gathering detailed feedback and insights from participants through open-ended questions. This allowed for a deeper understanding of how international students felt about various aspects of the video, including its content, design and usefulness.

7.2.1 General impression

Everyone was once again very positive about the video. The simplistic design was well-received by all participants. Some mentioned that it was very suitable for the context of an educational video, while others preferred a minimalistic style in general.

7.2.1.1 Feedback on Visuals

Visually, the students found the video very appealing. Some commented that they liked the subtle Dutch elements, such as the orange background colour, the Dutch houses at the beginning, and the brief appearance of the Dutch flag. Everyone agreed that the simplicity of the animation made it easy to understand. One participant even said: “There isn’t anything extra that would make it too confusing.” One participant explicitly mentioned that they really liked the colour blue of the main character as it made them feel more comfortable. And they also overall liked the colours and also complimented the fonts.

Additionally, some participants mentioned that the video successfully guided their attention to the intended content. Two participants explicitly said they appreciated how the main character's eyes and pointing gestures guided their attention. They explained that they naturally followed the character's gaze to see what it was looking at, which made it easier for them to focus on specific parts of the video.

The participants were also asked about the impact of the visuals on their understanding of the content. Some said the audio alone would have been enough to understand the information. However, it was also noted that the visuals enhanced the overall experience. One person specifically mentioned that the visuals represented the story nicely and were in sync with the voice-over. Several participants mentioned that the visuals helped them stay focused. Some explicitly pointed out that the puzzle pieces illustrated the concepts visually effectively (Figure 43). One participant said that arrow in the “hospitatie” process was particularly helpful for comprehension of the concept (Figure 44: Arrow). Another participant said that it visually clearly explained that you have to distinguish yourself from others in the “hospitatie” process (Figure 45). Someone said that they really liked the visual for the information on what to include in your “hospiteer” message illustrated by the outfits with the photography and the guitar (Figure 46).

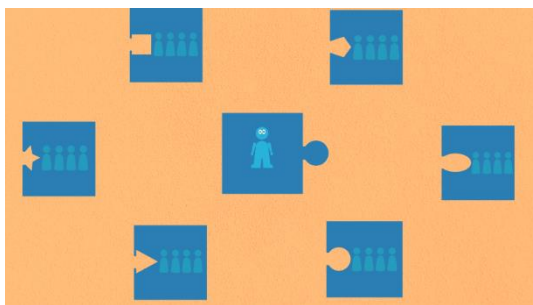


Figure 43: Puzzle pieces

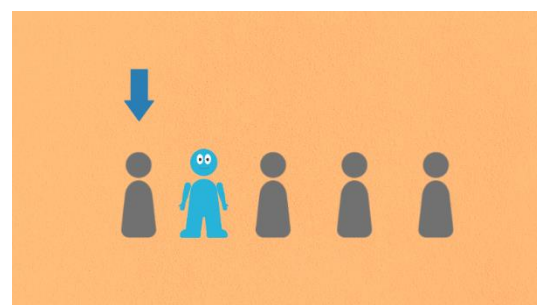


Figure 44: Arrow

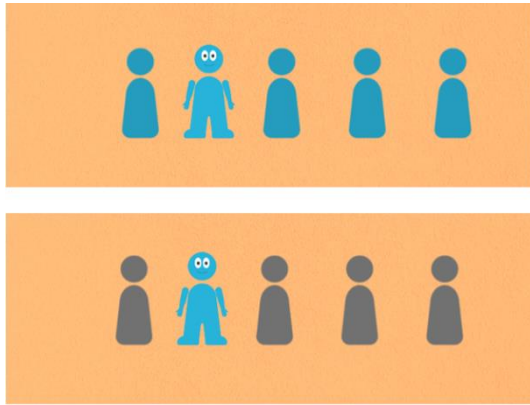


Figure 45: Distinguish Yourself



Figure 46: Include in "hospiteer" message

7.2.1.2 Feedback on Audio

Regarding the audio, most participants mentioned that they hadn't noticed the background music. This suggests that the students did not experience the split attention effect, indicates that the student did not experience the split attention effect (2.3.2 Dual Coding and Split-attention), which is a good sign as it indicates that the music did not distract from the information presented. There was also a comment that the music was calm and pleasant, adding that it gave a professional impression. Everyone found the voice-over clear and easy to follow. They understood everything the narrator said without difficulty. It was also noted that the voice-over sounded professional, which added credibility, making the video feel more reliable.

7.2.1.3 Feedback on Length

Overall, the students found the length of the video appropriate for the topics it covered. It was sufficient to hold their attention and provided a solid base of information. One participant felt the information on "hospiteren" was too long, while another participant felt the section on accommodation was too short. However, the majority of the participants agreed that the length of the video was appropriate (introduction: 20s and accommodation: 1.10 min)

7.2.1.4 Feedback on Pacing

The feedback on the pace of the video was also mostly positive. Most participants liked the pace and felt no need to slow it down or speed it up. However, two participants said the pace was a bit too fast in places. One participant suggested that a slightly slower pace might be a good idea, as international students might have difficulty understanding English. Or maybe leave one or two seconds between information to give the students time to process everything.

