

# The Role of Language Anxiety in the Relationship between Personality and Language Behavior among Dutch university students

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## Abstract

This study examines the impact of language anxiety on Dutch students in a university setting and explores its relationship with personality, specifically the personality trait extraversion, and behavior. It aims to understand the consequences of language anxiety and its effects on social interactions among Dutch students and international peers. The study also investigates differences in behavior between individuals with high and low levels of extraversion in Dutch and English language contexts. An online survey was conducted to investigate the relationship between language anxiety, extraversion, and language behavior among Dutch university students. The survey used various scales to measure language anxiety, extraversion, and Dutch and English language behaviors. The results indicated a moderate positive correlation between extraversion and Dutch language behavior, suggesting that more extraverted students engaged more in Dutch language behavior. However, no correlation was found between extraversion and English language behavior. Additionally, a negative correlation was observed between language anxiety and English language behavior, indicating that as language anxiety increased, English language behavior decreased (avoidance behavior). However, no correlation was found between language anxiety and Dutch language behavior, indicating that as language anxiety increased, Dutch language behavior did not increase (compensation behavior). Additionally, no moderation effect of language anxiety was found between extraversion and neither Dutch and English language behavior, indicating that language anxiety does not influence how extraverted a student is in their behavior in an university context. These findings provide insights into how the personality trait extraversion and language anxiety influence language behavior in the university context. The study recommends further research to explore additional variables such as context and language proficiency and employ multiple assessment methods to enhance understanding. The implications of this research can contribute to the creation of a more inclusive and supportive university environment by addressing language anxiety as a potential barrier to social integration and friendships in an university context.

Keywords: *Language anxiety, Language behavior, Behavior, Personality, Extraversion, University context, Dutch students, International students, Coping behavior, Avoidance behavior*

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## The Role of Language Anxiety in the Relationship between Personality and Language Behavior among Dutch university students

Feeling alone among international students at university, not attending international parties, or not making international friends are all situations that may be encountered by Dutch students who experience language anxiety at university. Language anxiety is the fear and stress experienced by language users when they are expected to speak in a foreign or second language (MacIntyre & Gardner, 1994; Sevinç & Dewaele, 2018). Dutch students studying at a university in the Netherlands are often exposed to English-speaking teachers and international students. In these situations, Dutch students are required to communicate in English. When Dutch students experience language anxiety, it can have potentially negative consequences for both Dutch and international students. Dutch students who experience language anxiety may become afraid to talk with international students, which can lead them to avoid creating friendships with international peers and avoiding participation in activities organized by internationals. Similarly, it may cause international students to feel excluded when Dutch students avoid contact and choose to speak Dutch. As a result, language anxiety can negatively impact the social interaction between Dutch students and international peers.

Language anxiety is a common phenomenon among individuals learning a second language or using a language other than their first language in situations where it is required (MacIntyre & Gardner, 1991). Research suggests that common characteristics of language anxiety include physical and cognitive symptoms. Physical symptoms include sweating, trembling, increased heartbeat, clammy hands, shivering, foot tapping, and desk drumming, while cognitive symptoms include apprehension, worry, and difficulty concentrating (Horwitz et al., 1986; Kalsoom & Al-Awawdeh, 2021; Sevinç, 2018). Several studies, including those by Horwitz et al. (1986), MacIntyre and Gardner (1991), and Young (1991), have examined language anxiety in the context of foreign language learning in classrooms. These studies suggest that language anxiety can be triggered by a range of situations, such as speaking a foreign language in front of a group, interacting with native speakers, participating in discussions, and taking language tests, as noted by Horwitz et al. (1986), MacIntyre

and Gardner (1991), and Young (1991).

Looking at the consequences of language anxiety, individuals may experience difficulty understanding others, perform poorly in language classes, and exhibit freezing up and avoidance behavior, as stated by Horwitz et al. (1986), MacIntyre and Gardner (1991), and Young (1991). A study conducted by Lou and Noels (2019) reveals that this avoidance behavior manifests itself among individuals living in a foreign country who experience language anxiety, as they avoid interactions due to being less willing to communicate in the local language. This avoidance is further supported by individuals who reported higher levels of language anxiety displayed a greater tendency to avoid learning tasks (Onwuegbuzie et al., 1999). Additionally, language anxiety causes silent behavior, such as giving short responses, using the native language, and not speaking when expected (Maher & King, 2020). In conclusion, language anxiety has the potential to lead to avoidance and silent behavior, significantly impacting our behavior in foreign language settings.

Another factor influencing people's behavior is their level of extraversion. Extraversion is part of an individual's personality and determines their social behavior, that is, it determines how they interact and communicate with others (Ajzen, 2005; Parks & Guay, 2009; Wilt & Revelle, 2009). According to Burger and Caldwell (2000), the personality trait extraversion predicts a high level of social behavior. Extraverts have better relationship skills and are highly energetic, outgoing, sociable, self-assured, talkative, and action-oriented (Augustine & Hemenover, 2012; Ajzen, 2005; Harris & Vazire, 2016). Extraverts have many friends, maintain large social networks, dominate conversations, speak up more frequently and participate more in social activities than introverts (Harris & Vazire, 2016; Kammrath et al., 2015; Lucas et al., 2008; Landis et al., 2022; Selfhout et al., 2010). Compared with extraversion, introversion predicts a lower level of social behavior (Burger & Caldwell, 2000). According to Ajzen (2005), introverts are thoughtful individuals who tend to pay more attention to their inner feelings. Introverts show shyness, reservedness, quietness, timidity, and distance in their behavior (Ajzen, 2005). Introverts have fewer friends, maintain smaller social networks, are restrained speakers, speak up less frequently and participate less in social activities than extraverts

(Harris & Vazire, 2016; Kammrath et al., 2015; Lucas et al., 2008; Landis et al., 2022; Selfhout et al., 2010). Understanding the relationship between the personality trait extraversion and behavior is essential for comprehending how individuals behave within a group or society.

Previous research has established the relationship between both language anxiety and behavior and between personality and behavior. However, no research has been done on combining the three variables language anxiety, personality and behavior. In addition, no previous research has been done within a university context to investigate the behaviors of students when they encounter language anxiety in situations unrelated to language learning, both inside and outside the classroom. By combining these three variables—language anxiety, personality, and behavior—in a university context, this research seeks to provide as language anxiety can have broader implications in the university environment. The findings obtained from this research could have significant implications for various aspects of students' university experience, particularly their social interactions and relationships. It is possible that language anxiety may pose challenges in forming friendships or connecting with peers, potentially hindering social integration. Thus, gaining a deeper understanding of the dynamics of language anxiety holds the potential to foster a more supportive and inclusive university environment.

This study will investigate how language anxiety affects the relationship between personality and behavior by examining behavior outcomes when students speak Dutch versus behavior when students speak English at the university. Examples of English language behavior include seeking friendships with international students at university, forming study groups with international students to collaborate, and feeling comfortable attending social events with international students. Similarly, in the context of Dutch language behavior, the same examples apply but within a Dutch setting. This involves seeking friendships with Dutch students at university, forming study groups with Dutch students to collaborate, and feeling comfortable attending social events with Dutch students. By examining potential differences between the two contexts, the study seeks to identify to what extent language anxiety can lead to behavior patterns that differ from an individual's

inherent personality. The findings aim to contribute to a better understanding of the relationship between personality and behavior when individuals experience language anxiety in the university environment. Therefore, the following research question was formulated: *How does language anxiety affect the behavior of Dutch students in a university environment, and is there a relationship between language anxiety, personality, and behavior among these students?*

## 2.0 Theoretical framework

This theoretical framework focuses on the relationship between extraversion, language anxiety, and behavior. The framework is guided by three main hypotheses formulated based on the existing literature. First, it aims to explore how specific personality traits, particularly extraversion, influence the actions, choices, and social interactions of individuals. Secondly, the framework delves into the impact of language anxiety on behavior, with a particular emphasis on its effects in multilingual contexts. Lastly, this framework aims to investigate the relationships and complex dynamics between extraversion, language anxiety, and behavior. Through this examination, the framework aims to enhance the understanding of the relationship between language anxiety, personality trait extraversion and behavior.

