Tindergration

A fun way to study for the Dutch Civic Integration Exam

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Abstract

This paper aims to explore the potential of serious games applied to the civic integration exam that is mandatory for the non-EU citizens who wish to ask for the Dutch citizenship. To this end, this research will contemplate foreign subjects, and two different methods of preparing for the exam will be compared: the first one consisting of conventional approaches before taking the exam, and the second one consisting of experiencing a serious game version of said exam before taking the original exam. For the serious game, the use of Figma platform was opted for, in order to develop a cell phone app inspired by usual social services such as Tinder and Instagram, that go by the principles of simple interactions and high intuitivity, alongside with the use of visual resources (images) an a storytelling approach, reaching for a lower cognitive load and higher engagement experience than the conventional exam. By comparing the grade obtained by the group who studied using conventional approaches and the group that studied using the gamified version, it will be possible to assess if there is any substantial performance difference between the two groups, pointing to different learning curves and information assimilation.

1. Introduction to the Civic Integration process

If one wants to integrate in the Netherlands, they must learn the Dutch language and culture. To prove their knowledge, they must pass the civic integration exam (inburgeringsexamen in Dutch).

One is allowed to pass the civic integration exam if:

a) they are a non-EU citizen living legally in the Netherlands for 5 years and want to ask for a permanent residence;

b) they want to get a Dutch passport after living legally in the Netherlands for 5 years;
c) they are granted asylum as a refugee and the Immigration and Naturalization Service (Immigratie en Naturalisatiedienst - IND) has given them permission to stay;

d) they are a non-EU citizen married to or in partnership with a Dutch citizen and requesting a permanent residence.

This exam is administered by the Education Executive Agency (Dienst Uitvoering Onderwijs - DUO) and the municipality plans together with the applicant which exams will be mandatory. This is called Personal Integration and Participation Plan (persoonlijk plan inburgering en participatie in Dutch - PIP).

In this process, the applicant has up to three years to integrate (this is called the integration period), to pass 6 exams (differences may apply depending on the year the process was initialized, if the applicant is an asylum seeker or proven unable to pass the exams). These exams are divided into knowledge of the Dutch society, Orientation on the Dutch Labour Market (from 2022 on this exam is not requested anymore) and knowledge of the Dutch language, the former divided into writing, speaking, listening and reading. All exams are conducted in Dutch.

A table with a list and prices can be found in Appendix A. Since there are several courses that teach the Dutch language in many different methodologies, for the purpose of this research, I decided to focus only on the Kennis van de Nederlandse Maatschappij (KNM).

1.1. KNM exam:

The KNM exam is done on a provided computer and consists of 40 to 43 questions. In each question there is an audio telling a short story, a question and three options as answers. The applicant has 45 minutes to answer at least 28 correctly (70%). The questions have a variety of themes related to Dutch culture including the educational system, the health care system, housing and waste management, the Dutch history and related geography, public and consumer agencies, the various government departments, and other related topics. Marilene Gathier, in her book Welkom in Nederland, divides the chapters into 10 themes for the exam:

- Getting to know the Netherlands: the country, important cities, seasons, languages...
- The people in the Netherlands: important family days, holidays, contacts...
- Health and healthcare in the Netherlands: the family doctor, medicines and where to find them, emergencies, health insurance...
- Living in the Netherlands: buying a house, renting a house, important notes, what you need to pay for...
- Services in the Netherlands: police, municipality, taxes, resident permit and naturalization…
- Upbringing and education in the Netherlands: taking care of your children, education…
- Working in the Netherlands: who can help, apply for positions, start your own business, rights and obligations when you have a job…
- Living together in the Netherlands: relationships and sexuality…
- The history of the Netherlands: the time before 1800, the time after 1800…
- Politics in the Netherlands: the board of the Netherlands, elections, rules…

The exam is mandatory, but the method of studying for it is the applicant’s choice. They can study from the books, enroll in a course in a school or online, use apps with quizzes, follow videos on YouTube or other platforms.