7.2.1.5 Feedback on Engagement

When asked about their engagement while watching the video, all participants said they found it engaging. They said the information itself is relevant, so that keeps you engaged. Some mentioned that the relatable content also helped keep their attention. Additionally, the visuals were pointed out as an effective way to hold their attention. One participant said that the pacing really helped to keep their attention, others said that the dynamic of the video helped them to stay focused.

7.2.1.6 Suggestions for Improvement

Finally, participants were asked for additional comments or suggestions to improve the video. Their remarks included the following:

- Consider adding English subtitles to complement the voice-over.
- Include the video in the confirmation email sent by the university to incoming students.
- Use different background colours to visually distinguish between sections of the video.

7.2.2 Introduction

Everyone agreed that the introduction clearly conveyed what the video would cover. However, one participant mentioned that the icons might be perceived as brief examples rather than an overview of what would be discussed. To clarify this, they suggested adding a “table of contents” component, similar to what you might find in a book. Two others proposed naming the icons as they appear to avoid misinterpretation and to emphasize the aspects extra. Although they made these suggestions, they still felt that the introduction was good as it was. Many participants expressed that they liked the introduction in its current form. One person explicitly said that adding anything more would be unnecessary.

7.2.3 Accommodation

The participants found the information about the accommodation to be clear. One participant mentioned that the video included both familiar and new information, but everything was explained in a way that they could understand equally easily. Another participant observed that these types of videos often simplify things too much compared to reality. However, they felt that this video was realistic, without being discouraging. They especially liked the part about each house searching for their own match, which means it might take some time, but is not impossible. When asked for suggestions to improve the part about accommodation, most participants had no comments. However, two suggested adding a warning about scams or shady practices for students to watch out for.

7.2.4 Format

The participants were asked whether they would prefer this animation video to be part of a larger support system instead of being a stand-alone video. Opinions were divided. Some participants felt it worked perfectly as a standalone video on YouTube. Two participants mentioned that the video provides a great baseline, so if students want more information, they can do their research. Others suggested that it could be useful to integrate the video into other platforms to make it more accessible. For instance, placing it on a university website, a municipality website, or even sharing it via Instagram. Two other participants mentioned that it might be helpful to include the video in the university’s welcome mail.

Additionally, students were asked what they thought about using an animation video as the format for this kind of information. Everyone agreed that an animation video is very appropriate. This statement was supported by arguments such as the predetermined length of a video, which prepares the students or how much time they will spend on the support. Other arguments included that it’s easy to follow, and provides relevant information quickly, and if students need more details, they can easily click on the links provided in the description.

7.2.5 Relevance and Usefulness

All participants agreed that the video was very relevant for international students who are considering or planning to move to the Netherlands. Many said they would have appreciated having a video with this kind of information before coming to the Netherlands, especially the information about “hospiteren”. Several participants said they found it useful to have various information centralized in one place (which was also noted during the interviews in 2.1.1 First Round of Interviews).

One participant noted that they personally would not be interested in information about the educational system. They explained that if they planned to come to the Netherlands for the

education, they would have researched this topic beforehand. They might skip it and click on the timestamp for the next aspect. However, they added that it would also depend on the duration of that section. They might still watch it to see if it contains useful information, saying, ‘But it also depends, on what’s going on, because maybe now I think it won’t be useful, but if I start looking, I might think, “Ok that might actually be useful, so I’ll keep looking” ‘.

Overall, everyone agreed that the content is relevant, especially for international students planning to move to the Netherlands. One participant, who had moved to the Netherlands two months earlier, expressed their interest in the project and asked if they could be sent the script, storyboards, and additional links, as they were very intrigued by the project and wanted to use the information themselves.

Participants were also asked if they would recommend this video (or future versions) to other international students. All responded positively. One participant mentioned that they often answered questions from other countrymen about moving to the Netherlands and that many of these topics are mentioned in the video. They said they would definitely share the link. Another participant added that they liked the inclusion of links to additional sources of information.

After the evaluation session, another participant reached out to ask if the video may be used by the “organization of Study Associations” (OS) [183] once it is finalized. They said they would be very interested in using it as an information resource for students.

7.3 Requirements Evaluation

The functional and non-functional requirements will be evaluated to determine whether they are met. The results are shown in the last column of Table 10 and Table 11, and use the following colour coding:

Green = Requirement was met

Red = Requirement was not met.

* = Requirement is met in the final concept, however not met in the proof of concept

7.3.1 Functional Requirements Evaluation

MoSCoW	No.	Functional Requirement	Results
Must have	1.	Must provide sufficient information about Dutch aspects (accommodation, educational system, health care and administrative processes, public transport, cultural and social interactions)	88,9 % of the participants of the evaluation agreed that the information on accommodation was sufficient.
	2.	Must be in a format that is accessible from within the Netherlands and abroad.	YouTube makes the video available all over the globe.
	3.	Must provide the information in a clear way.	100% of the participants agreed.
	4.	Must provide different kinds of information in one place.	*In the final concept 5 aspects will be discussed. In the proof of concept, only the aspect accommodation is discussed.