### 2.1 Extraversion and Behavior

Every individual has a different personality which refers to the unique combination of traits, thoughts, and behaviors that shape how individuals express themselves and interact with the world (Mischel & Shoda, 1995). It includes a wide range of characteristics that tend to stay consistent over time and in different situations, influencing how we behave, think, and feel (Ajzen, 2005; Parks & Guay, 2009). The relationship between personality and behavior has been a subject of extensive research. Personality traits play a significant role in shaping individuals' actions and responses across different situations and contexts (McCrae et al., 1999). For instance, individuals high in conscientiousness are more likely to exhibit organized, disciplined, and goal-directed behaviors (Roberts et al., 2009). Further, extraversion is associated with high levels of social engagement, assertiveness, and enthusiasm, while those with introverted tendencies prefer spending time alone and reflecting on their thoughts and feelings (Ajzen, 2005). Neuroticism has been linked to heightened emotional reactivity and vulnerability to stress (Joseph & De Guzman, 2023). These personality traits are important for understanding individual differences in behavior patterns, and they impact various aspects of life, including relationships, career choices, and overall well-being (Anusic & Schimmack, 2016).

This study specifically focuses on the personality trait extraversion and its relationship with social behavior patterns. Extraversion is one of the five major personality traits in the Five-Factor Model of personality (extraversion, neuroticism, agreeableness, conscientiousness, and openness to experience) which aims to capture human personality (Roccas et al., 2002). According to the Five-Factor Model of personality, extraversion is characterized by positive affect, assertiveness, sociability, and high levels of activity and energy (Roccas et al., 2002). The behaviors exhibited by extraverted individuals can be attributed to their extraverted personality (Lucas et al., 2008). Extraverts naturally engage in more social behavior, actively seeking social interactions, demonstrating leadership qualities, and openly expressing positive emotions (Ajzen, 2005; Augustine & Hemenover, 2012; Lucas et al., 2008). They feel comfortable in the presence of strangers, possess strong social skills, and have a tendency to initiate and dominate conversations, speaking up more frequently (Ajzen, 2005; Augustine & Hemenover, 2012; Harris & Vazire, 2016; Kammrath et al., 2015; Landis et al., 2022). Furthermore, extraverts actively enjoy participating in group activities (Ajzen, 2005; Augustine & Hemenover, 2012). These group activities include attending social events and forming social networks (Lucas et al., 2008). Additionally, extraverts often assume leadership roles within social groups due to their social skills, confidence, and ability to influence others (Lucas et al., 2008). Their expressive nature and positive emotions contribute to positive interactions and create a warm and welcoming atmosphere, further enhancing social behavior (Lucas et al., 2008). Overall, extraverted individuals' behaviors facilitate interaction, understanding, and the exchange of information, which are key aspects of social behavior (Lucas et al., 2008).

Applying the literature to the current context suggesting that extraverts, with their tendency for active social engagement and expressive communication style, may demonstrate a greater frequency of language behavior in both Dutch and English contexts. Applying these findings to native Dutch speakers studying at a Dutch university, Dutch students who report high level of extraversion are more likely to talk to an Dutch student if waiting outside the lecture room, are more likely to adopt to the attitudes and values of a Dutch student when talking to them at university. However,

they also exhibit an openness to interact with international students in the same context. For example, talking to an international student if waiting outside the lecture room and adopting to the attitudes and values of an international student when talking to them at university. Therefore the following hypothesis is demonstrated: Individuals with higher extraversion scores will demonstrate higher levels of Dutch-language behavior and English-language behavior compared to individuals with lower extraversion scores.

## 2.2 Language Anxiety and Behavior

Language anxiety, which involves feeling tense, uneasy, and frustrated when learning or using a foreign language, is a common issue that significantly affects language learning and intercultural communication (Horwitz, 2001). While it typically begins in foreign language classrooms, its impact does extend to other situations as well (Sevinç & Dewaele, 2018). According to Dewaele and Sevinç (2017), the level of anxiety experienced when using a language depends on the specific situation and the people involved in the conversation. Their research revealed that individuals tend to have lower levels of language anxiety when conversing with friends, but higher levels of anxiety when interacting with colleagues, strangers, talking on the phone, or in public places. Furthermore, Sevinç (2018) found that individual factors, such as the frequency of second language use, level of confidence, and perceived language proficiency, play a role in the level of language anxiety experienced by individuals.

Most studies on language anxiety focus on learners in educational settings, where three main causes of language anxiety have been identified: academic, cognitive, and social factors (MacIntyre, 1991). Academic causes involve anxiety regarding making pronunciation mistakes, having high expectations, facing intimidating teachers who embarrass students, and dealing with challenging assessments. Cognitive causes are associated with psychological factors such as the fear of losing one's identity, personality traits like introversion or emotional instability, shyness, low self-esteem, and an inaccurate perception of one's language abilities. Furthermore, social causes revolve around the fear of being negatively judged or evaluated by others when speaking a foreign language,

engaging in social comparison related to language proficiency, and experiencing social influences and expectations from peers, teachers, or the wider community.

Looking at the consequences of language anxiety, research conducted by Sevinç (2018) on public speaking among adults and foreign language learners has shown that the autonomic nervous system becomes activated. In the context of language anxiety, this activation reflects an increased state of alertness and preparedness to handle situations that induce anxiety. Sevinç (2018) identified specific symptoms associated with autonomic nervous system activation, such as sweaty palms, stomach discomfort, trembling, and an elevated heart rate. Furthermore, MacIntyre and Gardner (1991) stated that people who experience language anxiety often struggle to understand concepts because anxiety can make it harder for them to remember information in the short term. They may also have trouble expressing themselves because anxiety can interfere with retrieving information from their long-term memory.

Language anxiety has been shown to affect behavior. Language anxiety is reflected in, for example, behavior of which is known as 'silent behavior' (Maher & King, 2020). Silent behavior refers to giving brief responses, relying on one's native language, and avoiding speaking when it is expected. Another behavior associated with high levels of language anxiety is a reduced willingness to answer questions and a tendency to avoid learning tasks, often manifested through nonverbal cues (MacIntyre & Gardner, 1991; Onwuegbuzie et al., 1999). The findings of MacIntyre and Gardner (1991), Lou and Noels (2019), Onwuegbuzie et al. (1999), and Sevinç and Backus (2017) are particularly relevant to my research. These studies have all highlighted that individuals with high levels of language anxiety are less likely to develop relationships with members of the other language group and tend to avoid interacting with the foreign language group. This avoidance is attributed to language anxiety making individuals more sensitive to potential rejection based on language in intercultural communication (Lou & Noels, 2019). These behaviors observed in individuals with language anxiety demonstrate their inclination to steer clear of situations that involve using a second language. These behaviors show their tendency to stay away from situations that involve using a

second language.

In addition to this avoidance behavior, there is also compensatory behavior. In the study conducted by Sevinç and Backus (2017), researchers examined Turkish immigrants residing in the Netherlands, and they found that the Turkish community tends to gravitate towards their own community in order to speak Turkish. These Turkish individuals thus remain in their own vicious circle, using the Dutch language less, having less language knowledge, and consequently experiencing more language anxiety (Sevinç and Backus, 2017). The inclination towards one's own community and clustering with people who also speak their language can be seen as a coping mechanism. This study considers the inclination of native Dutch speakers towards their own community and language as compensatory behavior.

In this thesis, I look at the relation between language anxiety and behavior in a university context. To do that, I distinguish between "English language behavior" and "Dutch language behavior". Examples of English language behavior are engaging in a conversation with an international student while waiting outside the lecture room, being open to sharing an apartment or room with an international student, and enjoying spending time with English-speaking international students at the university. Similarly, for Dutch language behavior, the same examples apply, but within a Dutch context. This means talking to a Dutch student while waiting outside the lecture room, being open to sharing an apartment or room with a Dutch student, and enjoying spending time with Dutch students at the university.