The exam is mandatory, but how to study for it is the applicant’s choice. They can study through the books sold online for 44.95 in bol.com, follow a course in a school or online, apps with quizzes, follow videos on youtube or other platforms.

1.2 Problems with the integration process

Only in 2021, almost 26,000 people were in the process of civic integration, but a mere 746 people finished the process. In 2020, just over 3000 out of 20,000 people finished it. According to De Correspondent and Gemeente.nu this low amount of participants finishing the process is due to a few problems:

- Before starting the civic integration process, participants must have a residence. This may take a while, and therefore cause delay to their studies.
- Participants must receive a call from the Education Executive Agency to begin their process. Sometimes this call comes very late.
- Participants have difficulties finding the right course, as they not only need it to be close to them but also suited to their level and learning pace.
- Information about the exams is not easy to find.
- The quality of the course is not always sufficiently monitored and available to the participants.
- The schools only improve their quality after receiving complaints from the students and too few people pass the exams. It takes around 3 years before the schools’ rates are assessed.
- Participants are not always able to physically attend classes, as they might need to take care of a family member, be sick, have too little time to commute etc.
The classroom has students of different levels, rendering it difficult for latecomers to adapt and for higher level students to advance.

2. Serious games

Sometimes we are unable to teach, train, investigate or analyze in the real environment. For example, whenever a researcher needs to deal with a situation that cannot be investigated directly; or when, for a student, practicing in the real world would be dangerous and/or costly (a pilot or a surgeon are examples); or when a politician wants to assess the positive and negative sides of a new policy. In all these situations, we can resort to gaming environments.

Sometimes, in a factory or governmental setting, testing different possibilities is too expensive and risky due to its complexity. In a serious game, complex processes can be simulated, compared, trained and improved (Abt, 1987).

2.1 Definition

Before getting into the definition of a serious game, it’s important to understand the definition of games in general. To Clark C. Abbot, a game is: “an activity among two or more independent decision-makers seeking to achieve their objectives in some limited context” (Abt, 1987, 6).

To Bernard Suits “My conclusion is that to play a game is to engage in activity directed towards bringing about a specific state of affairs, using only means permitted by rules, where the rules prohibit more efficient in favor of less efficient means, and where such rules are accepted just because they make possible such activity.” (Suits, 2005, 49).

To Michael and Chen, “Games are a voluntary activity, obviously separate from real life, creating an imaginary world that may or may not have any relation to real life and that absorbs the player’s full attention. Games are played out within a specific time and place, are played according to established rules, and create social groups out of their players.” (Michael & Chen, 2006, 19).

If one looks at the definition of the word “game” in the dictionary, competition is a common feature. In the Oxford Dictionary, game is “an activity or a sport with rules in which people or teams compete against each other”. In Merriam Dictionary game is “a physical or mental competition conducted according to rules with the participants in direct opposition to each other”.

With so many definitions for “game”, there would be, obviously, many definitions for serious games. In his book from 1987, Clark C. Abt explains serious games as: games that “[...] have an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement.” (Abt, 1987, 9). It is important to notice
that, by his definition, the educational purpose doesn’t have to be necessarily implemented in the design of the game, but it could be assigned to the game depending on its purpose. This means that a game originally designed for entertainment could still be used as a serious game.

Michael and Chen (2006) define serious games in their book as “A serious game is a game in which education (in its various forms) is the primary goal, rather than entertainment” (Michael & Chen, 2006, 17). However some games don’t have educational purposes and are still considered serious games. One example of this is games used to distract patients going through painful therapy, (Breuer & Bente, 2010)

Although we still haven’t agreed on one single definition of serious games, most researchers and game designers agree that serious games are used for more than pure entertainment (Susi et al., 2007).

