The Impact of Social Support, Age, and Education in Second Language Acquisition of Adults

Påverkan av socialt stöd, ålder och utbildning på andraspråksinlärning hos vuxna

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Abstract

The topic of second language learning is frequently discussed in linguistics and social science, and several factors differentiate between second language learning in children and adults. Adults are faced with additional complications when learning a new language, including social factors, exposure to natural learning situations, and neurobiological factors. Learning a second language has been found to have many benefits for individuals, including social advantages and neurobiological benefits in terms of delaying cognitive aging and the onset of dementia. In this study, participants filled out a self-evaluation questionnaire regarding their social conditions and then took part in a reading comprehension exercise to search for a correlation between reading comprehension and the social conditions of adult second language learners. The correlation was also investigated between scores on reading comprehension and age, time spent in Sweden, education level, and age of arrival. The study found a significant correlation between education level and reading comprehension, but no significant correlation between reading comprehension and the remaining factors.
Sammanfattning

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# Table of Contents

Copyright ........................................................................................................................................... 1  
Abstract ............................................................................................................................................... 2  
Sammanfattning .................................................................................................................................. 3  
Acknowledgments ............................................................................................................................... 4  
Table of Contents ............................................................................................................................... 5  
List of Tables ....................................................................................................................................... 6  
List of Figures ....................................................................................................................................... 7  
1. Introduction ..................................................................................................................................... 8  
   1.1 Benefits of Bilingualism ............................................................................................................. 8  
   1.2 Second language acquisition in adults .................................................................................... 10  
2. Methodology ................................................................................................................................... 14  
   2.1 The test participants & their native languages ......................................................................... 14  
   2.2 Ethics ......................................................................................................................................... 16  
   2.3 Self-evaluation questionnaire .................................................................................................... 16  
   2.4 Reading comprehension test ..................................................................................................... 20  
   2.5 Structure of the Report ............................................................................................................. 21  
3. Results ........................................................................................................................................... 22  
   3.1 The highest education level of the participants ........................................................................ 23  
   3.2 Spread between the participants in regard to scores in ISEL and reading comprehension ......... 24  
   3.3 Correlations ............................................................................................................................... 25  
   3.4 Summary of Correlations .......................................................................................................... 32  
4. Discussion and future research ....................................................................................................... 34  
   4.1 Methodology discussion ............................................................................................................. 34  
   4.2 Result discussion ......................................................................................................................... 36  
5. Conclusion ...................................................................................................................................... 42  
Reference list ....................................................................................................................................... 43  
Appendices .......................................................................................................................................... 47
List of Tables

Table 1 - Table of the different participants and their information 21
Table 2 - Correlation matrix of reading comprehension and ISEL score 25
Table 3 - Correlation matrix of reading comprehension and ISEL score, age group 1 26
Table 4 - Correlation matrix of reading comprehension and ISEL score, age group 2 26
Table 5 - Correlation matrix of reading test results and education level 27
Table 6 - Correlation matrix of reading comprehension and age of arrival 28
Table 7 - Correlation matrix of reading comprehension and years in Sweden 29
Table 8 - Correlation matrix of ISEL and score on last question in reading test 30
List of Figures

Figure 1 - Circle diagram showing the participants’ education levels 22
Figure 2 - Spread diagram of ISEL scores among the participants 23
Figure 3 - Spread diagram of reading test scores among the participants 23
Figure 4 - Correlation plot of reading comprehension and ISEL score 25
Figure 5 - Correlation plot of reading test results and education level 27
Figure 6 - Correlation plot of reading comprehension and age of arrival 28
Figure 7 - Correlation plot of reading comprehension and years in Sweden 29
Figure 8 - Correlation plot of ISEL and the score on the last question in the reading test 30
1. Introduction

This section will introduce the aim of this study and give an explanation as to why the topic of second language learning in adults is important. Previous research on the topic will be presented and is intended to shed light on benefits of bilingualism and what differs second language acquisition in adults from children. For those not familiar with the term bilingualism, it refers to the act of being able to communicate in languages other than the native language.

1.1 Benefits of Bilingualism

Learning is often considered to be a major field within cognitive science. As a result of social, economic, and cultural growth, one-third of the world population today is bilingual to some degree (Artini et al., 2021). The purpose of this paper is to investigate different background factors that enhance the chances for the adult population to learn a second language. The aim is to fill a gap in science by investigating how perceived social support correlates with reading comprehension in the new second language. There are several different reasons why this should be considered important. Bilingualism has been proven to provide individuals with advantages in socio-emotional, cognitive as well as academic, and career areas (Artini et al., 2021). Concerning cognitive advantages, there is scientific proof that bilingualism hinders cognitive aging, making this process slower. The same study also show that another positive cognitive consequence of bilingualism is that it promotes executive functioning and is in addition associated with better working memory (Artini et al., 2021). Bilingualism is also associated with socio-emotional benefits and, among other things, is considered to promote self-confidence, and increased friendliness and empathy towards others. Other socio-emotional effects of bilingualism include a more open-minded frame of mind towards foreign cultures and an increased respect for speakers of languages that are not the same as one’s own. As mentioned, bilinguales also enjoy academic benefits. These generally include higher levels of achievements and being extra wanted by recruiters due to their ability to apprehend more than one language. In addition to this, bilinguals often enjoy a high possibility of being promoted (Artini et al., 2021). In addition, there is also evidence proposing that bilinguals experience enhanced executive function and executive control in the form of performing better than monolinguals in some tasks regarding problem-solving (Oliveira & Oliveira, 2022).
examples of these tasks include those that require self-monitoring and sorting out irrelevant information.

Bilingualism, in terms of age, can be divided into child bilingualism and adult bilingualism (Artini et al., 2021). The focus of this report will be on the latter; adult bilingualism. More specifically, this report will focus on the type of adult bilingualism in those individuals who start to learn a new language when they move to a new country. A study where bilinguals were compared to monolinguals in the task of reacting correctly to visual stimuli by pressing the right button showed that bilinguals performed significantly faster (Bialystok, 2019). This was the start of many studies and experiments on bilinguals and their advantages in adults. Conflict monitoring is another subject where bilinguals have been shown to outperform monolinguals, especially in situations where the demands for monitoring are high. Ignoring distracting cues while directing attention to a given target is also an example of situations where older bilinguals have proven to perform better (Bialystok, 2019). In other words, there are proven connections between being bilingual and showing improved executive functions.

Cognitive neuroscience is another field in which researchers have examined the potential advantages of bilingualism in adults. Several studies have been done on the topic, and a consistent number of these studies have shown an increased density of gray matter in several parts of the brain in older adult bilinguals (Bialystok, 2019). The results of a study have also been found that would suggest that even late bilinguals show an increased density of gray matter in the brain (Chen et al., 2014). These findings arguably imply that learning a second language when one has already mastered their original language can positively manipulate the brain structure in the older adult population since gray matter density generally declines with age (Bialystok, 2019).

There is also scientific evidence that suggests that bilingualism has medical advantages. One example is dementia. While there have been no findings that support that bilingual individuals completely avoid dementia to a larger extent than their monolingual peers, there is evidence that suggests that being bilingual can help with postponing the symptoms (Bialystok, 2019) and therefore giving the individual more healthy years in life. A study on cognitive outcomes in stroke patients has also shown that normal cognition after a stroke is more common in bilinguals than in their monolingual counterparts (Alladi et al., 2015). This study also determined bilingualism to be an independent predictor of cognitive impairment in patients
after they have suffered a stroke. This is believed to be due to an enhanced cognitive reserve in the bilingual population.

1.2 Second language acquisition in adults

Second language acquisition in adults is a topic that has been explored in previous studies. There are many factors to be accounted for when it comes to second language acquisition for the adult population. One study, for example, showed that participants who adopted an identity-based and more nationalist ideology performed better in learning Swedish as a second language as opposed to those participants who shared a universalist, or globalist, ideology (Arvidsson et al., 2022). The results of this study, which consisted of several long-term immigrants in Sweden, originating from France, point to the idea that language ideology can play a part in second language acquisition in adults.

When compared to second language acquisition in children, adults often face complications and difficulties to a higher degree when facing the challenge to learn a new language (Deng & Zou, 2016). This is due to several factors, including environment, age, and motivation. The same study that came to this conclusion suggests that it could be helpful for adults to try to emulate children’s second language learning process to the extent possible since children often live under conditions that make it easier for them to learn a second language in its natural environment (Deng & Zou, 2016). Since adults are not presented with natural learning environments to the same extent and manner as children, adults must be more active in the process of creating their learning environments, and that in combination with the fear of making errors can lead to increased challenge and difficulties (Deng & Zou, 2016). This emphasizes the social aspect of second language learning and supports the idea that social interaction in natural living environments is of great importance in adult second language acquisition.

Researchers at the Massachusetts Institute of Technology (MIT) have conducted a study that suggests that the ideal age for learning a new language is before turning 10 and that it is harder for older individuals to achieve proficiency similar to that of a native speaker if they learn the language after the age of 18 (Trafton, 2018). Another theory as to why second language learning is generally more difficult for adults is the Critical Period Hypothesis (CPH). This theory, which originated in 1959, suggests that there is a critical period between the age of two and puberty, in which individuals need to start acquiring a second language to be successful
(Vanhove, 2013). The reason for this is said to be neurobiology, more specifically, the brain’s lateralization process. Modern studies in the field of neurological research suggest that there are time frames that exist for the brain’s lateralization process regarding language learning, but that these time frames are different depending on the language function in question. The topic of the Critical Period Hypothesis is being discussed in research today as well. However, the nature and causes of this critical period hypothesis for second language learning are not completely understood, and there are a vast number of different potential explanations (Hartstone et al., 2018). Examples of these possible explanations include the fact that adults are given a later start than children, increased level of interference from a well-learned first language, decreased limits in cognitive processing, making them more susceptible to distractions, and decreased willingness to experiment and make errors. An additional factor that science suggests has an impact on the critical learning period is that children, due to their age, have superior neural plasticity compared to adults (Hartstone et al., 2018). These findings suggest that adult individuals have brains that are less adaptable to new experiences and changes since neuroplasticity decreases with age.