The existing literature suggests that the main behavior outcomes of language anxiety include silent behavior, a reluctance to interact with individuals from different language backgrounds, avoidance of situations requiring the use of a second language, and a tendency to gravitate towards one's own community and language as compensatory behavior. Therefore the following hypothesis is formulated: Individuals who have high levels on language anxiety exhibit higher levels of Dutch-language behavior (compensation) and lower levels of English-language behavior (avoidance) compared to those who score lower on language anxiety.

### 2.3 Extraversion, Language Anxiety, and Behavior

While previous studies focused on the link between language anxiety and behavior, this study aims to additionally investigate the influence of language anxiety on the relationship between personality and behavior. Language seems to influence behavior in various ways. This is because people have a different personality when using a particular language, but also because they struggle to express their personality when experiencing language anxiety. In my thesis, the main focus lies on how individuals struggle to express their personality when experiencing language anxiety. However, to provide a comprehensive understanding, I will discuss both aspects.

There is evidence that language plays a crucial role in the personalities of multilingual people, influencing who they are and their behavior. Multilingual individuals, as described by memoirists like Enkvist (Dewaele and Nakano (2013)), experience a sense of distinctiveness or uniqueness in their different languages. Ramirez-Esparza et al. (2006) and Dewaele and Nakano (2013) found that bilingual individuals display different personality traits depending on the language they are using at a given time. This feeling of shifting in their identity and exhibition of different verbal behavior is called Cultural Frame Switching (Dewaele & Nakano, 2013). According to Dewaele and Nakano (2013), such differences are not only felt by the speaker but also perceived by their interlocutors and even identified through psychological tests. This means that bilinguals' behavior and how they come across to others might vary when they switch between languages. Ożańska-Ponikwia (2012) notes that people change their body language, facial expressions, or intonation while switching languages, with some becoming loud and energetic, while others become more reserved and distant. For example, someone might feel more outgoing and extroverted when speaking one language, while feeling more reserved and introverted when speaking another.

When individuals experience language anxiety, it becomes challenging for them to express their true personality. Hakim (2019) highlights that language anxiety can result in self-consciousness and heightened self-awareness, as individuals worry about making mistakes or appearing unintelligent when using a non-native language. This self-consciousness acts as a psychological

barrier, preventing individuals from freely expressing themselves and fully engaging in conversations (Hakim, 2019). Additionally, the fear of being judged or rejected based on their language proficiency causes individuals to adopt a cautious and reserved communication style (Lou & Noels, 2019). They constantly monitor and filter their words, imposing restrictions on their natural self-expression. Consequently, they are unable to fully showcase their genuine thoughts, emotions, and personality traits. Moreover, language anxiety can hinder individuals' verbal fluency and erode their confidence in their language skills (Lou & Noels, 2019). This struggle to find the right words and effectively articulate ideas leads to frustration, further inhibiting their ability to express themselves authentically.

An example of a study demonstrating that individuals may feel different, possibly due to language anxiety, is a study conducted by Dewaele and Nakano (2013). They found that multilingual individuals feel different in their later-acquired languages with the difference between their native language and second language being the most significant. Dewaele and Nakano (2013) measured 'feeling different' according to a 5-point Likert scale closed questions ranging from 1 (feel the same) to 5 (feel very different). In the context of the findings, when I consider the participants' later-acquired language as English in their English-language behavior, the significant difference they felt between their native language and second language suggests that they experience higher levels of language anxiety when using their second language. Several respondents in the study by Dewaele and Nakano (2013) mentioned that it depended on the confidence of their language abilities in the change of feeling different, feeling more confident in their native language than in their second language. This lack of confidence changes how they express themselves, therefore for formulating the hypothesis that language anxiety influences behaving different, I link this lack of confidence to foreign language anxiety.

The studies discussed above suggest that the relationship between personality and behavior is not fixed but can vary depending on an individual's level of language anxiety. The existing literature suggests that individuals behave according to their personality. When people possess the personality

trait of extraversion, they exhibit social behavior in both their native language and a second language. However, when multilingual individuals speak a foreign language, there is a shift in their personality and they struggle to express their personality when experiencing language anxiety. When language anxiety arises while speaking a second language, they feel less confident in speaking the foreign language, are less likely to form relationships with members of the other language group, and tend to avoid interacting with the foreign language group. This means that when language anxiety occurs, Dutch native speakers exhibit avoidance behavior in English-context situations (avoidance), and they lean more towards the Dutch community in Dutch-context situations (compensation).

In the context of this study, a Dutch student might show more outgoing and extroverted behavior when going to a café with Dutch students where they can speak their native language Dutch, while behaving more reserved and introverted when going to a café with international students where they have to use their second language English. Therefore, it is plausible to argue that individuals who score higher on extraversion but also high on language anxiety may exhibit lower levels of English-language behavior because their feelings of being different and potentially less proficient in these languages could contribute to their lower confidence and decreased willingness to engage in English-language activities and behaviors. This could manifest as less willing to create study groups with international students to collaborate, less likely to spend time at university with international students who speak English and less likely to become a member of a university club with international students. Therefore the following hypothesis is demonstrated: Individuals who score higher on extraversion but also high on language anxiety will exhibit lower levels of English-language behavior (avoidance) and higher levels of Dutch-language behavior (compensation) compared to those who score high on extraversion but low on language anxiety.

## 3.0 Method

### 3.1 Design

An online survey was conducted using three scales to investigate the extent to which Dutch university students experience language anxiety and how this influences their behavior in the university environment. The independent variable used in this study was Personality, focusing on extraversion. The dependent variable was Language Behavior, while the moderating variable was Language Anxiety. The first scale measured the level of extraversion among participants, while the second measured the level of language anxiety. The third scale measured Dutch and English-language behaviors to examine the relationship between personality and behavior in a native language context and how this differs in a second-language context when experiencing language anxiety.

### 3.2 Participants

The participants of this study were Dutch students who were either enrolled in an English-taught program or taking individual English-taught courses at universities in the Netherlands. The participants were recruited via a convenience sampling approach utilizing social contacts, and recruitment efforts were carried out on various online platforms, including WhatsApp, Instagram, and Facebook. To be eligible for participation, students had to meet the following criteria: having Dutch as their mother tongue, using English as their second language, being enrolled in an English-taught program or taking English-taught courses at a Dutch university. The final sample size consisted of 88 participants. The sample consisted of 33% male and 67% female participants. The average age of the participants was 21 years. The highest level of education attained or currently pursued was as follows: high school or equivalent/MBO (20%), bachelor's degree (50%), master's degree (29%), and doctorate (1%). In terms of self-rated proficiency levels, 1% considered themselves beginners, 7% pre-intermediate, 20% intermediate, 34% upper-intermediate, 29% advanced, and 9% at a mastery level.

### 3.3 Procedure and measurements

An online survey was developed using the Qualtrics program. A recruitment message was then prepared, briefly describing the study's purpose and target population. This message included a hyperlink to the survey and the researcher's contact information and was sent by WhatsApp and posted on Instagram and Facebook. Participants were asked to provide informed consent and indicate if their mother tongue was Dutch and whether they attended English-taught courses. The latter question aimed to exclude Dutch individuals who speak English as their native language and are not enrolled in an English-taught program or have courses in English.