Should have	5.	Should be an appropriate length for the topics it covers.	88,9% of the participants agreed.
	6.	Should provide information in a concise way.	77,8% of the participants were satisfied with the simplicity of the information while finding it informative enough.
	7.	Should use cueing in the form of transformations in size, translations (movement) and transitions (appearance and/or disappearance).	These kinds of translations are used.
	8.	Should have a contrast between the background and the foreground.	The background is orange with texture while the foreground is blue and plain.
	9.	Should have a main character that is visually appealing and equally relatable to everyone.	100% of the participants found the style appealing. 22,2 % of the participants explicitly mentioned they liked the main character and found it relatable. Additionally, the main character does not refer to a specific nationality.
	10.	Should distinguish the main character from the other characters.	The main character has a different design and colour than the other characters.
Could have	11.	Could use the eyes and arms of the main character for cueing.	The eyes and the arms of the main character have been used for cueing.
Won't have	12.	Won't have too much text.	The use of text is minimized.

Table 12: Functional Requirements Evaluation

7.3.2 Non-Functional Requirements Evaluation

MoSCoW	No.	Non-Functional Requirement	Results
Should have	1.	Should include classical, non-vocal, uplifting background music.	This requirement is met as the video uses <i>Country Dances for Orchestra 10-12</i> by Beethoven.
	2.	Should include narration by a native English speaker.	This requirement is met as the voice-over is recorded by John White who is from the United Kingdom.
	3.	Should provide information in a way that international students stay engaged.	100% of the participants agreed.
	4.	Should have a simplistic style.	The video has a simplistic style.
	5.	Should use Roboto Slab font for the titles in 120px and Helvetica font for the text bubbles.	The video uses Roboto Slab font for the titles in 120px and Helvetica font for the text bubbles.
	6.	Should use the following colours: background muted orange RGB (241, 181, 124), main character blue RGB (0,162,200), People blue RGB (1,138,170), icon/details blue RGB (11,109,160).	The video uses the colours.
Could have	7.	Could include sound effects.	The video included a sound effect only at the beginning with the title display. No other sound effects were implemented. Therefore this requirement is considered unmet.

Table 13: Non-Functional Requirements Evaluation

Chapter 8: Discussion & Conclusion

This chapter discusses the relevancy of this research and its limitations. Additionally, the main research question is addressed.

8.1 Discussion

There have been suggestions that there should be support for international students to help them better prepare for what they can expect when moving to a new country [5], [7], [9], [10].

This aligns with the findings from the first round of background interviews (section 2.1.1 First Round of Interviews), where international students indicated that they would have benefitted from having more support before moving to the Netherlands. While they acknowledged that a lot of support was already available, many did not use it for various reasons, mainly related to its format and accessibility.

During the experts' interviews (section 4.3 Expert Opinion; International Officer and Exchange Coordinator), it was also noted that students have a desire for more support. The experts pointed out that while a lot of support already exists, the current channels used to provide this support are not sufficient. Both the international students and the experts mentioned a preference for support presented in an easy-to-watch video format, with the majority specifying an animation video.

In the state-of-the-art analysis (section 2.2 State of the Art), it was confirmed that there is indeed already a substantial amount of information available about the Netherlands. However, this information is not yet available in an animated video format. This indicates that there is room for improvement. An animated video discussing Dutch aspects is therefore to be considered as relevant as it fills this gap and better addresses the needs of international students.

The feedback from participants shows that the animation tool is effective in informing international students about the Dutch culture. Participants appreciated the visuals and pacing of the animation, which made the content clear and easy to follow. This supports other research (section 2.3.2 Dual Coding and Split-attention) that shows combining visuals and audio is a great way to communicate complex information in a way that's easy to understand. Specifically, the dual coding theory explains that presenting information visually and verbally helps people learn and process it more effectively.

The animation was effectively designed, with clear visualisations and minimal text. Participants felt this made it easier for them to focus on the information without getting overwhelmed. This aligns with the cognitive load theory (section 2.3 Literature review about informative visual communication of information), which suggests that keeping the content simple and using visual cues to guide the viewers' attention to help viewer process the information more easily. Additionally, the use of narration and instrumental background music further contributed to this, making the video engaging without being distracting.

However, there are still some limitations. The study only included a small group of participants, which means their feedback might not reflect the experiences of all international students, as there could be demographic biases. Additionally, it would have been more appropriate to evaluate students who are planning to come to the Netherlands in the near future for their study, rather than those who were already studying in the country. They are eventually the intended target group, therefore it would be very valuable to gather their feedback.

Furthermore, the evaluation participants were not all from different nationalities. While that could also give interesting results as their personal opinions of students from the same country could differ, it also would have been valuable to have in the evaluation a broader representation of nationalities as it could have enhanced the findings.

Another discussion point concerns potential bias in the students' engagement. Since the participants were watching the video specifically to evaluate it, they might have paid extra attention. This raises the question of whether the same level of engagement would have been in a real-world setting.

Looking at the bigger picture, this study shows how animation can bridge the gap between the existing shortcomings in information and the actual needs of international students. By involving students and experts in the design process and applying cognitive load theory, this project created a tool that is both relevant and enjoyable.