While neuroplasticity poses a potential challenge to learning a second language for adults, research with MRI studies has shown that second language acquisition itself can cause changes in the brain, both at structural and functional levels (Isel, 2021). This research shows that second language learning can shape our brains in a few weeks, with short-term training. The results of this research show that second language experience can sculpt the brain in late second language learners, and the author argues that this constitutes a strong argument that environmental factors are important for language development (Isel, 2021). These findings highlight the importance of studying different sorts of environmental and social factors in second language acquisition for adults. Second language acquisition has been found to induce brain changes in the form of increased white matter, gray matter, and density in the brain (Li et al., 2014). This is consistent with earlier findings in the research of brain structure and neuroplasticity and arguably shows that neuroplasticity and second language learning in adults have a mutual impact. This study aims to investigate social factors and the part they play when adults are to learn a new language.

Research in different fields has determined that social interaction has an impact on human communication in general, especially in language learning (Kotz & Verga, 2013). While learning new words in a text, adults often face the same challenges as children, and this is
considered to be the easy part of second language acquisition. While adults can learn vocabulary independently, social interaction can increase referential information and cues, and during this interaction, the individual who is learning can learn to focus on aspects of the context, and certain words, that are more relevant (Kotz & Verga, 2013). This in turn could increase the efficiency of conversation and lead to the learner’s focus being directed to the part of the conversation that is the most important for learning, which highlights the importance of social interaction in second language acquisition. Since adults often learn a language in social contexts, it is arguably important to examine this factor further. Despite this, the role of social interaction in adult second language acquisition has reportedly been overlooked (Kotz & Verga, 2013) despite the importance of this matter generated from several lines of research, including the role of sociality in learning in general (Kotz & Verga, 2013). A conversation analysis study done on new French learners and how they use the term “comment on dit” (meaning “how do you say”) done over 15 months showed a significant increase in the usage of the term over time, meaning that the longer the individuals had been learning French, the more they used the term (Doehler & Marian, 2022). These findings suggest that as the speaker progresses through their proficiency in French, they become more prone to seeking help and understanding how to say something, suggesting that social interactions over time play an important part in trying to comprehend and learn a new language. This study also showed a transition from seeking translation requests, to seeking requests for confirmation, which suggests an increase in confidence in the language over time as one takes part in regular social interactions.

Another study done on sociocultural factors and their impact on second language learning has also found that the lack of social interactions can serve as barriers a barrier when learning a new language (Alsalhi, 2021). This study was done on Arab learners of English, and the results of this study indicate that these barriers can result in low self-esteem and low motivation, which in turn harm the second language learner’s involvement in conversational interactions (Alsalhi, 2021). This could arguably result in a negative circle, where low amounts of social interactions lead to less self-esteem and low motivation, which in turn leads to low amounts of social interactions, resulting in an impaired second language learning experience.

Furthermore, studies have also shown that literacy in one’s first language has an impact on one’s ability to become literate in a second language (Bigelow & Tarone, 2004). This research has found that second language learners’ performance in standardized tests has a high
correlation with academic language proficiency, which could arguably indicate that the person’s academic background could have an impact on their capabilities to learn a second language.
2. Methodology

This report aims to investigate how social interactions affect second language learning in adults. To do that, I located participants who fit into the target group, and let them perform a series of tasks to assess the level of their acquired skills in Swedish. In brief, the level of their social life during their first time in Sweden was assessed by a self-assessment questionnaire. The second part of their participation consisted of the test participants completing an assignment in reading comprehension. This report will aim to search for any potential correlation between the self-reported quality of social life, and results on the reading comprehension test. To streamline the work process and increase the possibility of having more participants, the questionnaire and reading comprehension was carried out in the form of Google Forms. Since the self-questionnaire and reading comprehension test is estimated to take about an hour to complete, one participant will be randomly selected to win a gift card of 500 SEK as motivation. The participants will be informed of this before participating in the study and the reason for this decision is to increase the motivation for people to participate in the study.

2.1 The test participants & their native languages

A total of 19 participants ended up participating in the study. Of these 19 participants, 15 have Arabic as their language of origin, 1 has Spanish and 3 has Kurdish. Since the vast majority (15 of 19) have Arabic as their language of origin, the study will be focused on the data gathered from these participants. The 3 Kurdish speakers and the sole Spanish speaker will be excluded, due to the lack of generalizability of these few results.

The sample group will consist of adult individuals who have moved to Sweden and have learned Swedish as a second language. Since there could be potential differences in similarities to Swedish between different native languages, it was at first intended that the sample group would include those whose native languages are Spanish and Arabic, to offer possibilities for comparison across first languages. These two specific languages were chosen due to convenience sampling, which means that the participants of the sample group are chosen according to their convenient accessibility (Bastos et al., 2016). The author of this report has
access to individuals that speak one or another of these languages, which increases the potential of sampling individuals efficiently.

As a result of the fact that there is no official government record of how many speakers a language has in Sweden (Institutet för språk och folkminnen, 2022), it is hard to precisely determine how many Arabic and Spanish speakers there are in Sweden. This makes it difficult to decide how big a part of the minority language speakers these languages represent. However, linguist and author Mikael Parkvall has been able to estimate the top 20 most spoken languages in Sweden, and according to his calculations, there were approximately 115000 native Arabic speakers and 75000 native Spanish speakers in Sweden in the year 2012 (Parkvall, 2019). These numbers have undoubtedly changed today, but these data gives an estimate that would indicate that both Arabic and Spanish are relatively common as minority languages in Sweden, which arguably makes them satisfactory native language choices for this report. Limiting the study to two languages would also limit the potential of other, for this report irrelevant, factors to skew the data. Having two languages as opposed to one, however, gives this report the potential to conclude how second language learning can differ between speakers of two different native languages.

To minimize the risk of other factors skewing the results of this report, the sample group will consist of individuals within selected age brackets when they arrived in Sweden. These brackets have been designed using the rackets of government agency Statistiska centralbyråns (SCB) as a guideline (Statistikdatabasen, 2023). The reason for this is to use age brackets that have already been professionally established. I argue that dividing individuals into age groups is better done by using groups that have been established by experts, rather than making up their age groups. By using pre-existing age brackets, it is also easier to make appropriate comparisons between age groups.

To find the balance between a potential research group without too many internal differences, and the possibility to find as many possible participants as possible, the decision has been made to use three different age brackets. These brackets have been set to 26–34, 35–44, and 45–54. To be able to use participants just outside of these brackets, participants from the age groups of 23 to 59 will also be accepted. The decision has also been made to limit potential study subjects to those who have been living in Sweden for 4–20 years. There were two main reasons
for this. First, I wanted to have a large span to be able to accept a sufficient number of participants. Secondly, I wanted to be able to compare age groups against one another.

This means that a potential participant of this study arrived in Sweden at the age of 23 to 59 and has been living there for 4–20 years. To minimize the risk of the results being affected by anything other than the participant’s actual knowledge and experience with the Swedish language, those with dyslexia have been excluded. Measures will also be taken to record different levels of highest completed education, to identify any possible correlations with language proficiency levels.

2.2 Ethics

The data collected in this study followed traditional academic ethics (Vetenskapsrådet, 2018). No conflict of interest is present with the author. Anonymity was guaranteed for the participants and no personal information was shared in this thesis. The participants gave oral consent to participate and were informed in their native languages that they were free to stop their participation at any time without being questioned and that they were free to request that their submission be deleted at any time and that this would happen as soon as possible. All participants were informed and agreed that their participation was to be used as data for research that would be published and that their contributions would remain anonymous. and that no personal information was to be either published or shared with a third party in any way. The participants also made sure that they participated of their own free will. It is, however, important to mention that I have traceable data of the participants regarding their email addresses and phone numbers. These data were gathered as a precaution if I needed to contact a participant for any reason and will be deleted immediately after the examination.

2.3 Self-evaluation questionnaire

To assess the quality of social life of the test participants, a self-assessment questionnaire will be filled out together with the reading comprehension exercise. The reason for this chosen method is partly because getting an understanding of the participant’s quality of social life is paramount to investigating any relationship between social interactions and second language learning. Since there is arguably no established objective method of determining the quality of an individual’s social life, the decision was made to use a self-evaluation questionnaire. This
would also give an insight into how the individual themselves perceives the quality of their own social life, which would be beneficial since the idea that individuals have different needs in their social life and different understanding of what a good social life is.

The questionnaire that will be used as inspiration is the Interpersonal Support Evaluation List, or ISEL, developed by Sheldon Cohen and Harry M. Hoberman, at the Department of Psychology at Carnegie Mellon University. The purpose of ISEL was to assess the perceived availability of different parts of social support and to provide a model for overall social support assessment (Cohen & Hoberman, 1983). ISEL has been used in previous instances, for example in a study that examined the connection between a high score on the ISEL questionnaire and the stress tolerance of medical students in Greece (Delistamati et al, 2015).