It is also important to understand the difference between serious games and gamification. Gamification is the procedure of inserting game elements in non-game content, usually to increase engagement by adding an element of competition, reward, or challenge e.g. badges and achievements. Serious games, on the other hand, are games designed with non-entertainment purposes, but with the intention of learning, training, experimenting or motivating. (Deterding et al., 2011)

### 2.2. Advantages of serious games

Serious games describe an intention of the player or developer to include a purpose other than pure entertainment. Serious games communicate through fun and immersive gameplay. While being engaged in gameplay, learners are more receptive to learning or acquisition of a new skill and behavior change (Boyle et al., 2016).

In short:

- Serious games are games whose objective is not just entertainment, enjoyment or fun, which would be an added value, but to use the entertaining quality for training and education. (Michael & Chen, 2006, 21)
- Serious games are developed or changed to have an educational purpose, the goal is for the player to acquire new knowledge/skills.
- Players are willing to invest more time and energy in game play because the game play itself is rewarding.
- It is possible to simulate real tasks in such a way that performing them in a game environment involves the same cognitive processes that are required for the task in the real world.

### 2.3. Classifying serious games
There are many ways of classifying serious games. The most common is the application field. Michael and Chen (2006) divide them in: military, government, educational, corporate, healthcare, political, religious and art games. Within these groups, some subgroups are also mentioned by Susi et al. (2007).

Ratan and Ritterfeld (2009) reviewed 612 serious games. Based on the description of these games, they classified them in four major points:

1. Primary educational content: Academic education, social change, occupation, health, military, and marketing.

2. Primary learning principle: Practicing skills, knowledge gained through exploration, cognitive problem solving, or social problem solving.

3. Target age group: Preschool and below, elementary school, middle school and high school, and college, adult and senior.

4. Platform: PC and other platforms (stationary gaming consoles, handhelds and other mobile platforms)

Breuer and Bente (2010) suggest an approach adding every game, since commercial games can be used as serious games depending on the approach used. The table can be seen on appendix B.

3. Tinder interface

According to David, G., & Cambre, C. (2016) the act of touching, dragging, pinching or scrolling a screen or display became a common gesture for people who commonly use their mobile phones. More specifically, the act of swiping itself, which can be made with only one thumb, is a normal gesture for mobile phone users when unlocking the screen on the start screen. This act is also a firm and decisive gesture which gives the user a feeling of control while at the same time allowing for direct interaction that leads to the desired result in a quick and easy way.

Since the tinder interface is not cluttered with too many objects, the user is focused on the task at hand. The low cognitive load required by this type of interface is what led me to decide to base the user’s interaction with my app on tinder.

François Alliot, creator of the game “Reigns”, where you make decisions as the king of a kingdom by swiping in one of two directions, mentions in an interview that he thinks that there is an irony in making an important decision by casually moving your thumb left or right.

The same applies to my game, as important life decisions are made by a simple finger movement that might lead the user to situations that they had not anticipated and might therefore find entertaining.
4. Storytelling

Storytelling is a prehistoric form of communication. When we started to articulate, draw or paint, we were using storytelling to pass over information. Tribes used stories to pass over their customs, history and knowledge to the new generations. (Neuhauser, 1993) Until recent years, this method was used spontaneously and was not considered to be a learning and teaching technique. Recently this notion has changed. Storytelling can be considered a learning and teaching tool if used in a meaningful and thoughtful way. (Alterio & McDrury, 2003)

Stories can be spontaneous or predetermined. Spontaneous stories are the most common ones and occur when the storyteller feels the urge to share an event that just happened. Usually they contain an interesting, funny or serious fact and have a strong affective force. Predetermined stories are the ones that the teller has thought about and carefully crafted, maybe even written them. They are less common but more likely to provide reflective learning. In predetermined stories, the teller has already thought about their consequences but would like to reflect even further. (Alterio & McDrury, 2003)

Stories are an effective and meaningful learning tool. Stories are realistic, they are usually related to humans or human-like situations and we tend to see this as an authentic source of knowledge. Stories are easy to remember and engaging, they involve the listener in the acts and thoughts of the characters, immersing them in the story and creating a deeper connection between character-listeners. (Rossiter, 2002).