8.2 Conclusion

When international students move to another country they often endure a lot of stress, which tends to lead to mental health problems. Therefore, it is beneficial to provide support that helps them better prepare for what to expect. The main research question of this thesis is the following:

RQ: How can a support tool be created to help international students better prepare when coming to the Netherlands?

This question has been addressed by creating a concept for an animation video that discusses multiple aspects of the Netherlands. Two rounds of interviews were conducted with nine international students from various countries. The first round identified twelve key aspects, and the second prioritized the most important ones. During the interviews, students also mentioned that they preferred an animation format. Based on these results, the concept for an animation video was created to address multiple aspects of Dutch culture, covering accommodation, educational system, health care and administrative processes, public transportation, and cultural and social interactions.

A video was designed according to the requirements based on research on cognitive load, an analysis of the state-of-the-art and input from stakeholders. Requirements such as, should include a voice-over, should include background music without vocals and should provide the information in a clear way. A proof of concept was created and uploaded on YouTube. The video description includes timestamps that allow viewers to skip to sections of their interest. Additionally, there are links to more information on each topic.

The evaluation confirmed that the animated video met most of the established requirements, particularly in terms of relevancy, visual appeal and accessibility. The participants responded positively, saying that they would have appreciated this video before coming to the Netherlands and that they would recommend it to other international students.

Nevertheless, it should be kept in mind that the sample size was small, which limited statistical significance of the findings.

Despite this, the results suggest that the animated video discussing multiple aspects of the Netherlands effectively addresses the need for a support tool to help students better prepare for their move to the Netherlands.

Chapter 9: Future Research

While the proof of concept was very positively received by the international students, there is still room for further development.

Firstly, the video could be fully developed to address all five aspects. This completed version could then be evaluated and improved accordingly. During this process, new points for improvement may emerge that were not evident in the proof of concept. While the proof of concept gives an impression of what the entire video should eventually look like, it is not the full video. This could have influenced the participants' opinion. In addition, the links in the description are currently not clickable. While this is acceptable for a proof of concept, it would be ideal to make the description more functional for a more thorough evaluation and possible improvement. Therefore it would be interesting to see what the participants would think of the final video.

Moreover, the findings indicated that an animation video covering multiple aspects was the most suitable format for the aim of this project. However, if this project is expanded, it may be worth considering creating a series of separate animation videos, each focusing on a specific aspect. This would make it possible to include more information on a wider range of topics.

Furthermore, involving more experts in relevant fields could have provided valuable insights and improved the overall quality of the research. For example, engaging more staff members from the University of Twente who interact with international students, as well as experts in visual design and educational design, could have offered diverse perspectives and strengthened the results.

Building on this, every phase of the project could benefit from more iteration. Not only would involving more experts initially improve the process, but consulting them throughout each phase of iteration could also lead to more refined results. Additionally, revisiting phases multiple times could further enhance the quality.

Additionally, the video is designed for a broad group of international students, with consideration given to inclusivity and avoiding exclusivity. However, it would also be interesting to research the differences in needs between international students from within and outside of the EU and adjust the animation video accordingly. Furthermore, differences in the needs of students from different continents could be explored, or it might even be possible to focus specifically on the needs of students from individual countries.

Another interesting area to explore is whether there are differences in the needs of international students at other universities in the Netherlands. This research has focused on international students from the University of Twente, but students from other universities may have different needs. It may also be valuable to investigate whether there are differences in the needs of students coming to the Netherlands at different study levels. For instance, examining the needs of students starting their bachelor program compared to those coming for their minor or master's program could provide interesting insights. Additionally, a similar support tool could be developed for international students moving to other countries.

In terms of design, further research could be conducted on the style of the video and the visualization of specific information. The current focus has mainly been on holding and guiding the viewer's attention. While some research has already been done on the use of colors and shapes in the video. However, this area could be further explored in future research to improve both attention retention and the visual appeal of the animation.

Finally, it would be valuable to investigate the impact of the video. This could be done by comparing a group of students who watched the video with a group who hasn't. This kind of research helps determine the influence of the video on the preparation of the students.

Appendices

Appendix A: AI-statement

General use

During the preparation of this work the author(s) used ChatGPT in order to help me formulate correct English sentences and translate Dutch to English. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the work.

Discussion

During the preparation of this work the author(s) used ChatGPT in order to incorporate the feedback correctly. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the work.

Appendix B: Background research; First round interview questions

General

What is your nationality?

What is your mothers nationality?

What is your fathers nationality?

Experience

Have you lived in another country than the country you grew up in (before you came to the Netherlands)?

When and why did you come to the Netherlands?

What was your experience when you first came here?
(How did you feel? Did you get any help settling in?)

Support

How did you prepare yourself for coming to the Netherlands?
(Did you look for information on the internet? Where did you look? What were you specifically searching for?)

Would you like to have had (more) support about what you would encounter in the Netherlands before you came here?

What information would you like to have known about the Netherlands before you came here?
(possible categories to inspire them in case they can't think of anything: Food, transportation, events and activities, relations with other people and lifestyle.)

Demographic

How old are you?

With which gender do you identify?