This questionnaire consists of 40 different questions, assessing four types of subscales. These are tangible support, self-esteem support, belonging support, and appraisal support. Tangible support refers to support in the form of material aid (Carnegie Mellon University, 2023), for example, support in the form of lending something or giving a ride to a doctor's appointment, while self-esteem support refers to the support in being able to make positive self-comparisons, or in other words, being reassured of one’s capabilities and strengths. Belonging support refers to support in the form of availability, in other words being able to do activities or spend quality time with others (Carnegie Mellon University, 2023), and appraisal support refers to support in the form of being able to discuss personal problems and dilemmas with someone.

There is a shortened, 12-answer version of this questionnaire, called the ISEL-12, but the decision was made to use the full version since it includes more questions and gives the potential to better understand the quality of social life of the participants. Each question consists of 4 potential answers, “definitely true” (gives 3 points), “probably true” (gives 2 points), “probably false” (gives 1 point), and “definitely false” (gives 0 points), in which the participant is to choose the answer that they feel fits the best. One additional reason why the decision was made to use an already established questionnaire as opposed to creating a new one was the belief that a proven and used method was to increase the validity of the results. Since ISEL is originally in English, it was translated to Swedish before being administered to the test participants. I also made sure to replace difficult words in the translation to make the questions easier to understand for the participants. In addition to this, I put my email address in the instructions on the form and encouraged the participants to reach out to me if they had any
questions about the questionnaire. For environmental and backup reasons, the results of the questionnaire was administered digitally. Changes were also be made regarding the formulation of some of the questions, to decrease the risk that some participants misunderstand the question. One example of a question that was simplified is the question “If I decide one afternoon that I would like to go to a movie that evening, I could easily find someone to go with me”. This was altered to “If I would like to go to the movies, I could find someone to go with me”, or in Swedish, “Om jag skulle vilja gå på bio finns det någon som skulle vilja följa med mig”. This captures the essence of the question, while making it easier to understand and thereby increasing the credibility of the answer. Questions that are reverse-scored were altered, so that the results would be easier to comprehend. Questions that are very similar to a previous question were excluded, along with questions that was not translatable to a level of Swedish that was deemed easy to understand. One example of a question that was deleted is the question “I have a hard time keeping pace with my friends”. After these alterations were made, the questionnaire ended up being 38 questions long, not counting questions regarding personal information, such as education level. This means that only 2 questions ended up being removed. Examples of statements that the ISEL questionnaire contains are “If I needed a place to stay for a week because of an emergency (for example, water or electricity out in my apartment or house), I could easily find someone who would put me up”, “there is someone I could turn to for advice about making career plans or changing my job” and “there is at least one person I know whose advice I trust”. The original ISEL questionnaire can be reviewed in appendix A, while the version that was used in this study can be reviewed in appendix E.

An example of a reverse statement, which was altered in my Swedish version of ISEL, is the question “If a family crisis arose, it would be difficult to find someone who could give me good advice about how to handle it”. This was changed to “If a family crisis arose, it would be easy to find someone who could give me good advice about how to handle it”. Similar questions were altered similarly. The reason for this is the fact that most statements in the original ISEL were phrased in that way, meaning that the higher the score on the question, the more positive the answer was. If I did not change the reverse questions, positive answers would mean a lower score on these questions, and for that reason, the decision was made to change these statements.

The statements in the questionnaire were divided in the same manner as in the original ISEL questionnaire. This means that they were divided according to their subcategory, and they were divided in this order: First, questions on “Tangible support”, second, questions on “Belonging
support”, third, questions on “Self-esteem support”, and fourth, questions on “Appraisal support”. The two questions that were removed were both in the fourth section. In this study, the same grade system was used as in the original ISEL questionnaire, with “Definitely true” being worth 3 points, “Probably true” being worth 2 points, “Probably false” being worth 1 point, and “Definitely false” being worth 0 points. This decision was made as this would arguably keep the questionnaire easy and efficient to grade and thereby use the total point to estimate the self-perceived social support of the participants.
2.4 Reading comprehension test

The reading comprehension test will be administered after the questionnaire. It consists of a text that is about 600 words long. After reading this text, the participants will be handed an assignment that consists of five different questions, with varying sizes and extents. In questions 1–4, the participants can receive between 0 and 2 points, and in question 5, which is longer and more comprehensive, the participants can receive between 0 and 4 points. In total, the participant can receive between 0 and 12 points on the assignment.

The assignment is collected from Skolverket, the Swedish school agency, and it is an older version of the Swedish national tests that are taken in the courses Swedish 1 and Swedish as a Second Language 1 in gymnasiet (Skolverket, 2022), where students usually study from the year they turn 16 to the year they turn 19. The national test used in this study is from the first year of high school. This test, in particular, is designed by Uppsala University (Uppsala universitet), and the text that the questions are based on is an article in the newspaper Sydsvenskan written by author Elin Lindman (2011), called “Sopdykarna kan leva på vårt överflöd” (“The garbage divers can live of our abundance” in English). The reason for choosing an older national test for reading comprehension is that it is an established method that has been created by individuals who are experts in the field of language testing. Since it is also given for a particular course, it has a clear indication of which age group of native Swedish speakers is expected to manage it, which would help with concluding the result.

The assignment is also accompanied by clear instructions on how to grade and assign points, along with a template of all the correct answers (Uppsala Universitet), which makes the final points given and thereby the result of the test more reliable, even though the tests will not be graded by a teacher. The criteria are simple. For question 1, the participant needs to state in which city the article in the reading comprehension plays out. There is only one correct answer, and the participant can answer with a single word. If they are right, the participant is rewarded 2 points. Question 2 asks the participants to retell 2 out of 3 potential solutions to a problem in the reading comprehension text. Both the problem and the solution are clearly stated in the text and the participants have to choose 2 out of 3 to retell and are rewarded 3 points if they do it correctly. Questions 3 and 4 are multiple choice questions worth 2 points each, and there is only 1 correct answer each. For the final question, participants are asked to give 2 examples of
how one as the reader can tell that the author has a positive attitude to garbage diving, even if the author doesn’t explicitly express her opinion on the matter. This question is worth 2–4 points, depending on if the student has 1 or 2 correct examples. Since this question is a task where participants will have to form a piece of text on their own instead of choosing between alternatives in a multi choice question, the decision has been made to also measure the correlation between points on this specific question and score on the ISEL form. The reasoning behind this is that this question arguably requires more skill of the participants and that it on its own would be a valid way to measure reading comprehension and the ability to both notice and retell something from the text. The last question is “Författaren till reportaget är Elin Lindman. Även om författaren inte skriver ut sina egna åsikter i ämnet kan man som läsare ändå få uppfattningen att författaren är positiv till friganism, eftersom sopdykning framställs som något positivt i texten. Granska texten och ge två exempel på hur författaren får fram den positiva bilden av sopdykning.”. Translated to English, the question is “The author of the article is Elin Lindman. Even if the author doesn’t explicitly express her opinion on the matter, it is possible for the reader to get the impression that the author has a positive view on freeganism, due to the fact that garbage diving is presented as something positive in the text. Audit the text and give two examples on how the authors opinion on garbage diving is presented”.

Both the instructions for correcting and the reading comprehension exercise can be reviewed in their whole in the appendix. The results of the self-evaluation questionnaire and the reading comprehension assignment will be compiled using Google Sheets and the open-source statistics program Jamovi.

2.5 Structure of the Report

I will start by presenting a selection of the current research on the topic to explain the benefits of learning a second language and which challenges adults face when they do so. I will then present the chosen methodology and explain why certain decisions were made. Finally, the results are discussed to present what this study has shown, and I will end the thesis by discussing these along with the methodology.

This report is written according to the APA 7 guidelines, regarding references, font, font size, and line spacing (American Psychology Association, 2022), available on the American Psychology Associations website.
3. Results

The results are shown in Table 1.

Table 1: Table of the different participants containing their age of participation, age of arrival, years lived in Sweden, education level, reading score and social support score.