The first measure was the extraversion subscale of the Big Five Inventory (BFI). Previous research has shown that the BFI is a quick and effective tool for measuring the Big Five personality traits and can predict a diverse range of human behaviors. Additionally, the BFI is a reliable and valid method for measuring extraversion in non-clinical samples (Alansari, 2016; Arterberry et al., 2016; Gerber et al., 2011). The BFI assesses personality traits across five dimensions: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism (John & Srivastava, 1999). The main personality trait examined in this study was extraversion, as extraversion has been found to be associated with social activities (Burger & Caldwell, 2000). The Extraversion Scale consisted of eight items, for example: "I see myself as someone who is talkative" and "I see myself as someone who is reserved". These statements were rated on a 5-point Likert scale ranging from 1 "Strongly Disagree" to 5 "Strongly Agree". The mean of the responses was then calculated as a measure of extraversion. The items showed excellent reliability (Cronbach's alpha = 0.78), allowing us to calculate each participant's overall Extraversion average score. Before computing the score, the items were recoded such that a higher score indicates a higher level of extraversion across all items. The Extraversion scale can be found in Appendix A.

This study aimed to develop a new measurement scale to measure the level of Language Anxiety within the university context. This Language Anxiety Scale, which can be found in Appendix A, was derived by combining items from two existing measures: the Foreign Language Classroom

Anxiety Scale (FLCAS) by Horwitz et al. (1986) and the English as a Foreign Language Classroom Anxiety Scale (EFLCAX) by Guntzviller et al. (2016). The Language Anxiety Scale (LAS) ( $\alpha = 0.96$ ) contained 32 items also rated on a 5-point Likert scale ranging from 1 "Strongly Disagree" to 5 "Strongly Agree". Optimizing the new scale involved adapting the context of the statements to align with the appropriate setting. For instance, a statement from the FLCAS, "When I am on my way to language class, I feel very sure and relaxed," was revised to read, "When I am on my way to an English-taught lecture, I feel very sure and relaxed." Similarly, a statement from the EFLCAX, "I am more tense and nervous when speaking in this non-native language than when speaking my native language in the same situation," was modified to read, "I feel more tense and nervous in my English-taught lectures than in my lectures in Dutch." By adjusting the statements in this manner, it was ensured that the new measurement scale accurately reflected the language anxiety experienced by Dutch university students in the context of being either enrolled in an English-taught program or taking individual English-taught courses.

To measure the variable Language Behavior, the Language Behavior Scale (LBS) was created. The LBS consisted of two subscales: the Dutch-language Behavior Scale and the English-language Behavior Scale. To create this new measurement scale, items were incorporated from six existing measures: the Foreign Language Classroom Anxiety Scale (FLCAS), The Willingness to Communicate Scale (WTCS) by McCroskey and Baer (1985), the Foreign Language Behavioral Scale by Piroe et al. (in progress), the Intergroup Approach-Avoidance Tendency Scale by Yashima (2002), and items from the Attitude and Motivation of Second Language Learning Scales by Gardner and Lambert (1972). The statements from the original scales were translated into situations that a Dutch student could experience while enrolled in an English-taught program or taking individual English-taught courses at a university in the Netherlands. For instance, a statement from the FLCAS, "I start to panic when I have to speak without preparation in language class", was revised to read, "I have the courage to ask questions in Dutch/English during lectures". Another statement by the FLCAS, "I would not be nervous speaking the foreign language with native speakers", was modified to read, "I would create

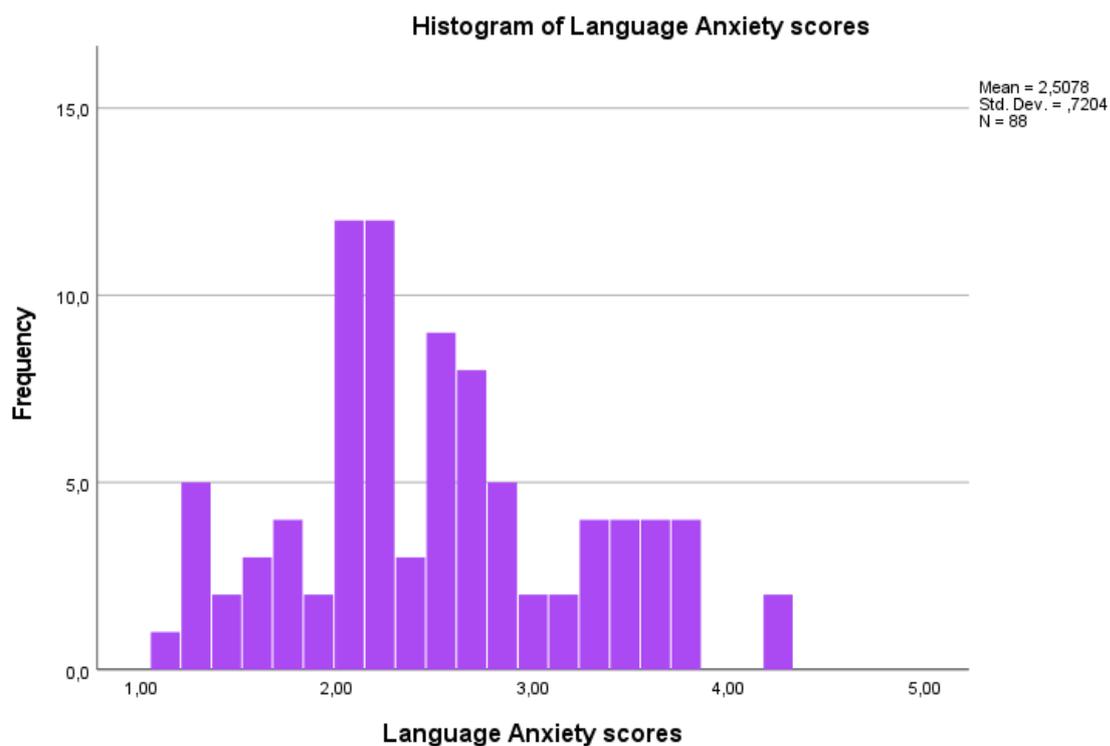
study groups with Dutch/international students to collaborate". The Dutch-language behavior subscale and the English-language behavior subscale consisted of ten items each. The Dutch-language Behavior Scale and the English-language Behavior Scale each featured the same 10 activities, but both adapted to their respective contexts. Participants had to indicate the frequency with which they performed these behavioral activities on a 5-point Likert scale ranging from 1 "Never" to 5 "Very often". The LBS and its two subscales were included in Appendix A.

The reliability of both the Dutch Language Behavior scale ( $\alpha = 0.83$ ) and the English Language Behavior scale ( $\alpha = 0.90$ ) was excellent. This allowed me to calculate the average scores for each participant's Dutch Language behavior and English Language Behavior. Before computing these scores, the items were recoded so that a higher score indicated a higher level of social behavior across all items.

## 4.0 Results

In this study, Language Anxiety, Extraversion, Dutch Language Behavior, and English Language Behavior were measured using different scales. Language Anxiety was assessed using a 32-item scale, with a mean score of 2.51 and a standard deviation of 0.72. Higher values on this scale indicated a greater level of language anxiety. Extraversion was measured using an 8-item scale, with a mean score of 3.61 and a standard deviation of 0.51. Higher scores on this scale denoted a higher level of extraversion. Dutch Language Behavior was evaluated using a 10-item scale, with a mean score of 3.98 and a standard deviation of 0.49. Higher scores on this scale indicated a greater degree of Dutch language behavior, such as attending parties with Dutch-speaking students. English Language Behavior was assessed using a 10-item scale, with a mean score of 3.62 and a standard deviation of 0.66. Higher scores on this scale represented a higher level of English language behavior, such as attending parties with international students. Figure 1 presents a histogram displaying the distribution of language anxiety scores for each participant.