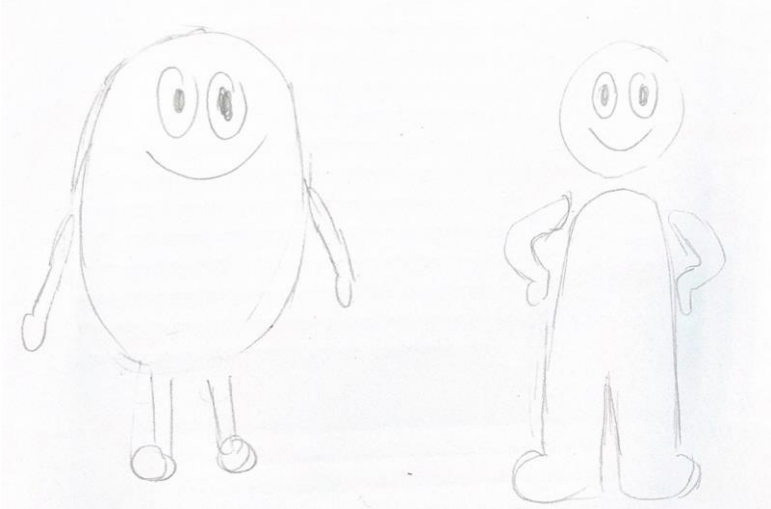
What do you study?

Appendix C: Estimation Table

Aspects	Frequency	Countries	Weight factor	Multiplication	Ranking
Bicycles	6	Italy/Austria, Spain, Romania, Croatia, Indonesia, South Africa	1	6	6
Public transport	8	Spain, Germany, Romania, Montenegro, Croatia, Poland, Indonesia, Italy/Austria	3	24	2
Food and eating habits	6	Spain, Romania, Montenegro, Croatia, South Africa, Italy/Austria	1	6	6
Cultural and social interactions	9	Spain, Romania, Montenegro, Poland, South Africa, Indonesia, Croatia, Germany, Italy/Austria	3	27	1
Educational system	7	Germany, Romania, Montenegro, Poland, South Africa, Indonesia, Italy/Austria	2	14	4
Work-life balance	3	Montenegro, Croatia, Italy/Austria	2	6	6
Store hours and shopping	6	Spain, Germany, Romania, Italy/Austria, Indonesia, Poland	1	6	6
Health care and administrative processes	4	Germany, Indonesia, Romania, Montenegro	2	8	5
Accommodation	6	Indonesia, Montenegro, Spain, Croatia, Germany, South Africa	3	18	3

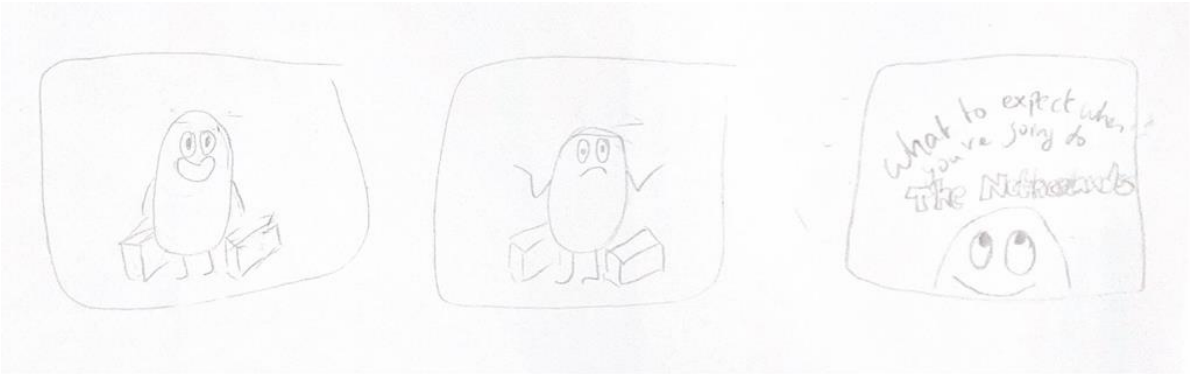
Local traditions and festivities	4	Montenegro, Croatia, South Africa, Italy/Austria	1	4	11
Weather	2	Indonesia, South Africa	1	2	12
Associations	3	Croatia, Germany, Romania	2	6	6

Appendix D: Concept Draft Sent for Feedback



----Introduction----

So, you're planning on moving to the Netherlands for your studies? Do you know what you will encounter there? Here is some information about different aspects of the Dutch culture that can help you prepare for what to expect when you're going to the Netherlands.



Accommodation

Finding an accommodation can be challenging. Where should you look? Often universities provide sources, but social media platforms and social connections can also be used to find housing.

And what type of accommodation do you want? Do you want a studio? Or do you prefer to live in a shared house? If you want to live in a shared house, be aware that you will probably have to go through a procedure called "hospiteren". Hospiteren is a process where you, as a potential roommate, meet with current residents to see if you are a good fit for the shared accommodation. The hospiteer process can differ between houses.