5. The solution

Having in mind the possibilities that serious games and narratives can create, I concluded that these concepts could be used in order to help foreigners study for the civic integration process. I wanted to create an application that would be easy to use. If something overcomplicated was made, it would drive the user away from the app.

Using the tinder system would make it user friendly and making it mobile would enable the learners to study anywhere. In this way delays caused by the inability to attend courses would no longer be an issue.

Moreover, each user can use the app at their own pace and is no longer dependent on the level of their peers or the effectiveness of the course.

Issues such as finding the right course in terms of quality are eliminated, since the app reviews and ease of giving feedback not only allow the user to effortlessly check the rating of the app but also give them the opportunity to actively participate in its improvement.
I therefore decided to make an easy to use mobile serious game with a narrative approach.

6. The game

The game was made by means of a software called Figma. This software is a web-based prototyping tool focused on user interface and user experience. Figma was chosen for its large number of tutorials found online, its connectivity to a mobile version and its many features, one of which is the possibility to create a Tinder-like app, where the user can choose between two options by swiping left or right.

My aim was to create a game that people could use to study for the KNM test anywhere in a fun and relaxed way. The game-format would render studying for the test a pleasant experience and could be used alone or additionally to the existing methods of studying. Its versatility, which allows the user to play it in short periods of “dead time” and in places where studying from a book would be difficult or impossible (e.g. transportation means, while waiting for an appointment e.t.c.) helps the user engage more with the goal at hand and get more familiar with the questions as the game can be repeated as many times as desired. I based my interface on famous apps like Tinder, Instagram or TikTok where the user only needs simple commands to interact with the app. Therefore, with not too many things on the screen and having simple interactions the cognitive load of the app is low. This makes the game more attractive to the user, especially the younger people who are nowadays used to quick and easy ways of interacting that don’t require a long attention-span.

The players are initially introduced to a situation where they find themselves wanting to move to the Netherlands with their family and needing to face certain realistic circumstances that someone in their situation would face. Another considered option was to create a fake family and ask the players to help this family. I decided not to create this fake family and ask the player what that family should do because I wanted the players to feel like they were facing those situations themselves, giving the user the feeling they are inside the game, leading to more excitement and positive emotions. For this same reason, I also didn’t give a gender to the player nor to the partner, so any player could see themselves in the shoes of the main character. This introduction renders the game more personal to the player, who is thus immersed in the story and will try to answer the questions correctly as to overcome the obstacles presented to them.

The game thus takes the user through a series of events as they could occur in a realistic timeline. It begins namely with the preparation of the game’s character (which is the user) for their trip to the Netherlands, continues with the way to reach the country, to find a place to stay, to find a job and goes on to present everyday situations of people who live in the country, such as finding places to visit, finding a school for the kids, picking someone up from the airport etc.
Each event is presented on the user’s screen in the form of a description of the situation that the character/user is facing on the top of the screen, a related photo under the description and two options at the bottom of the screen, presenting two possible ways of dealing with the issue at hand. The photo is another element that renders the game more familiar to the user who recognizes the depicted places or events and thus creates a more realistic feel to it. The player must choose one of two possible options by swiping in its direction. Depending on the choice the player is presented with a new screen that comments on the answer given in a light-hearted, yet teaching manner. The comment has a green or red board around it, in order to help the user identify whether they have answered the previous question correctly or wrongly, in case the text is not enough to clarify. It is also accompanied by a relative photo for the reasons mentioned above. The comments on the wrong answer explain on many occasions that although the chosen option is not the correct one there are still perks to it. This way the player is not discouraged after giving the wrong answer and still wants to continue playing.

The game consists of 10 questions and 20 outcomes. These questions are based on the original questions but re-written in a story-telling way, so as to engage the user more. I.e., instead of asking “where is Schiphol?” in a direct way, the user is told that they need to pick up their family from Schiphol airport and that they need to decide which way to go in order to reach the airport.