Figure 1: Histogram of Language anxiety scores



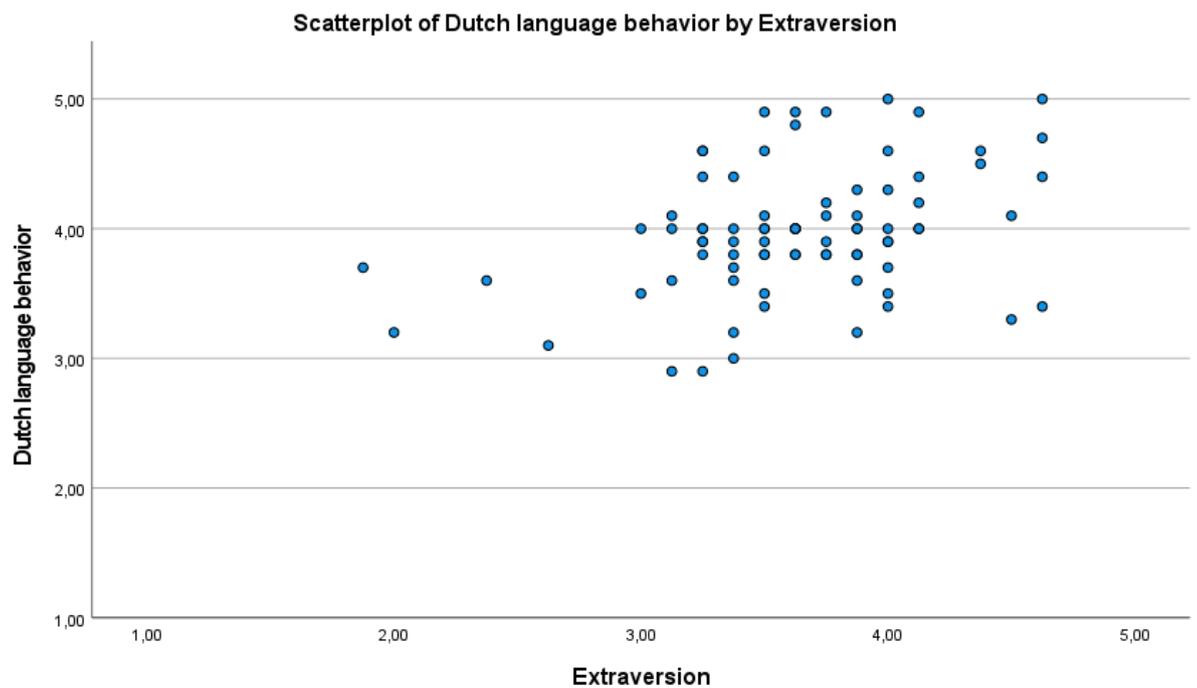
*This histogram illustrates the distribution of language anxiety scores among participants, showing significant variation. The majority of participants scored around the mean, indicating a central tendency. Notably, some participants showed no language anxiety at all, while others exhibited very high levels of anxiety. Although no one scored the highest possible score, two participants obtained scores above 4, indicating elevated anxiety levels.*

#### 4.1 Extraversion and Behavior

To test if Extraversion and Dutch Language Behavior are positively correlated, i.e. individuals with high levels of extraversion indicate higher scores of Dutch language behavior in a university context, a Pearson's correlation analysis was conducted. The Dutch Language Behavior scores were normally distributed (z-score skewness = 0.41, z-score kurtosis = -0.01) as the z-scores lie between 1.96 and -1.96. The Extraversion scores were not normally distributed (z-score skewness = -2.25, z-score kurtosis = 3.00) therefore, I decided to ask for the bootstrapped 95% CI for  $r$ .

A moderate positive correlation was found between the variables Extraversion and Dutch language behavior ( $r = 0.36$ , 95% bootstrapped CI [.13, .53],  $r^2 = 0.13$ ,  $p = .001$ ), indicating the more students rate themselves as extraverted, the more they engage in Dutch Language Behavior (compensation), which indicates partial support for the tested hypothesis (see Figure 2).

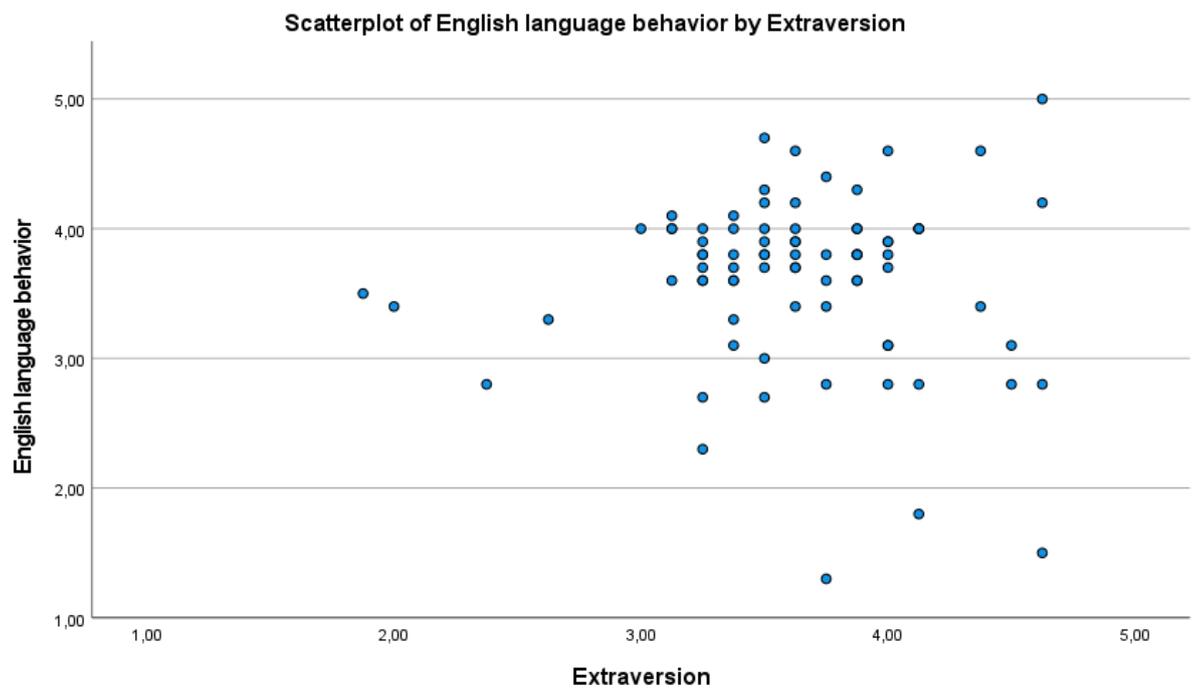
Figure 2: Scatterplot of Dutch language behavior and Extraversion



*In this scatterplot, the points are somewhat spread out but not extremely far apart. This suggests a linear moderate positive relationship between the variables Extraversion and Dutch language behavior.*

To test if Extraversion and English Language Behavior are negatively correlated, i.e. individuals with high levels of extraversion indicate lower scores of English language behavior in a university context, a Pearson's correlation analysis was conducted. Both the English Language Behavior scores (z-score skewness = -4.56, z-score kurtosis = 4.79) and the Extraversion scores (z-score skewness = -2.25, z-score kurtosis = 3.00) were not normally distributed. Therefore, I decided to ask for the bootstrapped 95% CI for  $r$ . No correlation was found between Extraversion and English Language Behavior ( $r = -.036$ , 95% bootstrapped CI  $[-.30, .26]$ ,  $r^2 = 0.00$ ,  $p = .752$ ). This means that high levels of extraversion do not indicate lower levels of English language behavior. Indicating the more students rate themselves as extraverted, they do not engage less in English language behavior (avoidance), for example, attending less parties with international students, providing partially no support for the tested hypothesis (see Figure 3).