If you find a room you like, send the house an email with a brief introduction about yourself, such as your name, age, study, hobbies etc. Include a motivation about why you want this room in this particular house. The goal is to distinguish yourself from others and show why the house should want you as a roommate. Highlight how you can contribute positively to the house, whether it is through your personality, skills, or interests. Adding a photo of yourself is a plus, as it will make it easier for them to remember you.

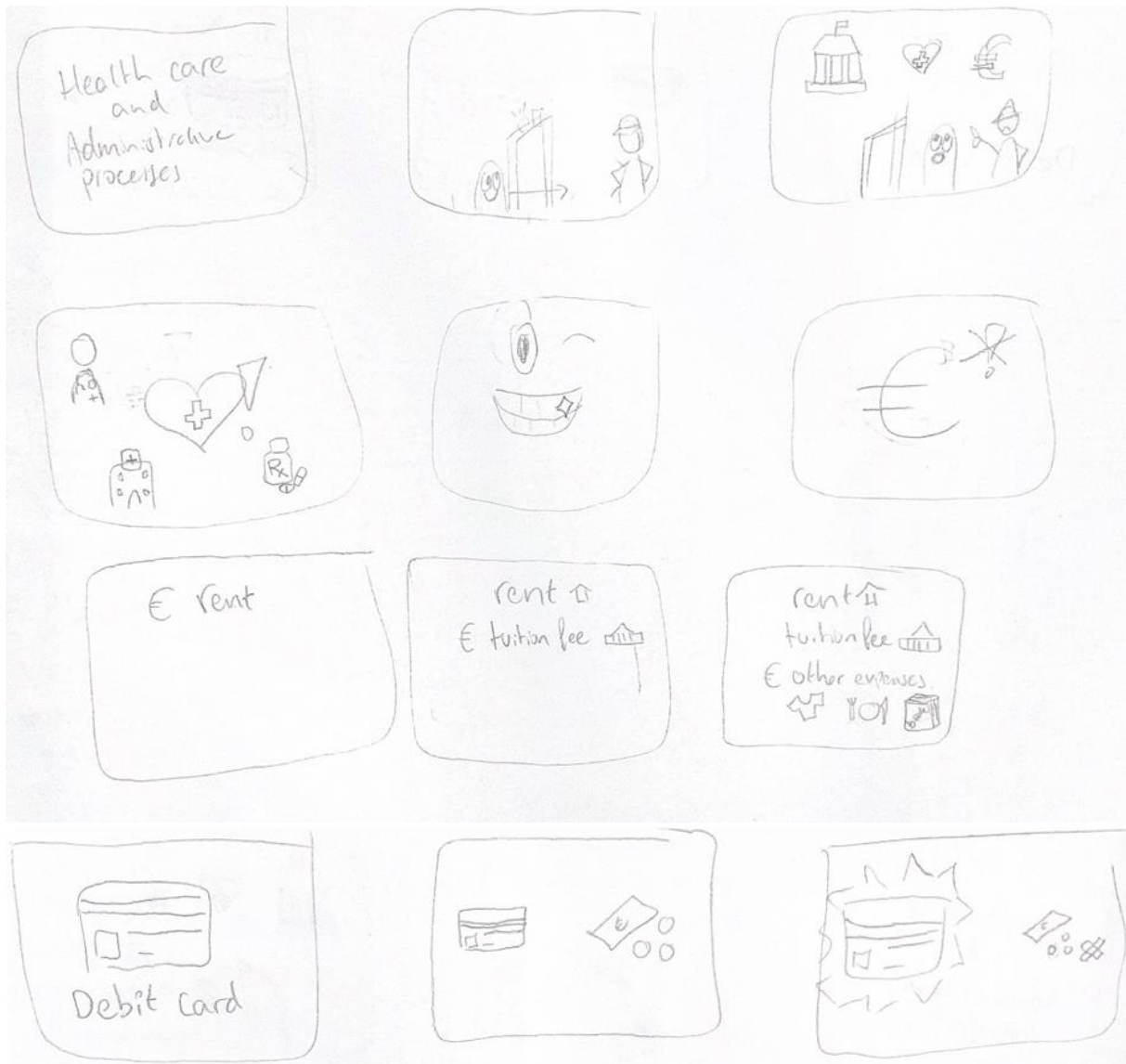


Health care and administrative processes

You will have to go through various administrative processes, such as registering with the municipality, acquiring health insurance and optionally setting up a Dutch bank account.

Dutch health insurance is obligatory and covers GP visits, hospital care, and prescriptions. Additional coverage, such as dental care, is optional.

Even though, setting up a Dutch bank account is not mandatory, it could be very practical for handling rent, tuition fees, and other expenses. Payments are generally made using a debit card. Cash is also used but is way less popular, and not always accepted.