<table>
<thead>
<tr>
<th>Participant #</th>
<th>Age</th>
<th>Age of arrival</th>
<th>Years in Sweden</th>
<th>Education level</th>
<th>Reading score</th>
<th>Score on last reading question</th>
<th>ISEL score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>43</td>
<td>33</td>
<td>10</td>
<td>Uni, 3–5 yrs</td>
<td>6</td>
<td>0</td>
<td>98</td>
</tr>
<tr>
<td>2</td>
<td>59</td>
<td>43</td>
<td>16</td>
<td>Uni, 3–5 yrs</td>
<td>4</td>
<td>0</td>
<td>89</td>
</tr>
<tr>
<td>3</td>
<td>43</td>
<td>33</td>
<td>10</td>
<td>Uni, 3–5 yrs</td>
<td>2</td>
<td>0</td>
<td>51</td>
</tr>
<tr>
<td>4</td>
<td>56</td>
<td>41</td>
<td>15</td>
<td>Uni, 3–5 yrs</td>
<td>10</td>
<td>4</td>
<td>96</td>
</tr>
<tr>
<td>5</td>
<td>34</td>
<td>26</td>
<td>8</td>
<td>Elementary</td>
<td>2</td>
<td>0</td>
<td>96</td>
</tr>
<tr>
<td>6</td>
<td>40</td>
<td>32</td>
<td>8</td>
<td>High School</td>
<td>0</td>
<td>0</td>
<td>106</td>
</tr>
<tr>
<td>7</td>
<td>40</td>
<td>32</td>
<td>8</td>
<td>Uni, 1–3 yrs</td>
<td>2</td>
<td>0</td>
<td>71</td>
</tr>
<tr>
<td>8</td>
<td>45</td>
<td>27</td>
<td>18</td>
<td>Uni, 3–5 yrs</td>
<td>4</td>
<td>0</td>
<td>91</td>
</tr>
<tr>
<td>9</td>
<td>38</td>
<td>29</td>
<td>9</td>
<td>Uni, 5+ yrs</td>
<td>8</td>
<td>0</td>
<td>47</td>
</tr>
<tr>
<td>10</td>
<td>44</td>
<td>33</td>
<td>11</td>
<td>Elementary</td>
<td>2</td>
<td>2</td>
<td>110</td>
</tr>
<tr>
<td>11</td>
<td>52</td>
<td>43</td>
<td>9</td>
<td>High School</td>
<td>2</td>
<td>0</td>
<td>101</td>
</tr>
<tr>
<td>12</td>
<td>35</td>
<td>29</td>
<td>6</td>
<td>Elementary</td>
<td>1</td>
<td>0</td>
<td>74</td>
</tr>
<tr>
<td>13</td>
<td>47</td>
<td>40</td>
<td>7</td>
<td>Elementary</td>
<td>2</td>
<td>0</td>
<td>105</td>
</tr>
<tr>
<td>14</td>
<td>33</td>
<td>23</td>
<td>10</td>
<td>High School</td>
<td>0</td>
<td>0</td>
<td>114</td>
</tr>
<tr>
<td>15</td>
<td>44</td>
<td>40</td>
<td>4</td>
<td>Elementary</td>
<td>2</td>
<td>0</td>
<td>114</td>
</tr>
<tr>
<td>Range</td>
<td>33–59</td>
<td>23–43</td>
<td>4–18</td>
<td>Elementary – Uni 5+ yrs</td>
<td>0-10/12</td>
<td>0–4</td>
<td>47–114/114</td>
</tr>
<tr>
<td>Average</td>
<td>43</td>
<td>31</td>
<td>12</td>
<td>-</td>
<td>3/12</td>
<td>0.4</td>
<td>91/114 (80%)</td>
</tr>
</tbody>
</table>
3.1 The highest education level of the participants

In regards to educational level, 5 of these 15 participants have an elementary school graduation (“Grundskola” in Sweden) as their highest level of education. 3 participants have a high school education as their highest form, one has a university degree of 1–3 years, while 5 participants have a university degree of 3–5 years. One participant has a university degree of more than 5 years. The distribution of the different education levels among the participants is also displayed in figure 1.

![Pie chart showing the participants’ education levels.](image)

Figure 1: Circle diagram showing the participants’ education levels.
3.2 Spread between the participants in regard to scores in ISEL and reading comprehension

These graphs show the spread of the participants’ scores on the ISEL questionnaire (figure 2) and the reading comprehension exercise (figure 3). In figure 2, one can see that the lowest score is just under 50, with the highest score being between 100 and 125. Each blue “dot” represents one participant, and as one can see, the spread is noticeable and shows the variety of scores between the participants. The same conclusion can be drawn concerning the scores on reading comprehension, where the results are ranging from 10 to 2 among the 15 participants and can be reviewed in figure 3.

![Figure 2: Spread diagram of ISEL scores among the participants. The ISEL-score is represented on the Y-axis and the different participants are represented as the blue dots on the X-axis.](image)

![Figure 3: Spread diagram of reading test scores among the participants. The score on the reading comprehension test is represented on the Y-axis and the participants are represented as the blue dots on the X-axis.](image)
3.3 Correlations

In this subsection, the correlations will be explained. The correlations will be interpreted according to Pearson’s $r$ and $p$-value. Pearson’s $r$ is a way of measuring correlation, and it ranges from $-1$ (complete negative correlation) to 1 (complete positive correlation), with 0 meaning no correlation at all. The further from 0 a correlation is, the stronger it is, and a correlation over 0.7 is usually deemed as a strong positive correlation while results under $-0.7$ are usually deemed to be a strong negative correlation (Ellis, 2021). The $p$-value is used to estimate the risk that the correlation found is a result of chance and determines the significance of the correlation. A $p$-value under 0.05 is usually considered significant, while a $p$-value over 0.05 is often deemed as non-significant. The degree of freedom will be set to 13, since there are a total of 15 participants and the rule for determining the degree of freedom for Pearson correlations tests is 2 subtracted from the total number of participants (Turney, 2022). These measures will be used throughout the whole result section. The only exception is the correlation between highest level of education and score on the reading comprehension. This correlation will be measured with Spearman’s rho. This is a very similar method to Pearson’s $r$ but can be used to measure both continuous and ordinal variables, while Pearson’s $r$ can evaluate only linear relationships between two continuous variables. The threshold for significance and degree of freedom is going to be the same in both measurements.
This page displays the correlation between scores on reading comprehension and scores on the ISEL with the whole group of participants. There is a no significant correlation between the scores on the reading comprehension test and scores on the ISEL questionnaire, $r(13) = .304$, $p = 0.271$. The matrix can be reviewed in table 2 and the correlation graph in figure 4.

Table 2: Correlation matrix of reading comprehension and ISEL score among the participants.

<table>
<thead>
<tr>
<th>Correlation Matrix</th>
<th>Reading comprehension</th>
<th>ISEL score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading comprehension</td>
<td>Pearson's $r$</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>—</td>
</tr>
<tr>
<td>ISEL score</td>
<td>Pearson's $r$</td>
<td>$-0.304$</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>$0.271$</td>
</tr>
</tbody>
</table>

*Note. * $p < .05$, ** $p < .01$, *** $p < .001$*
On this page, the correlation between reading comprehension results and ISEL results between different age groups of the participants when they arrived in Sweden will be compared and presented. The age of arrival among the participants ranged from 23 to 43. Age group 1 contains participants who arrived at the age of 23–33 (10 participants), and age group 2 consists of participants who arrived at the age of 34–43 (5 participants). The matrixes are displayed in table 3 and the graph can be viewed in table 4.

Correlation matrix in age group 1, which can be reviewed in figure table 3: The results show that in this group, there was no significant correlation, $r(13) = .161, p = 0.657$.

Table 3: Correlation matrix of reading comprehension and ISEL in age group 1.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Pearson’s r</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>—</td>
</tr>
<tr>
<td>B</td>
<td>Pearson’s r</td>
<td>0.161</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0.657</td>
</tr>
</tbody>
</table>

Correlation matrix in age group 2, which can be reviewed in table 4: These results show no correlation, $r(13) = 0, p = 1$.

Table 4: Correlation matrix of reading comprehension and ISEL in age group 2.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Pearson’s r</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>—</td>
</tr>
<tr>
<td>B</td>
<td>Pearson’s r</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>1.000</td>
</tr>
</tbody>
</table>
This page displays a correlation matrix (table 5) and the correlation plot (figure 5) between the highest form of education and the results of the reading comprehension assignment. These results show a high significant correlation, \( r(13) = .676, p = 0.006 \).

**Table 5: Correlation matrix between reading test results and education level.**

<table>
<thead>
<tr>
<th></th>
<th>Spearman's rho</th>
<th>p-value</th>
<th>Spearman's rho</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>X-axis</td>
<td>Y-axis</td>
<td>X-axis</td>
<td>Y-axis</td>
</tr>
<tr>
<td>A</td>
<td>Spearman's rho</td>
<td>X-axis</td>
<td>Spearman's rho</td>
<td>Y-axis</td>
</tr>
<tr>
<td>B</td>
<td>0.676</td>
<td>0.006</td>
<td>0.676</td>
<td>0.006</td>
</tr>
</tbody>
</table>

**Figure 5: Correlation plot between reading test results and education level.** The score on the reading comprehension test is represented on the Y-axis and the education level is represented on the X-axis. Explanations for values on X-axis: 1 = elementary school, 2 = high school, 3 = University 1–3 years, 4 = University 3–5 years, 5 = University 5+ years.
This page displays the correlation matrix between the age of arrival in Sweden and the score on the reading comprehension assignment. The results show no significant correlation, \( r(13) = .338, p = 0.217 \). Table 6 shows the correlation matrix while figure 6 displays the graph.

Table 6: Correlation matrix between reading comprehension and age of arrival in Sweden.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Pearson's r</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>—</td>
</tr>
<tr>
<td>B</td>
<td>Pearson's r</td>
<td>0.338</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0.217</td>
</tr>
</tbody>
</table>

Figure 6: Correlation plot between reading comprehension and age of arrival in Sweden. The scores on the reading comprehension are represented on the Y-axis and the age of arrival among the participants are represented on the X-axis.
This page displays the correlation between years lived in Sweden and score on reading comprehension. The results show no significant correlation, $r(13) = .471, p = 0.077$. Table 7 shows the correlation matrix while figure 7 shows the graph.

Table 7: Correlation matrix of reading comprehension and years lived in Sweden.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Correlation Matrix</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pearson's r</strong></td>
<td>—</td>
<td>0.471</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>—</td>
<td>0.077</td>
</tr>
</tbody>
</table>

Figure 7: Correlation plot of reading comprehension and years lived in Sweden. The reading comprehension scores are represented on the Y-axis and the X-axis represents the different ages of arrival among the participants.
On this page, the correlation between scores on the ISEL questionnaire and points on the last question in the reading comprehension test will be presented. The results show no significant correlation, $r(13) = .148, p = 0.614$. Table 8 displays the matrix and figure 8 displays the plot.