Figure 3: Scatterplot of English language behavior by Extraversion

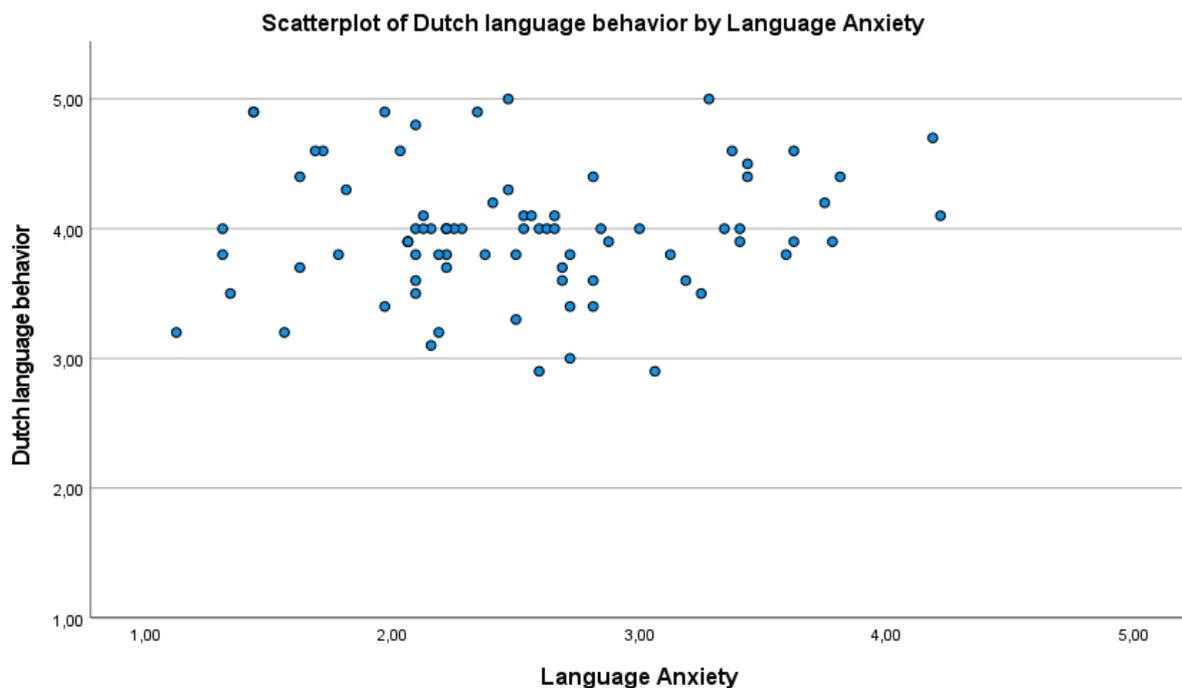


*The scatterplot shows that the points are very spread out and therefore does not show a linear relationship between the variables English Language Behavior and Extraversion.*

#### 4.2 Language Anxiety and Behavior

To test if Language Anxiety and Dutch Language Behavior are positively correlated, i.e. individuals with high levels of language anxiety indicate higher scores of Dutch language behavior in a university context, a Pearson's correlation analysis was conducted. Both the Language Anxiety scores (z-score skewness = 1.27, z-score kurtosis = -0.85) and the Dutch Language Behavior scores (z-score skewness = 0.41, z-score kurtosis = -0.01) were normally distributed as the z-scores lie between 1.96 and -1.96. See figure 4 for the scatterplot of Language Anxiety and Dutch Language Behavior. No correlation was found between Language Anxiety and Dutch Language Behavior ( $r = 0.08$ ,  $r^2 = 0.02$ ,  $p > .01$ ). In conclusion, it appears that language anxiety and Dutch language behavior are not positively correlated. Indicating the more students experience language anxiety, they do not engage more in Dutch language behavior (compensation), for example, attending parties with Dutch students, providing partially no support for the hypothesis.

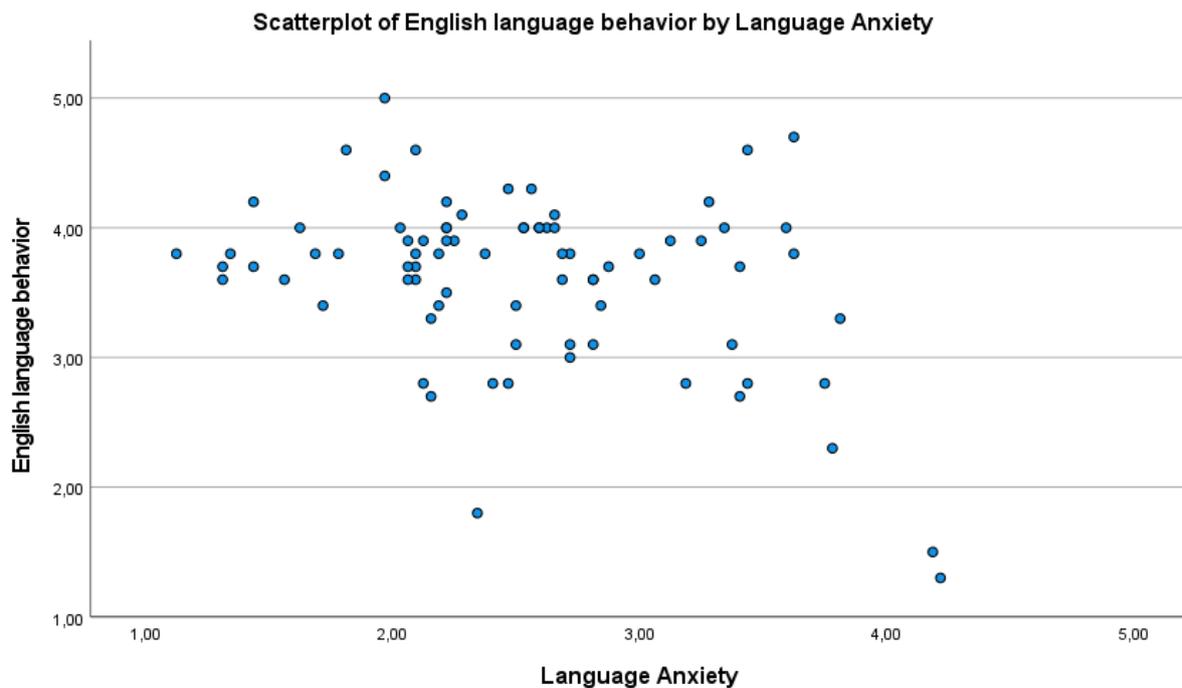
Figure 4: Scatterplot of Dutch language behavior and Language anxiety



*The scatterplot shows that the points are very spread out and does not show a positive or negative linear relationship between the variables Dutch Language Behavior and Language Anxiety.*

To test if Language Anxiety and English Language Behavior are negatively correlated, i.e. individuals with high levels of language anxiety indicate lower scores of English language behavior in an university context, a Pearson's correlation analysis was conducted. Since the English Language Behavior scores (z-score skewness = -4.56, z-score kurtosis = 4.79) were not normally distributed, I decided to ask for the bootstrapped 95% CI for  $r$ . See figure 5 for the scatterplot of Language Anxiety and English Language Behavior. A negative correlation was found between the variables Language Anxiety and English language behavior ( $r = 0.37$ , 95% bootstrapped CI [-.58, -.06],  $r^2 = 0.13$ ,  $p < .001$ ), suggesting that as language anxiety rise, there is a corresponding decrease in, for example, attending parties with international students, providing partial support for the hypothesis.

Figure 5: Scatterplot of English language behavior and Language anxiety



*The scatterplot shows that the points are very spread out and show a weak negative linear relationship between the variables English Language Behavior and Language Anxiety.*

#### 4.3 Extraversion, Language Anxiety and Behavior

To test the hypothesis that individuals with higher levels of extraversion, combined with high levels of language anxiety, exhibit lower frequency of English-language behavior and a higher frequency of Dutch-language behavior, in comparison to individuals with high extraversion but low language anxiety, two moderation analyses were conducted. First, the moderation analysis was conducted using Extraversion as the independent variable (X), Language Anxiety as the moderator (W), and Dutch Language Behavior as the dependent variable (Y). The overall model revealed a significant relationship between Extraversion and Dutch behavior ( $r = .39$ ,  $r^2 = .15$ ,  $F(3, 78) = 4.53$ ,  $p = .006$ ), meaning that the independent variable Extraversion explains 14.85 percent of the variation in the dependent variable Dutch language behavior. However, the moderation effect of Language Anxiety was not statistically significant (Language Anxiety:  $\beta = -.739$ ,  $p = .216$ ). Similarly, the interaction term between Extraversion and Language Anxiety (Int\_1) did not significantly contribute to the model ( $\beta = .208$ ,  $p = .190$ ).