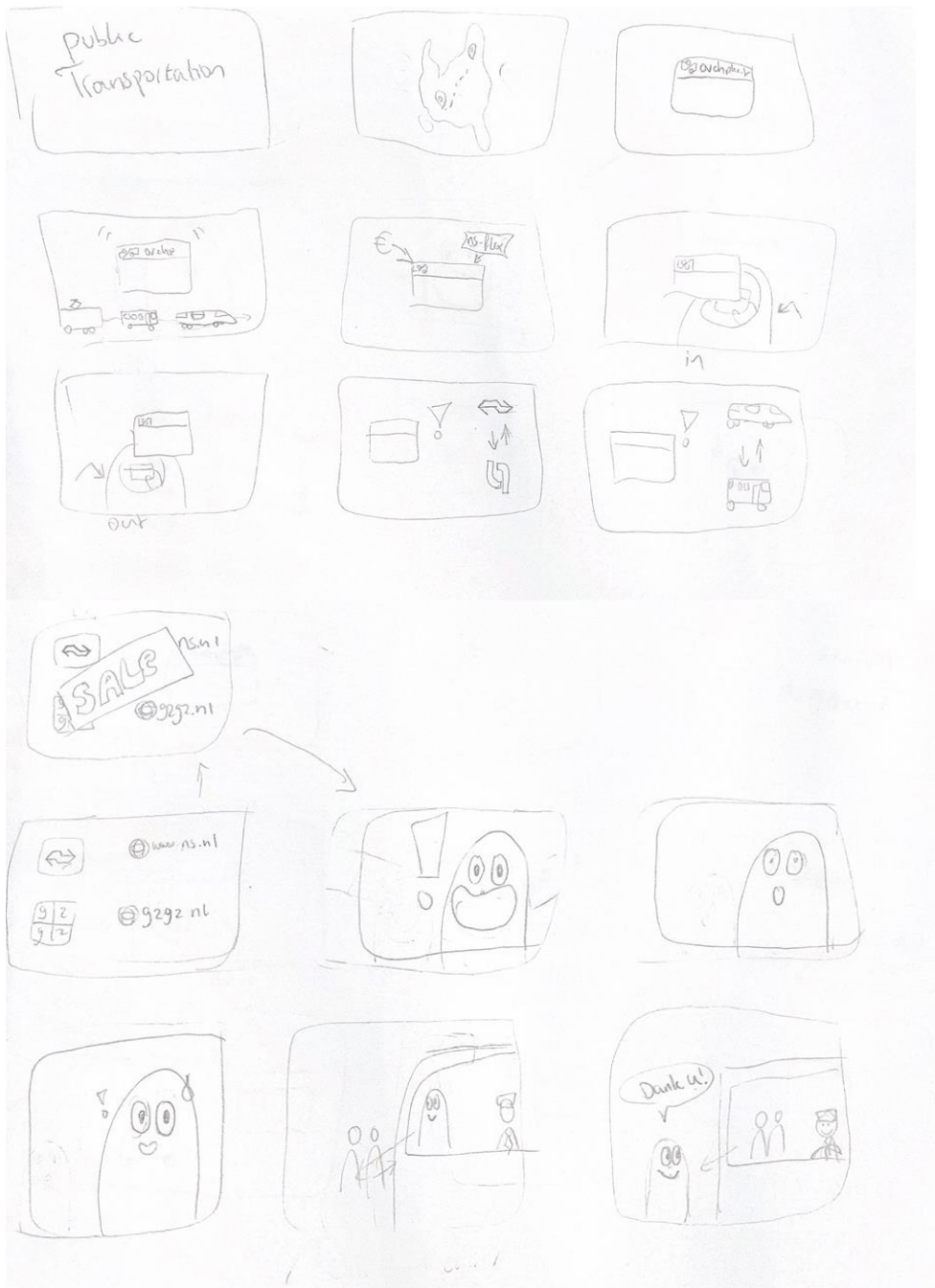


Public transportation

If you want to travel by public transport in the Netherlands, it is practical to acquire an “ov-chipkaart”. The ov-chipkaart is a contactless smart card, which serves as a convenient multifunctional payment method for trains, busses, trams and metro services across the country. You can load credit onto the card or add travel products and then simply check in and out at card readers when entering and leaving the transport system. Also, be aware that you should check in and out when you switch from train operator or vehicle.

TIP: check for subscriptions, because public transportation in the Netherlands can be quite expensive.

There are apps and websites that could help you plan your travels. When you travel, make sure to follow the etiquette, such as not talking too loudly, allowing people to exit before entering and thanking the bus driver when leaving the bus.



Cultural and Social Interactions

Attending your study's introduction days is highly recommended since it offers a great opportunity to make friends which can help you to integrate more easily into your new Dutch social life. Be warned: Dutch people are known for their direct communication style, which can be surprising for newcomers. This directness is not meant to be rude; it's a cultural norm that values honesty and clarity. And don't be afraid to ask a stranger for help. Even though the Dutch tend to keep a respectful distance, they are often very friendly.

Although it can certainly help to get into the Dutch social bubble by understanding and speaking a bit of Dutch, Dutch people generally speak English quite well.

When you go out for food or drinks, it's common to pay for your own share. The Dutch often use a mobile app called "Tikkie". It is used to quickly and easily request payments from friends.



---Outro---

Hopefully, you feel a bit more prepared for your journey to the Netherlands. While it may seem overwhelming at first, you will eventually find your place. Just take it one step at a time. If you encounter challenges, there will be people ready to help you along the way. Welcome to the Netherlands and let it become your home away from home.