Table 8: Correlation matrix of ISEL score and score on the last question of the reading comprehension test.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Pearson's r</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>---</td>
</tr>
<tr>
<td>B</td>
<td>Pearson's r</td>
<td>0.148</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0.614</td>
</tr>
</tbody>
</table>

Figure 8: Correlation plot of ISEL score and score on the last question of the reading comprehension test. The score on the last question is represented on the Y-axis and the ISEL score is represented on the X-axis.
3.4 Summary of Correlations

The correlation between scores on the reading comprehension assignment and scores on the ISEL self-evaluation questionnaire was found to be $r(13) = .304, p = 0.271$. When examining the correlation between the highest level of education and the score on the reading comprehension assignment, the correlation between the two was $r(13) = .676, p = 0.006$. When comparing age at arrival in Sweden with a score on reading comprehension, the results were $r(13) = .338, p = 0.271$. When looking at the correlation between years lived in Sweden and score on the reading comprehension assignment, the result were $r(13) = .471, p = 0.077$. Regarding correlation between ISEL and the last question on the reading comprehension test, the results were $r(13) = .148, p = 0.614$. 
3.5 More comparisons between groups

The average score on both the ISEL and reading comprehension were compared between the age groups. Age group 1 averaged 2.7 on the reading test while age group 2 averaged 4 points. In regard to ISEL, age group 1 averaged 86 while age group 2 averaged 101. Comparisons were also made between education groups, more specifically between those with a university degree and those without. Education group 1 consists of those with an elementary degree or high school degree (8 participants) while group 2 consists of those participants with an university degree (7 participants). Education group 1 scored an average of 1.4 (range = 0–2) points in the reading comprehension, while education 2 group scored an average of 5.1 (range 2–10) points. The average years lived in Sweden in education group 1 is 6.6 while the average years lived in Sweden in education group 2 is 12.3 years.
4. Discussion and future research

In this section, the methodology and results will be discussed.

4.1 Methodology discussion

There are several reasons behind the methodology that is used in this study. One matter that should be discussed is the gathering of participants. Convenience sampling was the main used method, but due to the reason that I wanted a larger sample pool, I also posted the study in relevant groups on social media. While this did not pay off, it is important for future research to explore different ways to find additional participants. Randomized sampling would be a way to gather participants that represented the group as a whole. In hindsight, additional factors such as the occupation of the participants would also have been interesting to include in the questionnaire to examine any potential connection between reading comprehension and socioeconomic factors. I also wish to discuss the choice to give a 500 SEK gift card to a randomly chosen participant. One can argue that this would increase the risk that participants give false answers in the study if they are under the impression that a high score would increase their chance of winning. I prevented this by clearly stating in the instructions that the winner of the gift card was to be randomly selected and that their score in the study would not affect their chances of winning. This information was also given orally to each participant in their native language before participation. Since I estimated that the experiment would take an hour for each participant to complete, the gift card raffle was seen as a way to motivate more participants to take part in the study and thereby have a larger sample pool. Since extensive measures were taken to prevent any negative consequences with this decision, the benefits were deemed to outweigh the potential risks.

In regard to the ISEL form, the decision to use the full 40-question version of the questionnaire made the test more comprehensive and made it possible to get a better insight into the perceived social support of the participants. However, if the shortened, 12-question version was used instead, it would make the study significantly faster to take and that could attract more participants that opted to not take part in the study due to the time it took with the full version. If researchers in the future wish to continue with this research, one possibility would be to include the 12-question version and instead ask more questions regarding education and
socioeconomic factors. It is, however, important to recognize the potential sensitivity in asking participants questions regarding certain economic factors, such as annual income. In hindsight, it would have been beneficial to group the questions in the ISEL form according to their subscales, instead of grouping them the same way as in the original ISEL questionnaire. This would make it easy to compile results on these subscales and it would make it more efficient to compare the different forms of social support among the participants. The form that was used in the experiment had the questions group in the same manner as the original ISEL, meaning that questions in the form were not categorized according to their subscales, but were spread out through the questionnaire.

In terms of the reading comprehension test, I deemed that the most appropriate would be to use a test that is compiled by experts. An old national test is not only that but is made at Uppsala University, which is an established university in Sweden. The different types of national tests are also administered at different years for students in Swedish elementary schools and high schools. Choosing a particular national test made it possible for the results of this study to be interpreted in terms of comparison to the level of reading comprehension that Swedish students are anticipated to be when they take the test, in this case in the first year of high school. I had the option to use a national test that is administrated in elementary school, for example in ninth or sixth grade. However, since the test in the first year of high school is administered in the same form both to native Swedish and in the course “Svenska som andraspråk 1”, or “Swedish as a second language 1” in English, I found it very appropriate to use since it is produced to be suitable to students who relatively recently relocated to Sweden.

Another fact that made it appropriate to use a national test is the fact that there are also clear instructions on when and how to reward the participant’s point. This doesn’t leave my grading up to interpretations that I cannot arguably make, since I am not a teacher. In this case, I only needed to compare the participant’s answers to the accepted answers provided in these instructions, and then grade accordingly. This also promoted the reliability of the grading, since these clear, non-ambiguous instructions make it possible for any researcher to grade the answers the same way. If another person were to grade the answers of the participants according to the same instructions that I did, it would be highly likely that the number of points given would not change, which increases the credibility of the results. For future research, it would also be interesting to let the participants perform not only this version of the national test but also the versions that are administrated in different grades, for example, those in 9th grade.
This would make it possible to determine which level of reading comprehension those who arrive in Sweden are at in comparison to native Swedish speakers and could be an effective way of determining which kind of help and assistance they require. It would also be interesting for future research to measure different parts of the language besides reading comprehensions, such as hearing comprehension, writing, and oral exams.

4.2 Result discussion

The correlation between scores on the reading assignment and scores on the ISEL was found to be low and without a statistically significant observed difference. There was no significant correlation between the two age groups either. This means that no clear relationship was found in this study between the two factors, which contradicts what has been found in similar studies on the topic. This was not the expected outcome of this study. This could have several explanations. First and foremost, the results were drawn from a sample of 15 participants. If a larger number of Arabic-speaking participants were included, it would arguably create a sample pool that included enough participants to create a pool that is more comparable to the general public. Something different between this study and the research presented in the introduction section is the fact that those studies were based on languages other than Arabic speakers attempting to learn Swedish. In this study, there is also a significant gap in the participants, both in regard to their age of arrival in Sweden and their age of participating in the study. There are also possible differences between other factors, such as work opportunities and integration programs that could differ between the participants in this study and the participants in previous research.

This could lead to different results. In other words, the sample size could be too small to detect any correlation. It is also possible that a larger sample size would make participants with extreme scores, or outliers, have a smaller impact on the results. For example, participants 14 and 15 received the maximum possible score on the ISEL questionnaire, 114. This means that they have selected “definitely” true on every one of the 38 questions. At the same time, participant 14 received 0 points on reading comprehension and Participant 15 received 2 points out of 12. This indicates a low level of reading comprehension skill, which raises the question if these participants truly understood the questions or the text. This could, but not with certainty, indicate that they choose the top answer without fully understanding or possibly considering the question, which could have a skewing effect on the data. However, when comparing how
the result would look like if I had excluded these two participants, the correlation would still have been low and without a statistically significant observed difference \( r(13) = -0.200, p = 0.512 \), so these particular outliers did not have a significant impact on the total result of the study.

This phenomenon could be a consequence of the decision of changing the reverse questions from the original ISEL questionnaire. It would be plausible that this was done by the original authors to avoid reader fatigue. This makes for the reflection of whether changing the reverse questions was the right decision or not. On the other hand, it made the result easier and more efficient to read, since the alteration means that the higher score on the ISEL, the better the participants self-perceptive social conditions. On the other hand, it is not possible to know if changing the reverse questions would hinder the participant from blindly choosing the top answer. They could still do this, thereby skewing the data even if the reverse answers were kept. This is arguably always a risk with a questionnaire like the one that was used in this study. The decision was made not to exclude the participants that showed these extreme scores. This decision was made for two main reasons. First, it cannot be said certainly that they blindly chose an alternative, even if it could be suspected. They could also be true outliers. Secondly, excluding these results would result in an even smaller sample pool, which was unwanted.

The size of the sample pool is also interesting to discuss. If the research group was larger, the result of these participants would not have the same impact on the data. A way to prevent this phenomenon could be translating the questions in the ISEL questionnaire into the participant’s native language. The reason that this was not done was the fact that I did not have a way to do this, since I cannot read or write Arabic. It would however be a possible action to take if one would continue with this research. Research suggests that native Arabic speakers exhibit exceptional difficulties in English reading (Martin, 2011), and since the English and Swedish alphabet (except for å, ä, and ö) are identical, this could arguably apply to Swedish as well. This indicates that it would be beneficial to provide the Arabic-speaking participants with an Arabic translation of the ISEL, to ensure that they truly understand the questionnaire. It is, however, important to recognize that I took other measures to ensure that this would be the case in this study. As mentioned in the methodology section, I made sure in my translation from English to Swedish to replace complicated words with words that seemed easier to understand. It was also made clear in the instructions on the Google Form that I could always be reached if the participants had any questions regarding any part of the study or if they needed
help with interpreting a question. Something that is, however, interesting to note is the fact that age group 2 performed better than age group 1 on reading comprehension (average of 4 points vs 2.7) even though they arrived at an older age. Age group 2 also reports a higher average score on the ISEL (101 vs 86), meaning that they experience a higher level of social support and at the same time perform better on the reading comprehension test. This is an indicator of the importance of social factors when learning a second language, which is an expected outcome.