Second, the moderation analysis was conducted using Extraversion as the independent variable (X), Language Anxiety as the moderator (W), and English Language Behavior as the dependent variable (Y). The model accounted for 8.81% of the variability in English behavior. The overall model revealed a non-significant relationship between Extraversion and English behavior ( $r = .3839$ ,  $R^2 = 14.74$ ,  $F(3, 76) = 4.3788$ ,  $p = .007$ ). Similarly, Language Anxiety did not significantly predict English Language Behavior ( $\beta = .504$ ,  $p = .535$ ). Additionally, the interaction term between Extraversion and Language Anxiety (Int\_1) was not statistically significant ( $\beta = -.227$ ,  $p = .293$ ). This means that Language Anxiety does not moderate the relationship between Extraversion and English Language Behavior. Suggesting that extraverted students do not change in behavior in both Dutch and English language contexts due to the rise in language anxiety, providing no support for the hypothesis.

## 5.0 Discussion

The purpose of this study was to investigate how students' behavior, particularly their level of extraversion, is influenced by their experience of language anxiety in the university setting. By analyzing the behavior outcomes of students enrolled in an English-taught program, specifically focusing on the differences between their behavior patterns in Dutch language situations (native language context) and English language situations (second language context), the study aimed to understand to what extent language anxiety influences the relationship between extraversion and behavior.

Before zooming in on the individual hypothesis, I would like to make a few general remarks about language anxiety in the university context first. The results have revealed two notable observations. Firstly, it has been observed that there is a significant variation in the extent to which individuals experience language anxiety. Measured on a 5-point Likert scale, the results demonstrate a diverse range of anxiety levels among the participants. While some individuals indicated no anxiety at all, scoring the lowest point on the scale, others reported higher levels of anxiety. It is worth noting that none of the participants reached the maximum score on the scale, but two individuals scored above 4, indicating elevated levels of anxiety. These findings highlight the varying levels of anxiety experienced by the students. Secondly, the majority of participants fell within the average range, around 2.51, on the 5-point Likert scale used to measure language anxiety. This suggests that, on average, the participants did not appear to exhibit significantly high levels of language anxiety. This could be because the participants who took part in the survey are regularly exposed to an English-speaking environment during their English study program. As a result, they have become more accustomed to using English in their daily lives and engaging in social interactions in that language. These results are in line with a study by Sevinç (2018) who investigated language anxiety among Turkish immigrants in the Netherlands and found that higher frequency of daily use of the an language lowered levels of language anxiety.

Regarding the relation between extraversion and behavior, the results indicated a moderate positive correlation between extraversion and Dutch language behavior, which aligns with previous studies by Burger and Caldwell (2000), Harris and Vazire (2016) and Augustine and Hemenover (2012). These studies indicated that extroverted individuals are more at ease with strangers, speak up more frequently, are more likely to make friends in social settings and engage in more social activities than introverted people. Hence it can be inferred that individuals who exhibit higher levels of extraversion are, for example, more likely to form friendships with Dutch-speaking individuals at university and feel at ease attending social events organized by Dutch student associations. This result highlights the role of extraversion in social interactions and communication in one's native language. However, no significant correlation was found between extraversion and English language behavior, suggesting that that being more extroverted may not necessarily increase the likelihood of Dutch native speakers engaging in conversations with international students outside of the lecture room or being open to sharing an apartment or room with them. These results suggest that someone's personality might affect their behavior in different ways depending on the language context.

Regarding the relation between language anxiety and behavior, a significant negative correlation between language anxiety and English language behavior was found, which aligns with previous studies that have demonstrated how language anxiety hinders the use of a second language (Sevinç, 2018; Sevinç & Dewaele, 2018; Onwuegbuzie et al., 1999). Higher levels of language anxiety were associated with a reduced frequency of English language behavior among participants. For example, individuals who exhibit higher levels of language anxiety are less likely to create study groups with international students to collaborate and are less likely to spend time at university with international students who speak English. The presence of anxiety-inducing factors that individuals actively try to evade could explain these outcomes. Additionally, the pressure to fulfill language expectations and the potential for evaluation or correction may have played a role in heightened language anxiety among Dutch native speakers when communicating in English. Although studies by Sevinç (2018) and Sevinç and Dewaele (2018) focused on immigrants, they did show similar results, indicating that

language anxiety has a consistent effect in different contexts.

Regarding language anxiety and Dutch language behavior, no significant correlation was found, challenging the initial hypothesis. Prior studies have suggested that individuals with higher language anxiety levels may rely more on their native language as a coping mechanism (MacIntyre & Gardner, 1991; Maher & King, 2020; Onwuegbuzie et al., 1999). The findings of the current study indicate that language anxiety may not have a direct influence on the behavior of Dutch native speakers in the university context. In other words, individuals with high levels of language anxiety may not be more likely to form study groups with fellow Dutch students or be open to sharing an apartment or room with them. While individuals experiencing high language anxiety in English-speaking settings tend to exhibit avoidance behaviors, Dutch native speakers in their own language context do not demonstrate similar coping strategies. This suggests that the impact of language anxiety on behavior may vary depending on the university environment. In an English study program, English is often required for academic tasks and social interactions. This means that Dutch native speakers are constantly exposed to situations where they have to use English. Additionally, international students are often present at parties or in class. Therefore, it becomes difficult for them to only rely on their native language as a coping mechanism.

Regarding the moderation analyses, the results did not support the hypothesis that language anxiety moderates the relationship between extraversion and either Dutch or English language behavior. The interaction terms between extraversion and language anxiety were not statistically significant in both models. This finding suggests that language anxiety does not significantly alter the relationship between extraversion and language behavior. Therefore, it can be inferred that extraverted individuals do not change their language behavior in a university context due to their level of language anxiety. There is a potential explanation for these findings. Studies conducted by Rezvani and Sadeghi (2016) and MacIntyre and Charos (1996) have examined the relationship between language anxiety and extroversion and introversion. These studies have revealed that extroverted individuals tend to experience lower levels of language anxiety compared to introverts

when interacting in their second language. This can be attributed to the extroverts' inclination towards social interaction (MacIntyre & Charos, 1996; Rezvani & Sadeghi, 2016). In the context of my study, this suggests that extraversion could lead to reduced language anxiety, consequently facilitating more sociable behavior in both Dutch and English language contexts.

Namely, the impact of language anxiety on language behavior may vary depending on the specific context and the relationship between individuals involved, as indicated by a study by Sevinç and Dewaele (2018). Sevinç and Dewaele (2018) explored how individuals tend to experience lower levels of language anxiety in informal settings and higher levels of language anxiety in formal settings. This suggests that language behavior can be influenced by the formality of the setting. In the university context, individuals may exhibit different levels of extraversion depending on the person they are interacting with or the particular situation they are in. For example, they may feel more extroverted in informal settings among friends, such as when creating study groups with classmates they know well, but more introverted when creating study groups with unfamiliar classmates. In both scenarios, the language anxiety experienced by individuals may play a role in their willingness and comfort level in engaging with others. Therefore, the specific impact of language anxiety as a moderator of the relationship between extraversion and language behavior within the university context may depend on whether the setting is informal or formal.