Appendix E: Final Script

So, you're planning on moving to the Netherlands for your studies? Do you know what you will encounter there? Here is some information about different aspects of the Dutch culture that can help you prepare for what to expect when you're going to the Netherlands.

Accommodation

Finding an accommodation can be challenging. Where should you look? Often universities provide sources, but social media platforms and social connections can also be used to find housing. Make sure that you start looking for accommodation well in advance since it could take some time.

And what type of accommodation do you want? Do you want a studio? Or do you prefer to live in a shared house? If you want to live in a shared house, be aware that you will probably have to go through a procedure called "hospiteren". Hospiteren is a process where you, as a potential roommate, meet with current residents to see if you are a good fit for the shared accommodation. The hospiteer process can differ between houses.

If you find a room you like, send the house an email with a brief introduction about yourself, such as your name, age, study, hobbies etc. Include a motivation about why you want this room in this particular house. The goal is to distinguish yourself from others and show why the house should want you as a roommate. Highlight how you can contribute positively to the house, whether it is through your personality, skills, or interests. Adding a photo of yourself is a plus, as it will make it easier for them to remember you.

Educational system

The Dutch educational system is known for its practical orientation and informal culture. Students frequently work in groups, and projects often use problem-based learning. Before enrolling in courses, it's a good idea to do some research on the course formats. It can be helpful to know whether your grades will be based on assignments, exams, or attendance. The grading system is typically stricter than in many other countries and it uses a scale from 1 to 10, with specific criteria for passing and failing grades.

The use of first names to address professors can feel impolite, but is a norm in Dutch academia, allowing a more approachable and less formal environment. However, in emails, it is customary to use the professor's last name.

Health care and administrative processes

You will have to go through various administrative processes, such as registering with the municipality, acquiring health insurance and optionally setting up a Dutch bank account.

It is obligatory to be registered at a Dutch GP as well as to have a Dutch health insurance which covers GP visits, hospital care, and prescriptions. Additional coverage, such as dental care, is optional.

Even though setting up a Dutch bank account is not mandatory, it could be very practical for handling rent, tuition fees, and other expenses. Payments are generally made using a debit card. Cash is also used but is way less popular, and not always accepted.

Public transportation

If you want to travel by public transport in the Netherlands, it is practical to acquire an "ov-chipkaart". The ov-chipkaart is a contactless smart card, which serves as a convenient multifunctional payment method for trains, busses, trams and metro services across the country. You can load credit onto the card or add travel products and then simply check in and out at card readers when entering and leaving the transport system. Also, be aware that you should check in and out when you switch from train operator or vehicle.

TIP: check for subscriptions, because public transportation in the Netherlands can be quite expensive.

There are apps and websites that could help you plan your travels. When you travel, make sure to follow the etiquette, such as not talking too loudly, allowing people to exit before entering and thanking the bus driver when leaving the bus.

Cultural and Social interactions

Attending your study's introduction days is highly recommended since it offers a great opportunity to make friends which can help you to integrate more easily into your new Dutch social life. On these days, you also have the opportunity to get in touch with sports, study, and cultural associations, where you can make many social connections. Be warned: Dutch people are known for their direct communication style, which can be surprising for newcomers. This directness is not meant to be rude; it's a cultural norm that values honesty and clarity. Although it can certainly help to get into the Dutch social bubble by understanding and speaking a bit of Dutch, Dutch people generally speak English quite well.

When you go out for food or drinks, it's common to pay for your own share. The Dutch often use a mobile app called "Tikkie". It is used to quickly and easily request payments from friends.

Hopefully, you feel a bit more prepared for your journey to the Netherlands. While it may seem overwhelming at first, you will eventually find your place. Just take it one step at a time. If you encounter challenges, there will be people ready to help you along the way. Welcome to the Netherlands and let it become your home away from home.

Appendix F: Evaluation Questions

Relevance and Usefulness

1. How relevant would information like this be to your own experience as an international student in the Netherlands?
2. Would you recommend this animation (or future versions) to other international students moving to the Netherlands?

General impression

3. What is your overall impression of the animation? Please explain why?
4. How visually appealing did you find the animation?
5. In what ways, if any, did the visuals impact your understanding of the content?
6. What did you think of the background music?
7. What did you think of the voice-over?
8. Was the length of the video appropriate for the topics it covered (introduction and accommodation)?
9. What did you think about the pacing of the animation?
10. How engaging did you find the video?
11. Do you have any additional comments?

Introduction specific questions

12. Did the introduction give you enough information on what the video would entail?
13. Do you have any suggestions for improving the introduction?

Accommodation specific questions

14. How clear was the information about the accommodation in general?
15. Do you have any suggestions for improving the part of the video about accommodation?

Format

16. Would you find it helpful if this is part of a larger support system (e.g. combined with a website or mobile app)? If yes, what additional recourses of formats would you like to see?
17. What do you think about the use of animation as the format for this information? Would you have preferred a different format? (e.g. Podcast, Website, documentary etc.) If so, please explain.

Demographic

18. What is your nationality?
19. What level of study are you currently pursuing: Bachelor's, minor, or master's?
20. Do you have previous experience with living abroad? If so, what experience?

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