The result did not show any significant correlation between the last question in the reading test and ISEL score either. In table 1, one can see that only 2 participants managed to receive points on this question and only one of these received maximum points on the question. The most probable explanation of this is the fact that the last question required more effort and skill than the previous questions that were multiple choice question or only required the participants to answer with one word. The participants had to form their own text in the answer. It is interesting to note that the one participant who received full points on this question have been living in Sweden for a long time and has a university degree, while at the same time scoring high on both the ISEL questionnaire and the reading comprehension test.

With regards to the correlation between the highest level of education and result on reading comprehension, the results of the study indicate a strong correlation between these two factors with a very low p-value, which in turn is a strong indication of a significant correlation with a low probability of being a result of chance. This result was expected since previous research shows a clear connection between education and the ability to learn a second language. As mentioned in the theory section, scientists have established that there is a high correlation between academic language proficiency and performance in standardized tests in second language learners (Bigelow & Tarone, 2004). These findings are coherent with the results of this study, which further indicates that academic background plays an important part when someone is learning a second language. Participant number 9 is an individual example of this. As can be seen in table 1, they have lived in Sweden for 9 years, which is below the average among the participants. They also have the lowest ISEL score of all the participants, at 47, scoring significantly lower than the average score of 91. Despite this, they achieved a relatively high score on the reading comprehension, with a score of 8. The average reading comprehension score among the participants was 3. In table 1, one can also see that this participant has a university education of 5+ years. This example reinforces the claim that
education plays a large role in adults second language learning. This can be compared with participant 5, who only has an elementary school education. This participant had an average score on the ISEL questionnaire and have lived in Sweden for 8 years. This participant received 2 points on the reading comprehension, compared to 8 points of participant 9. Another example is participant 6, who have also lived in Sweden for 8 years and scored 106 on the ISEL questionnaire. They scored 0 on the reading comprehension and have a high school education.

It would arguably be interesting for future scientific projects like this one to break down the education level of the participants more than what was done in this study. For example, to see which type of education, besides its length, has an impact on one’s ability to learn additional languages. Understanding what factors have the most significant impact can provide the public with more individually adjusted learning methods. This also highlights the benefits of acquiring a higher level of education. From the results of this study, a university degree of at least 3 years could come with advantages for an adult Swedish learner whose native language is Arabic. The result of this study indicates that those who have a university degree of at least three years generally performed higher on the reading comprehension test, compared with those who have an elementary or high school degree as their highest form of education. Another interesting finding to discuss is the education groups that were compared to each other in the result section. Those who do not have an university degree scored an average of 1.4 on the reading comprehension while those with an university degree scored an average of 5.1. This is another finding that puts emphasis on the important part of education. It is however important to take into account the fact that those without an university degree had lived in Sweden for an average of 6.6 years, while those with an university degree had lived in Sweden for an average of 12.3 years, almost twice as long. It is possible to consider that the years lived in Sweden is another plausible explanation for why this group performed so much better than the group with no university degree. But, considering the fact that this study did not show any significant correlation between years lived in Sweden and performance on the reading comprehension, it is more likely that the difference in reading comprehension between these 2 groups is a result of their education level and not their time lived in Sweden. This is because the study did show a strong, significant correlation between education and reading performance score.

The study also examined any potential correlation between the age of arrival in Sweden and scores on reading comprehension. This was found to be low and with a high p-value, which makes the correlation low and without a statistically significant difference. One of the older
participants (participant number 4), who was 56 years old at the time of participating and 41 years old when they arrived in Sweden, had the highest score on reading comprehension. They achieved a total of 10 points out of 12, despite arriving 10 years later than the average of the participants. There are several possible explanations for this. This participant has been living in Sweden for 3 years longer than the average participant. They also presented a high score on the ISEL questionnaire (96 out of 114) and have a university degree of 3–5 years. It is also important to recognize that there could be other factors behind this result, such as socioeconomic, that are not being accounted for in this study.

In this study, I examined both the current age of the participants and the age that they were when they arrived in Sweden, but in this section, I am referring to the age of arrival. Generally, the younger an individual is when moving to a new country and learning a new language, the easier it will be. As mentioned in the theory section, several reasons are believed to cause this. These include social factors, such as younger people being more exposed to social interaction than elderly individuals. Another factor is the mentioned neuroplasticity and the fact that the brain of younger individuals is more adaptable to new experiences, such as learning a second language (Isel, 2021). Due to these factors, the prediction was made that the study would show some degree of significant correlation between the age of arrival in Sweden and the score on the reading comprehension assignment. There are several possible explanations for this, with the sample size being one of the most probable. As mentioned in the first part of the discussion section, if the sample size is too small, it is not generalizable to the public and there could be significant difficulties finding correlations. It would be interesting if this was investigated further in future research projects, with a more substantial research group. Previous research can be an indication of finding a strong correlation in that case. Another likely explanation is the large variety of participants in regard to both ages of arrival and age of participating. There are several instances of scores on the ISEL that were similar to each other, for example, participants 14 and 15, 4 and 5, and 2 and 8. In total, there is a large variation in scores.

There is also the topic of the correlation between the number of years spent in Sweden and result on the reading comprehension. The correlation was found to be weak without a statistically significant observed difference, which was also not expected. It would be reasonable to believe that one’s ability to understand a second language would naturally improve as one spends time in the country where that language is spoken. It was expected that participants who have lived in Sweden for longer would perform better, but this was not the
case. However, it is important to note that the p-value of these results ($p=0.077$) were close to the threshold that was set ($p=0.05$). This could be an indication of some correlation between the two factors. Again, these results could likely be a result of a smaller sample group and therefore not be representative of the greater public.

Despite the smaller research group, the results of this study are highly interesting since they shed light on how complicated second learning acquisition in adults can be. It is not possible to determine a single factor that influences how adults learn a second language. The topic is more complicated. Arabic is a language that is very different from Swedish, both in speaking and in writing. The two languages do not use the same symbols, which arguably makes learning the other when one is accustomed to the first highly difficult. It would be interesting for future research to find a similar number of participants who have a language that is more similar to Swedish as their language of origin and have them complete the ISEL questionnaire and the reading comprehension, to be able to compare the results of the ones found in this study. One would then of course have to make sure to find a similar distribution of age, time in Sweden, age of arrival, and highest level of education. The reason for this would be to have a fair comparison and be able to minimize the risk that any potential differences would be the results of other factors than self-estimated social conditions and reading comprehension. For future research, it would also be interesting to include a larger variety of questions. One example of potential questions could be “How many of your friends in Sweden are Swedish speakers”. This would allow researchers to investigate any correlation between the ability to learn a second language and the fluency of said language among ones friends.

It would also, as mentioned, be ideal to be able to perform this study with a larger sample group, to be able to find generalizable and more dependable results. In future research, it would also be valuable to find a viable number of participants that have other languages as their languages of origin. This could potentially shed light on any potential differences in second language learning in adults between different languages of origin. A possible return of this would be the ability to customize learning programs according to different groups and individuals, thereby increasing the chances and improving the conditions for those who relocate to Sweden as adults, thereby making it easier for these individuals to become integrated, independent members of society. In conclusion, conducting further research on this topic could result in significant benefits for individuals all over the world who settle in a new country.
5. Conclusion

To conclude this research paper, there is a large amount of previous research on the topic of second learning acquisition in adults. Scientists have formed many theories on what is important to consider, and these theories include but are not limited to, neurobiological factors, social factors and ideological factors, and the similarity to one’s native language. Several of these factors were investigated in this study, but no significant correlation was found between reading comprehension and factors including self-estimated social conditions, time spent in Sweden, or age or arrival. However, a strong significant correlation was found between reading comprehension ability and one’s highest level of education. While the sample group only consisted of 15 participants, the results still shed light on the complexity of second language acquisition in adults. This is a topic that is important at a time when learning a second language is very common, and especially when migration is expected to increase due to global warming and other environmental factors. It is of great importance that further research is conducted on the topic, to understand how second language learning can be streamlined for those who are included in the group that will learn a new language for any reason.

In further research, the sample groups must be of a viable size and are representative of the general public, to find dependable results that can be applied when deciding how to perfect, and make other decisions, regarding learning methods.
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Appendices

A1: The original ISEL questionnaire:

INSTRUCTIONS: This scale is made up of a list of statements each of which may or may not be true about you. For each statement check “definitely true” if you are sure it is true about you and “probably true” if you think it is true but are not absolutely certain. Similarly, you should check “definitely false” if you are sure the statement is false and “probably false” is you think it is false but are not absolutely certain.