7. The experiment

For this experiment I created two documents plus the app. The first document was a questionnaire mocking the original KNM test. This questionnaire is a test consisting of 1 question asking which method the participant used to study for the test and 10 questions based on the original KNM test.

The people chosen to participate in the experiment were mostly non-Dutch people who have little knowledge of Dutch culture and in their majority don’t live in the Netherlands. The participants were divided in 3 groups:
- Those who studied by reading a small text with the content of the test
- Those who studied for the test via the app
- Those who didn’t study for the test

All groups were given a mock test based on questions from the original KNM test. The first 2 groups took the mock test after studying.

7.1. The results
<table>
<thead>
<tr>
<th>Type of participant</th>
<th>Average score on the test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studied through a document</td>
<td>9.57</td>
</tr>
<tr>
<td>Studied through the app</td>
<td>9.17</td>
</tr>
<tr>
<td>Only did the test</td>
<td>5</td>
</tr>
</tbody>
</table>

According to the results, the participants who played the app before doing the test had a lower average grade than those who studied by reading the text (9.17 and 9.57 respectively). The difference between the average grades was nevertheless small (only 0.4). It’s also important to mention that due to the small number of participants, the grade of one participant had a great impact on the average grade of the total.

What is remarkable though, is that both study methods helped the participants to learn when we compare them to the results of the participants that only did the test (5.0). This means that apart from a tool to be used additionally to the traditional way of studying to “kill” time in a productive way, further development of the app could render it a stand-alone tool for people to use exclusively to study for the exam.

8. Feedback

Although the results of the participants playing the app were somewhat lower than the ones reading the text, it seems that these participants found the app-way of studying more entertaining than reading.

Some were laughing while playing it and mentioned that they had a lot of fun learning in this way. According to a number of them, the funny, light-hearted and realistic nature of the comments in combination with the photos made some answers “stick”, as they would create in them the feeling of experiencing the events in real life.

A lot of the participants who already live in the Netherlands commented on the fact that they found the app very interesting, as they learned about things that they didn’t know and felt the desire to learn more and more as they were playing the game.

Others shared they would have liked to have had such an app to inform them when they first moved to the Netherlands to avoid going through unfortunate situations such as the first Monday of the month alarm, which they were completely unaware of and felt very scared the first time they heard.

What was very interesting was the feedback from Dutch participants, who felt that they were learning from the app as well, since they too were not aware of certain facts relating to their country, such as e.g. the four values on which the Dutch constitution relies. Some of them also commented that they would like to share the app with their
foreign friends in order to help them become more familiar with the Dutch culture but also to have better communication with them.

All of the above indicate that the purpose of creating this app has been accomplished. It can constitute an attractive way of studying for the exam and therefore help not only more candidates succeed, but also people who want to learn more about the Netherlands.

9. Future of the app

The results of the test combined with the feedback received by the users give a lot of ideas for the future development of the app, that would enhance both the game experience and the learning goals.

Some of the possible improvements are as follows:

- The number of questions/outcomes can increase, thereby covering more aspects of the test.
- The answers can be chosen not only by swiping but also by tapping on the chosen answer, in order to satisfy a broader range of users with different preferences.
- Photos can be replaced by videos for an even more engaging experience.
- Different colors and font styles can be used in order to render the app more attractive to the user.
- Dutch music can be added (with a silent option) in order to make the app more fun and bring the user even closer to the Dutch culture.
- An option for trivia can be added for the users who want to expand their knowledge beyond the limits of the test.
- Useful information about the exam can be added.
- Different levels can be implemented, so as to gradually take the user to the desired level of knowledge.
- Implementation of rewards when a question is answered correctly.
- Debriefing or score added at the end of the game in order to inform the user how they did and encourage them to try again in case of mistakes.
- The app can be translated in Dutch in order to be on par with the KNM test and help users with their Dutch language skills while learning.

The more engaging the app is made, the more the user will be prompted to play repeatedly and therefore the more the success of the app.
The purpose would be to gradually render the app equally usable as an additional tool as well as a stand-alone tool for people’s studies for the test.

For this goal to be achieved attention must be drawn to keeping the app simple, fun and easy to use. An overload of information might “drown” the user and deter them from using it. To this end, the game-style should remain intact and the storyline simple and easy to understand.

More experiments with even bigger samples of people would help test the efficacy of any new features used, so as to not compromise the quality and engaging goal of the app.

This project has been a valuable and enriching experience for me. Although at first glance creating an app seems very simple and easy, it actually demands attention to numerous details which cover a broad scope of fields. Already from the beginning I found out that something as basic as the concept of the game is inextricably linked to mechanics and design, and subsequently takes a lot of time to develop for someone inexperienced like myself. I quickly realized that graphic design knowledge is not enough on its own as it has to be combined with user experience knowledge in order to build an attractive product. The narrative itself necessitates someone with imagination, as well as storytelling and copywriting skills. All these different specialties need to be combined and work together well in order to achieve the desired result. The complexity of this project not only helped me develop my abilities further but also forced me to acquire new skills that will certainly prove very useful in my subsequent endeavors.

The future seems promising and full of possibilities!

References


Rossiter, Marsha. (2002). Narrative and Stories in Adult Teaching and Learning. ERIC Digest.


Appendix

Appendix A: Costs of the civic integration exams
### Appendix B: Classification of games by Breuer and Bente (2010)

<table>
<thead>
<tr>
<th>Label/Tag Category</th>
<th>Exemplary Labels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Platform</td>
<td>Personal Computer, Sony PlayStation 3, Nintendo Wii, Mobile Phone</td>
</tr>
<tr>
<td>2. Subject Matter</td>
<td>World War II, Sustainable development, Physics, Shakespeare’s works</td>
</tr>
<tr>
<td>3. Learning Goals</td>
<td>Language skills, historical facts, environmental awareness</td>
</tr>
<tr>
<td>4. Learning Principles</td>
<td>Rote memorization, exploration, observational learning, trial and error, conditioning</td>
</tr>
<tr>
<td>5. Target audience</td>
<td>High school children, nurses, law students, general public, pre-schoolers, military recruits</td>
</tr>
<tr>
<td>6. Interaction mode(s)</td>
<td>Multiplayer, Co-Tutoring, single player, massively multiplayer, tutoring agents</td>
</tr>
<tr>
<td>7. Application area</td>
<td>Academic education, private use, professional training</td>
</tr>
<tr>
<td>8. Controls/Interfaces</td>
<td>Gamepad controlled, mouse &amp; keyboard, Wii balance board</td>
</tr>
<tr>
<td>9. Common gaming labels</td>
<td>Puzzle, action, role-play, simulation, card game, quiz</td>
</tr>
</tbody>
</table>

Table 1: Label/tag categories for classifying serious games

### Appendix C: Text in the app
Tindergration
The Netherlands: are you a match?
Let’s find out!

Here you will face a series of situations where you can choose a path by dragging the picture to the left or to the right. The app will then show you the consequences of your choice.

Just click on the screen and you will head to the next Dutch real-life dilemma.

Are you ready?
Let’s go!

Start button

You, your partner and your daughter are moving to The Netherlands. Before the big day comes, you will all decide to learn the local language. What language will you study?

<table>
<thead>
<tr>
<th>You choose Dutch:</th>
<th>You choose German</th>
</tr>
</thead>
<tbody>
<tr>
<td>You start a Dutch course and realize that arriving with some knowledge of the local language will help your daily life and your integration. You learn many words and can form full sentences even before crossing the border. This knowledge will be highly useful and appreciated in your new life! Goed Gedaan!</td>
<td>You join the German classes. It is only a couple of days before moving to The Netherlands you realize you should have been learning Dutch instead. Although many words are similar, it is an entirely different language. You manage to learn at least how to say thank you, and that if things are not awesome, they can just be PRIMA.</td>
</tr>
</tbody>
</table>

The day has come! While your partner and daughter stay back to sell the house, you travel first by car bringing all the furniture. You drive to The Netherlands and at some point you reach Belgium. From there, where should you go?

| Drive west | Drive north |
You go west and end up in France. You buy a map and a bag of croissants and see you’ve been traveling the wrong direction for hours.