1. There are several people that I trust to help solve my problems.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

2. If I needed help fixing an appliance or repairing my car, there is someone who would help me.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

3. Most of my friends are more interesting than I am.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

4. There is someone who takes pride in my accomplishments.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

5. When I feel lonely, there are several people I can talk to.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

6. There is no one that I feel comfortable to talking about intimate personal problems.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

7. I often meet or talk with family or friends.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

8. Most people I know think highly of me.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

9. If I needed a ride to the airport very early in the morning, I would have a hard time finding someone to take me.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)
A2: The original ISEL questionnaire:

10. I feel like I'm not always included by my circle of friends.
    ___ definitely true (3) ___ definitely false (0)
    ___ probably true (2) ___ probably false (1)

11. There really is no one who can give me an objective view of how I'm handling my problems.
    ___ definitely true (3) ___ definitely false (0)
    ___ probably true (2) ___ probably false (1)

12. There are several different people I enjoy spending time with.
    ___ definitely true (3) ___ definitely false (0)
    ___ probably true (2) ___ probably false (1)

13. I think that my friends feel that I'm not very good at helping them solve their problems.
    ___ definitely true (3) ___ definitely false (0)
    ___ probably true (2) ___ probably false (1)

14. If I were sick and needed someone (friend, family member, or acquaintance) to take me to the doctor, I would have trouble finding someone.
    ___ definitely true (3) ___ definitely false (0)
    ___ probably true (2) ___ probably false (1)

15. If I wanted to go on a trip for a day (e.g., to the mountains, beach, or country), I would have a hard time finding someone to go with me.
    ___ definitely true (3) ___ definitely false (0)
    ___ probably true (2) ___ probably false (1)

16. If I needed a place to stay for a week because of an emergency (for example, water or electricity out in my apartment or house), I could easily find someone who would put me up.
    ___ definitely true (3) ___ definitely false (0)
    ___ probably true (2) ___ probably false (1)

17. I feel that there is no one I can share my most private worries and fears with.
    ___ definitely true (3) ___ definitely false (0)
    ___ probably true (2) ___ probably false (1)

18. If I were sick, I could easily find someone to help me with my daily chores.
    ___ definitely true (3) ___ definitely false (0)
    ___ probably true (2) ___ probably false (1)

19. There is someone I can turn to for advice about handling problems with my family.
    ___ definitely true (3) ___ definitely false (0)
    ___ probably true (2) ___ probably false (1)

20. I am as good at doing things as most other people are.
    ___ definitely true (3) ___ definitely false (0)
    ___ probably true (2) ___ probably false (1)
A3: The original ISEL questionnaire:

21. If I decide one afternoon that I would like to go to a movie that evening, I could easily find someone to go with me.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

22. When I need suggestions on how to deal with a personal problem, I know someone I can turn to.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

23. If I needed an emergency loan of $100, there is someone (friend, relative, or acquaintance) I could get it from.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

24. In general, people do not have much confidence in me.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

25. Most people I know do not enjoy the same things that I do.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

26. There is someone I could turn to for advice about making career plans or changing my job.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

27. I don't often get invited to do things with others.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

28. Most of my friends are more successful at making changes in their lives than I am.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

29. If I had to go out of town for a few weeks, it would be difficult to find someone who would look after my house or apartment (the plants, pets, garden, etc.).
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

30. There really is no one I can trust to give me good financial advice.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)

31. If I wanted to have lunch with someone, I could easily find someone to join me.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2) ___ probably false (1)
A4: The original ISEL questionnaire:

32. I am more satisfied with my life than most people are with theirs.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2)  ___ probably false (1)

33. If I was stranded 10 miles from home, there is someone I could call who would come and get me.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2)  ___ probably false (1)

34. No one I know would throw a birthday party for me.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2)  ___ probably false (1)

35. It would me difficult to find someone who would lend me their car for a few hours.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2)  ___ probably false (1)

36. If a family crisis arose, it would be difficult to find someone who could give me good advice about how to handle it.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2)  ___ probably false (1)

37. I am closer to my friends than most other people are to theirs.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2)  ___ probably false (1)

38. There is at least one person I know whose advice I really trust.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2)  ___ probably false (1)

39. If I needed some help in moving to a new house or apartment, I would have a hard time finding someone to help me.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2)  ___ probably false (1)

40. I have a hard time keeping pace with my friends.
   ___ definitely true (3) ___ definitely false (0)
   ___ probably true (2)  ___ probably false (1)

Scoring:

Items 3, 6, 9, 10, 11, 13, 14, 15, 17, 24, 25, 27, 28, 29, 30, 34, 35, 36, 39, and 40 are reverse scored.
Items 1, 6, 11, 17, 19, 22, 26, 30, 36, and 38 make up the Appraisal Support Subscale
Items 2, 9, 14, 16, 18, 23, 29, 33, 35, and 39 make up the Tangible Support Subscale
Items 3, 4, 8, 13, 20, 24, 28, 32, 37, and 40 make up the Self-Esteem Support Subscale
Items 5, 7, 10, 12, 15, 21, 25, 27, 31, and 34 make up the Belonging Support Subscale.
All scores are kept continuous.
B1: The national test in reading comprehension:

Delprov B: läsförståelse

Exempel på uppgifter

Text: Sopdykarna kan leva gott på vårt överflöd

1. I vilken stad har Elin Lindman gjort sina intervjuer? 2 p

   __________________________________________

2. Om butiker slänger mindre mat blir det svårare att sopdyka. På vilka andra sätt kan butiker stoppa sopdykning, enligt texten? Nämna två sätt. 2 p

   __________________________________________
   __________________________________________
   __________________________________________

3. Cecilia Lundqvist är kritisk till att mat slängs. Hur tycker hon att problemet ska lösas?
   Ringa in det alternativ som bäst stämmer överens med texten. Fler inringade alternativ än ett gör svaret ogiltigt. 2 p
   
   A. Genom att förändra butikers policy om vad som slängs.
   B. Genom att göra sopdykning lagligt.
   C. Genom att handlarna ska erbjuda kunderna det de vill ha.
   D. Genom att förändra sättet maten produceras på.
4. Vilken är den främsta anledningen till att bli frigan? 
   Ringa in det alternativ som bäst stämmer överens med texten. Fler inringade alternativ än ett gör svaret ogiltigt. 2 p 
   A. Det är spännande. 
   B. Det är ett sätt att leva billigt. 
   C. Det är modernt. 
   D. Det är en politisk handling. 

5. Författaren till reportaget är Elin Lindman. Även om författaren inte skriver ut sina egna åsikter i ämnet kan man som läsare ändå få uppfattningen att författaren är positiv till friganism, eftersom sopdykning framställs som något positivt i texten. 
   Granska texten och ge två exempel på hur författaren får fram den positiva bilden av sopdykning. 4 p 

_________________________________________ 
_________________________________________ 
_________________________________________ 
_________________________________________ 
_________________________________________ 
_________________________________________
B3: The grading instructions of the national test in reading comprehension:

**Bedömningsunderlag för delprov B**

1. **Uppgift:** Vilken stad har Elin Lindman gjort sina intervjuer?
   **Process:** Hitta information och dra enkla slutsatser
   **Bedömning:** 2 poäng
   - Lund.

2. **Uppgift:** Om butiker slänger mindre mat blir det svårare att sopdyka. På vilka andra sätt kan butiker stoppa sopdykning, enligt texten? Nämn två sätt.
   **Process:** Hitta information och dra enkla slutsatser
   **Bedömning:** 2 poäng
   Av lösningen framgår två av följande sätt:
   - lås
   - mosmaskiner
   - annanlås av brottet.

<table>
<thead>
<tr>
<th>Exempellösningar</th>
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<tbody>
<tr>
<td>2 poäng</td>
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<td><strong>Kommentar:</strong></td>
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</tbody>
</table>
B4: The grading instructions of the national test in reading comprehension:

3
Uppgift: Cecilia Lundqvist är kritisk till att mat slängs. Hur tycker hon att problemet ska lösas?
Process: Tolka och sammanföra
Bedömning: 2 poäng
   D: Genom att förändra sättet maten produceras på.

4
Uppgift: Vilken är den främsta anledningen till att bli frigan?
Process: Tolka och sammanföra
Bedömning: 2 poäng
   D: Det är en politisk handling.

5
Uppgift: Författaren till reportaget är Elin Lindman. Även om författaren inte skriver ut sina egna åsikter i ämnet kan man som läsare ändå få upp- fattningen att författaren är positiv till friganism, eftersom sopdykning framställs som något positivt i texten.
Gör en uppfattning och ge två exempel på hur författaren får fram den positiva bilden av sopdykning.
Process: Reflektera över och utvärdera innehåll, form och språk
Bedömning: 4 poäng
Av lösningen framgår två rimliga exempel på hur Lindman förmöger en positiv bild av sopdykning.
   • Ingrossen slår fast att mat slängs i onödan.
   • Fler personer som är positiva till sopdykning intervjuas än personer som är negativa.
   • En av sopdykarna får sista ordet i artikel.
   • Lindman valjer att ta med information från en frigans hemsida.
   • Lindman skriver ”I en värld där en miljard människor /…/ sväller slängs vi i Sverige över 100 000 ton mat varje år”.

2 poäng
Av lösningen framgår ett rimligt exempel.
Exempellösningar

4 poäng


Kommentar: Av lösningen framgår två rimliga exempel att Lindman väljer att tala om det sopdykarna hittar som "fynd" och att hon väljer att låta en person som är positiv till sopdykning få sista ordet i texten.

"Hon säger att man tar vara på mat som slängs i önödan. Hon tar upp all svält som pågår i världen och att vi ändå kastar 100 000 ton mat."

Kommentar: Av lösningen framgår två rimliga exempel att mat slängs i önödan enligt artikel och påpekar att det i Sverige slängs 100 000 ton mat trots att människor i världen svält.

2 poäng

"Hon intervjuar flera personer som är positiva till sopdykning men bara en som är negativ?"

Kommentar: Av lösningen framgår att en majoritet av rösterna som kommer till tals i texten är positiva till sopdykning.

0 poäng

"Det fokuseras väldigt mycket att det inte är negativt utan mer positivt"

Kommentar: Att sopdykning framställs positivt i texten framgår av uppgiftsformuleringen.