When you finally arrive in The Netherlands, you are exhausted and just a little bit fatter. The next morning you realize Dutch croissants are just as good.

You are in the Netherlands, what a beautiful country! But where should you live? So many options!

After reading all about the Royal family, you decide it is close to King Willem and Princess Maxima you want to live. Where should you look for a house?

<table>
<thead>
<tr>
<th>Groningen</th>
<th>Zuid-Holland</th>
</tr>
</thead>
<tbody>
<tr>
<td>You find a nice place in Groningen. After a while you find out the Royal family doesn’t live anywhere nearby. There goes the chance of meeting them in a bakery.</td>
<td>So exciting! You are living not that far from the Dutch royal family! Who knows, maybe one day you can stumble on royalty in the bakery?</td>
</tr>
</tbody>
</table>

You bought a house. What an achievement! You are happy your family can finally join you in this beautiful country. They will come by plane and will be arriving in Schiphol.

You should pick them up, but in which city is Schiphol located?

<table>
<thead>
<tr>
<th>Rotterdam</th>
<th>Amsterdam</th>
</tr>
</thead>
<tbody>
<tr>
<td>After a while, you reach Overschie, a little neighborhood in Rotterdam that should be close to the Airport - but you realize it is the wrong one. Schiphol is actually in Amsterdam. It takes you quite some time to drive all the way there. You arrive and your family is already out, waiting for you.</td>
<td>You go straight to Amsterdam. You follow the signs and arrive in Schiphol just in time. You celebrate the arrival of your family passing by FEBO on the way home.</td>
</tr>
</tbody>
</table>
Luckily they had a krokett while waiting, so everyone is still very happy.

Everything is going amazing! You and your partner have great jobs, your daughter is already enrolled in a school… but then she starts feeling a bit off. She has some fever, a cough, and a consistent headache. You should take a look at this. Where do you go?

<table>
<thead>
<tr>
<th>Go to the hospital</th>
<th>Go to the family doctor</th>
</tr>
</thead>
<tbody>
<tr>
<td>You arrive at the hospital. When they hear the complaints, they ask you to go to the family doctor (huisarts) first. You only go to a hospital in case of an emergency and scheduled procedures..</td>
<td>The doctor checks her up and sees it is nothing serious. In a couple of days your daughter should be healthy again. Good thing you didn’t go to the hospital. In cases like this, it is important the huisarts is informed, and the doctor will suggest a specialist or the hospital if it is needed.</td>
</tr>
</tbody>
</table>

Today you have some free time and you want to visit a new city. You remember you were told at work that one city was bombed during WWII and now it is famous for its architecture and skyline. You want to go there.

<table>
<thead>
<tr>
<th>Go to Rotterdam</th>
<th>Go to Utrecht</th>
</tr>
</thead>
<tbody>
<tr>
<td>You arrive in Rotterdam. You like the architecture and the large buildings. The skyline is different from any other city! Rotterdam is so modern! You see the “Destroyed City” monument made to remember the bombing in WWII</td>
<td>You arrive in Utrecht. Nice city, but you were expecting it to be more modern. After some time you realize you should have traveled to Rotterdam instead. You will make plans to go there on your next trip - but you will take the opportunity and</td>
</tr>
</tbody>
</table>
Today you and your family are spending all day in Rotterdam, what do you want to visit there?