"Hon uttrycker sig kritiskt mot policien att det som är släng är släng."


"Hon har bara intervjuat personer som anser att det är bra med sopdykning eller hänger på med det. Hon lyfter bara fram den idag"

Kommentar: Elin Lindman intervjuar även Andreas Fondell som är negativt inställd till sopdykning.

"För att man skulle kunna leva på det och maten de slänger är inte dåligt. Man kan också hitta olika saker som är nödvändigt att ha och det är gratis."

Kommentar: Lösningen beskriver varför sopdykning kan uppfattas som positivt men svarar inte på hur journalistens inställning kan anas i texten.
D1: The news article that the national test was based on:

**Lund**

**Sopdyrkarna kan leva gott på vårt överflöd**

27 februari 2011 01:30

"Vi slänger jättemycket mat som inte är dålig".

Text: Elín Lindman

– Vi slänger jättemycket mat som inte är dålig, säger Andreas Fondell, butikschef i Lund.

Med en pannlampa på huvuden hoppar Fredrik Nilsson ner i containern som är fylld av all slags skräp och mat. Han är student i Lund och har ägnat sig åt sopdyckning i flera år. Det är efter butikernas stängningstid och kylan biter.

Det är mestadels studenter i Lund som dumpstrar men när vi kommer fram till containern finns där också ett medelålders par som fyller en stor kasse med grönsaker och frukt. Fredrik Nilsson rotar runt med sina speciella dumpsterhandskar som han hittade i en container en annan kväll. Ibland ligger fynden i botten.

– Det känns lite grann som att vara ute och plocka svamp eller bär. Ofta hittar jag faktiskt finfina hallon också.

**Fredrik Nilsson hittar** mer än hälften av sin mat i butikscontainrar. Men han skulle kunna leva på det om han var lite mindre lat. Han berättar om sitt bästa fynd, som var åttio stycken banansmoothies och säger att han till och med brukar hitta toapapper och folköl.

– Det slängs ju så otroligt mycket, det är för jävligt.
D2: The news article that the national test was based on:

– Det slängs ju så otroligt mycket, det är för jävligt.

På en frigansk hemsida står uppmunlingen ”Våga lev på överflödet”. I en värld där en miljard människor, var sjätte person, svälter slänger vi i Sverige över 100 000 ton mat varje år. Friganismen är en rörelse världen över som det skrivs mycket om i medierna just nu och det är lite hype i Lund att sopdyka. Trendigt.

Cecilia Lundqvist, som också brukar sopdyka, säger att det finns det en risk med att ställa upp i medierna.

– Det kan ju innebära att det blir fler lös på containrarna och mosmaskiner som förstör soporna i varje butik. Samtidigt tycker jag att det är viktigt att göra folk uppmärksamma på det matsvinn som finns idag och visa att det finns alternativ.

Andreas Fondell, butikschef på Willys i Lund, har precis som flera andra mataffärer erfarenhet av att folk letar överbliven mat i containrarna utanför efter stängningsdags.

Han berättar att de slänger jättemycket mat och att stor del av den maten inte är dålig.

– Kunden idag är väldigt kräsen, bröd ska ha bakats samma morgon även om bästföredatumet är om en vecka och bananer får inte ha en fläck. Dessutom ska hyllorna vara ständigt fulla och eftersom försäljningen är väldigt varierande så är det svårt att pricka in precis rätt mängd inköp av varor. Allt detta resulterar i att mat slängs, säger Andreas Fondell.

Vad tycker du om sopdykare?

D3: The news article that the national test was based on:

Vad tycker du om sopdyrkare?


– Det där med att det skulle vara farligt för hälsan är ju fåligt, säger Fredrik Nilsson. Så pass bra omdömesförmåga har man väl att det går att skilja på ruten och bra mat.

– Och varför ska det vara olagligt att ta vara på någon annans sopor?

Cecilia Lundqvist understryker att friganismen måste ses som en kritik mot det system som skapar detta överflöd.

– Kapitalismens brister blir tydliga när man står i en containrar full med bra mat. Visst är det gött att få gratis käk, men jag skulle ju hellre leva i en värld med en verkligt hållbar och vettig matproduktion.

Cecilia Lundqvist är ganska nöjd med kvällens fynd.

– Visst är det tolig att dyka i containrar. Men det system som producerar allt detta ”skräp” måste ju vara toligare.
E1: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:
E2: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:
E3: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:
E4: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:
E5: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:
E6: The Google form used in this study, including instructions, ISEL questions and reading comprehension questions:
E7: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:
E8: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:
E9: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jag är lika bra på att göra saker som andra personer.</td>
<td>Definitivt sant, Förmodigen sant, Definitivt falskt, Förmodigen falskt</td>
</tr>
<tr>
<td>Om jag skulle vilja gå på bio så finns det någon som skulle vilja följa med mig.</td>
<td>Definitivt sant, Förmodigen sant, Definitivt falskt, Förmodigen falskt</td>
</tr>
<tr>
<td>Det finns någon jag kan prata med om jag behöver hjälp med ett personligt problem.</td>
<td>Definitivt sant, Förmodigen sant, Definitivt falskt, Förmodigen falskt</td>
</tr>
<tr>
<td>Om jag behöver låna 1000 kr på grund av en nödsituation, finns det någon som skulle kunna hjälpa mig.</td>
<td>Definitivt sant, Förmodigen sant, Definitivt falskt, Förmodigen falskt</td>
</tr>
</tbody>
</table>
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E11: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:
E12: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:
E13: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:
E14: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:

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**TEXTEN**

Författaren heter Elin Lindome.

Vi slänger jättemykot mat som inte är dålig, säger Andreas Fendell, butikschef i Lund.

Med en panetang på huvudet hoppar Fredrik Nilsson ner i container som är fylld av allt slags skräp och mat. Han är student i Lund och har ägnat sig åt sopdyrkning i flera år. Det är efter butikernas stängningsstid och kylan börar.

Det är mestadele studenter i Lund som sop dyker men när vi kommer fram till containern finns där också ett medelålders par som fyller en stor kasse med grönsaker och frukt. Fredrik Nilsson rörer runt med sina speciella dumpstermedel som han nitarar i en container en annan kväll. Inte långt ligger fynden i botten.

- Det känns lite grann som att vara ute och plocka svamp eller bär. Ofta hittar jag faktiskt eldhära hallon också.

**Fredrik Nilsson hittar** mer än hälften av sin mat i butikscontainer. Men han skulle kunna leva på det om han var lite minstare. Han berättar om sitt bästa fys, som var Astlo stycken bananasmoothies och säger att han till och med brukar hitta togapapper och folköl.

- Det slängs ju så otroligt mycket, det är för jävaligt.

På en frigansk hemstäta står uppmunrningen ”Våga leva på överflödet”. I en varld där en miljard människor, var sjätte person, slänger vi i Sverige över 100 000 ton mat varje år. Frigasömen är en förelse runt världen över som det skrivit mycket om i medierna just nu och det är lite hypet i Lund att sopdyka. Trendigt.

**Cecilia Lundqvist**, som också brukar sopdyka, säger att det finns det en risk med att ställa upp i medierna.

- Det kan ju innebära att det blir fler i äts på containerna och möorsavskoru som förstör sopporna i varje butik.

Samtidigt tycker jag att det är viktigt att göra folk uppmärksamma på det medvinn som finns idag och visa att det finns alternativ.

**Andreas Fendell**, butikschef på Willye i Lund, har precis som flera andra mataffärer erfarenhet av att folk leker över stolen mot i containerna utanför efter stängningsdags.

Han berättar att de slänger jättemykot mat och att stor del av den maten inte är dålig.

- Kunden idag är välighetskränkande, brod ska ha bakata sömna morgon även om bostördsdatet är om en vecka och bananer får inte ha en fläck. Dessutom ska hyllorna vara ständig fulla och eftersom försäljningen är välighet skiljer så är det svårt att pricksa in precis rätt mängd inklöp av varor. Allt detta resulterar i att mat slängs, säger Andreas Fendell.

**Vad tycker du om sopdyrkare?**

- Det finns mycket kvar för oss att göra i hanteringen av sopor. Samtidigt har vi politisc att det som är slängt är slängt. Vi vill ha några som rostar i containerna. Vi måste alltid kunna garantera matsäkerheten.


- Det där med att det skulle vara farligt för hälsan är ju fanns, säger Fredrik Nilsson. Så pass bra omdömesförmåga har man väl att det går att skilja på rutten och bro mat.

- Och varför ska det vara oklart att ta vara på någon annans sopor?

**Cecilia Lundqvist** understryker att frigasömen måste ses som en kritik mot det system som skapar detta.
E15: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:
E16: The Google form used in this study, including instructions, ISEL questions and the reading comprehension questions:


   Lång svarstext

   - Genom att förändra butikens policy om vad som slängs.
   - Genom att göra sopdykning lagligt.
   - Genom att handlarna ska erbjuda kunderna det de vill ha.
   - Genom att förändra sättet meten produceras på.

   - Det är spännande.
   - Det är ett sätt att leva billigt.
   - Det är modernt.
   - Det är en politisk handling.

5. Författaren till reportaget är Elin Lindman. Även om författaren inte skriver ut sina egna åsikter i ämnet kan man som läsare ändå få uppfattningen att författaren är positiv till friganism, eftersom sopdykning framställs som något positivt i texten. Granska texten och ge två exempel på hur författaren får fram den positiva bilden av sopdykning.

   Lång svarstext

Stort tack!
Stort tack för att du tog din tid och deltog i studien.