<table>
<thead>
<tr>
<th><strong>Europoort, the largest port in Europe</strong></th>
<th><strong>The IJsselmeer, the largest lake in the Netherlands</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>You visit the Europoort. It's so big! You have never seen anything like it! You see many huge ships entering and leaving the port, which is one of the world's busiest ports. It is considered a major entry to Europe.</td>
<td>You try to go there. After asking some people around, you find out that the IJsselmeer is not in Rotterdam, it's more to the North. It was part of the Zuiderzee (South Sea) and was closed off by a man-made dyke. You make plans to visit there at a future opportunity.</td>
</tr>
</tbody>
</table>

Your partner also would love to see the parliament. You would love to go there too, but unfortunately the Parliament is not in Rotterdam. Where would you need to go to visit it?

<table>
<thead>
<tr>
<th><strong>We need to go to The Hague to visit it</strong></th>
<th><strong>We need to go to Amsterdam to visit it</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The Hague is not that far from Rotterdam. If you hurry up, you can still make it</td>
<td>Amsterdam is a bit further away. It takes you a bit longer to get there. At your arrival you find out that the parliament is in The Hague. That's okay, you will take the rest of the day to visit Amsterdam.</td>
</tr>
</tbody>
</table>
While walking on the streets, you remember there is a good friend living here and you would love to pay her a visit!

<table>
<thead>
<tr>
<th>Knock on the door and make a surprise visit</th>
<th>Continue your way. Maybe another day you can schedule to meet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your friend tells you they can’t welcome you right now. She is busy. And please, next time schedule an appointment before - you should never come by a Dutch house without notice.</td>
<td>You continue your way home. You know Dutch people don’t like to be surprised with visitors. You can make an appointment to meet her next time.</td>
</tr>
</tbody>
</table>

After so much walking, you feel hungry. Luckily there is a fish stand nearby. You order the famous herring that you heard about. But he forgot to give you cutlery!

<table>
<thead>
<tr>
<th>Ask for cutlery, how can you eat this?</th>
<th>The man is busy already, just eat your fish like that</th>
</tr>
</thead>
<tbody>
<tr>
<td>You ask for cutlery and the man explains to you that Dutch people eat herring without it. People around start looking at you judging.</td>
<td>You look around you and see that nobody is using cutlery. You do as they did and enjoy eating Dutch-style!</td>
</tr>
</tbody>
</table>

What a Dutchie you have become!
We know the knowledge you gained here will prove invaluable, but we hope you also enjoyed yourself!

Appendix D: Text provided to second group to study before the exam

If you get sick, the family doctor (huisarts) is the best place to go first in the Netherlands

Rotterdam was bombed in 1940

Dutch is the language spoken in the Netherlands

Dutch people usually make an appointment before visiting someone
Belgium is in the south of the Netherlands

Schiphol, the airport, is in Amsterdam

Dutch people eat their herring with their hands

The parliament of the Netherlands is in The Hague

The Dutch king lives in Zuid-Holland

Europort, the largest seaport in the Netherlands in Rotterdam

Appendix E: Test with questions based on the original KNM test

Which study method did you use?  
- App
- Text
- None of the above

Which language is spoken in the Netherlands?  
- German
- Dutch
- Flemish

Where is Schiphol?  
- Rotterdam
- Amsterdam
- Eindhoven

Which country is in the south of the Netherlands?  
- Belgium
- Germany
- France

Where does the Dutch king live?  
- Groningen
- Nord-Holland
- Zuid-Holland

How do Dutch people eat their herring?  
- With napkins
- With their hands
- With fork and knife
What do Dutch people usually do when they visit someone? *

- They just go in
- They call asking if they are free on the moment
- They usually make an appointment

In what city is the parliament of the Netherlands? *

- Amsterdam
- The Hague
- Maastricht

Where is the largest seaport in the Netherlands? *

- Zeeland
- Amsterdam
- Rotterdam

If you get sick, where is the best place to go first in the Netherlands? *

- Family doctor (huisarts)
- Hospital (ziekenhuis)
- Appointment at the drugstore (apotheek)

Which large Dutch city was bombed in 1940? *

- Utrecht
- The Hague
- Rotterdam