### 5.1 Theoretical and Practical Implications

The study revealed several important implications. Firstly, it highlighted the diverse range of anxiety levels among the participants, with some individuals reporting higher levels of anxiety while others indicating no anxiety. This demonstrates that language anxiety is a subjective experience that varies among individuals within the university context. Furthermore, the study indicated that higher levels of language anxiety are associated with reduced English language behavior. This suggests that individuals with heightened anxiety are less likely to engage in activities such as creating study groups or spending time with English-speaking international students. Consequently, language anxiety can act as a barrier to the use of a second language and limit opportunities for interaction with

individuals from different linguistic backgrounds. In this study, no significant relationship was found between language anxiety and Dutch language behavior in the university context. This suggests that the impact of language anxiety on behavior in one's native language may be limited. One possible explanation is the influence of constant exposure to English-speaking environments in universities, which could diminish the reliance on the native language as a coping mechanism. Additionally, the study revealed a positive correlation between extraversion and Dutch language behavior, indicating that individuals with higher levels of extraversion are more likely to engage in social activities with Dutch-speaking peers. However, no substantial correlation was found between extraversion and English language behavior, suggesting that extraversion may not necessarily lead to increased participation in English-speaking activities or interactions with international students. This suggests that language anxiety may not be a strong moderator of the relationship between extraversion and language behavior in the university context. Other factors, such as language proficiency or specific contextual factors, may have a more substantial influence on the relationship.

From a practical standpoint, educators should consider a person's extraversion level and level of anxiety when developing strategies to encourage the use of English in an English-language context at the university. By recognizing the influence of extraversion on language behavior and the impact of language anxiety on language use, educators can tailor their approaches to create a supportive environment that addresses these factors. This can be achieved by fostering a culture of inclusivity and understanding, implementing language exchange programs, providing language support resources, and promoting respect for linguistic diversity. By doing so, Dutch students can feel more comfortable and confident using English, leading to increased participation in English language activities and improved communication among students.

## 5.2 Limitations and Future Research

One strength of the study was using reliable and validated scales to measure extraversion, language anxiety, and language behavior. The scales demonstrated good internal consistency, increasing the data's reliability. However, it is important to acknowledge several limitations, regarding

measuring extraversion, language anxiety, and language behavior, which relied on self-report scales. Self-report scales are subjective and can be susceptible to individual biases. It is worth noting that participants' responses may have been influenced by social desirability bias or subjective interpretations of the scale items. For example, in the context of self-report measures concerning English language situations, participants might tend to overstate or exaggerate how often they engage in certain behaviors. One possible explanation for this phenomenon is that individuals may have a tendency to present themselves in a more socially desirable manner or conform to societal expectations. It is crucial to acknowledge the potential discrepancy between self-reported behaviors and actual actions when relying solely on self-report measures.

To overcome the limitations associated with relying solely on self-report measures, future studies can enhance their methodology by incorporating multiple assessment methods. By utilizing various approaches, such as behavioral observations and linguistic analyses, researchers can gather data from different angles, reducing their dependence on self-report data alone. For example, behavioral observations involve closely observing participants' actual behavior in real-life or simulated situations (Bakeman & Quera, 2012), providing objective insights into their language behavior that can complement and validate the self-report data. On the other hand, linguistic analyses involve examining language samples, such as written texts or recorded conversations, using objective linguistic measures (Fries, 1954). This enables researchers to analyze linguistic features, patterns, and structures, gaining valuable insights into individuals' language behavior regardless of their self-report responses. Additionally, experimental studies can further clarify the causal mechanisms by manipulating settings and observing their effects on language behavior, offering deeper insights into the underlying dynamics. Applying such a multi-method approach thus offers a more comprehensive understanding of the constructs under investigation, as it allows for data triangulation and enhances the validation of findings.

To gain a comprehensive understanding of language anxiety experiences among Dutch native speakers in an English study program, it is crucial to recognize the influence of multiple factors,

emphasizing the need for future research to explore additional variables. Language proficiency influences individuals' confidence and comfort in using a specific language, as higher self-perceived proficiency is associated with less language anxiety (Papi et al., 2023). Higher English language proficiency can increase Dutch native speakers' ease of engaging in conversations with international students and participating in English-speaking study groups. Second, the academic pressures stemming from meeting language expectations and performing well in English language courses can contribute to language anxiety. The need to demonstrate language proficiency in academic tasks, such as presentations, essays, or exams, can intensify the language anxiety experienced by Dutch native speakers, especially if they perceive themselves as less competent in English. Similarly, social pressures can contribute to language anxiety experienced by Dutch native speakers in English study programs. For instance, when attending international parties where they are unfamiliar with everyone, Dutch native speakers may feel the pressure to communicate in English and make a positive impression. These social situations can increase language anxiety as individuals feel the pressure to meet language expectations and overcome the perceived language barrier. By incorporating these variables in future research, a more comprehensive understanding of the complex interplay between extraversion, language anxiety, and language behavior can be achieved.

### 5.3 Conclusion

The findings of the study have implications for both the English language context and the Dutch language context. The positive correlation between extraversion and Dutch language behavior suggests that individuals who are more extroverted are likely to engage in social activities and interact comfortably with others in their native language. This implies that extroverted individuals may be more inclined to form friendships and participate in social events within the Dutch-speaking community at the university. In contrast, the negative correlation between language anxiety and English language behavior suggests that higher levels of language anxiety are linked to decreased engagement in English-speaking activities, potentially hindering interaction with international students at the university. Furthermore, the absence of a direct correlation between language anxiety

and Dutch language behavior suggests that language anxiety may not directly influence the behavior of Dutch native speakers in their native language context. This implies that Dutch native speakers, regardless of their level of language anxiety, are likely to engage in similar behaviors and interactions with other Dutch speakers, irrespective of their anxiety levels. Additionally, the non-significant moderation effect of language anxiety on the relationship between extraversion and language behavior indicates that language anxiety may not significantly alter the relationship between extraversion and language use in both the English and Dutch language contexts at the university. This suggests that the impact of extraversion on language behavior remains consistent regardless of individuals' language anxiety levels.

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## 7.0 Appendix A

### 7.1 Extraversion scale

I see myself as someone who...

1. Is talkative
2. Is reserved
3. Is full of energy
4. Generates a lot of enthusiasm
5. Tends to be quiet
6. Has an assertive personality
7. Is sometimes shy, inhibited
8. Is outgoing, sociable

### 7.2 Language Anxiety Scale

1. I feel confident when I speak English at university
2. I start to shake when I have to speak English in lectures
3. I can feel my heart pounding when I am about to be called on during English-taught lectures
4. I get nervous when the lecturer asks questions in English that I have not prepared in advance
5. Participating in group discussions in English makes me nervous
6. I often sweat when I speak English with students or teachers
7. During lectures, I find it embarrassing to answer in English
8. I feel confident when I have to give a presentation in English in front of my classmates
9. I normally feel at ease throughout English exams
10. Speaking English comes naturally to me
11. I often believe that my classmates speak better English than I do
12. I get nervous when I speak English at university
13. Even if I am well prepared for English-taught lectures, I feel anxious about it
14. English-taught lectures move so quickly I worry about getting left behind
15. I feel more tense and nervous in my English-taught lectures than in my lectures in Dutch

16. The number of rules you have to apply when speaking English overwhelms me
17. I worry about mispronouncing words while speaking English at the university
18. Speaking English in front of other students makes me self-conscious
19. I always feel that the other students speak English better than I do
20. I get nervous when I do not understand every word the lecturer says in English
21. It frightens me when I don't understand what the lecturer is saying in English
22. I am concerned about finding the right words when I am expected to speak English at university
23. I feel comfortable around native English speakers
24. Speaking English with native English speakers makes me feel nervous
25. When I'm on my way to a English-taught lecture, I feel very sure and relaxed
26. I feel confident when speaking with internationals at the university
27. I am afraid that students will judge me when I speak English
28. I often feel like avoiding lectures in English
29. Taking more courses that are taught in English would bother me
30. I do not worry about making grammar mistakes while speaking English at university
31. I'm afraid the other students will laugh at me when I speak English
32. I panic when I have to speak English at university without preparation

### 7.3 Language Behavior Scales

#### *Dutch-language Behavior Scale*

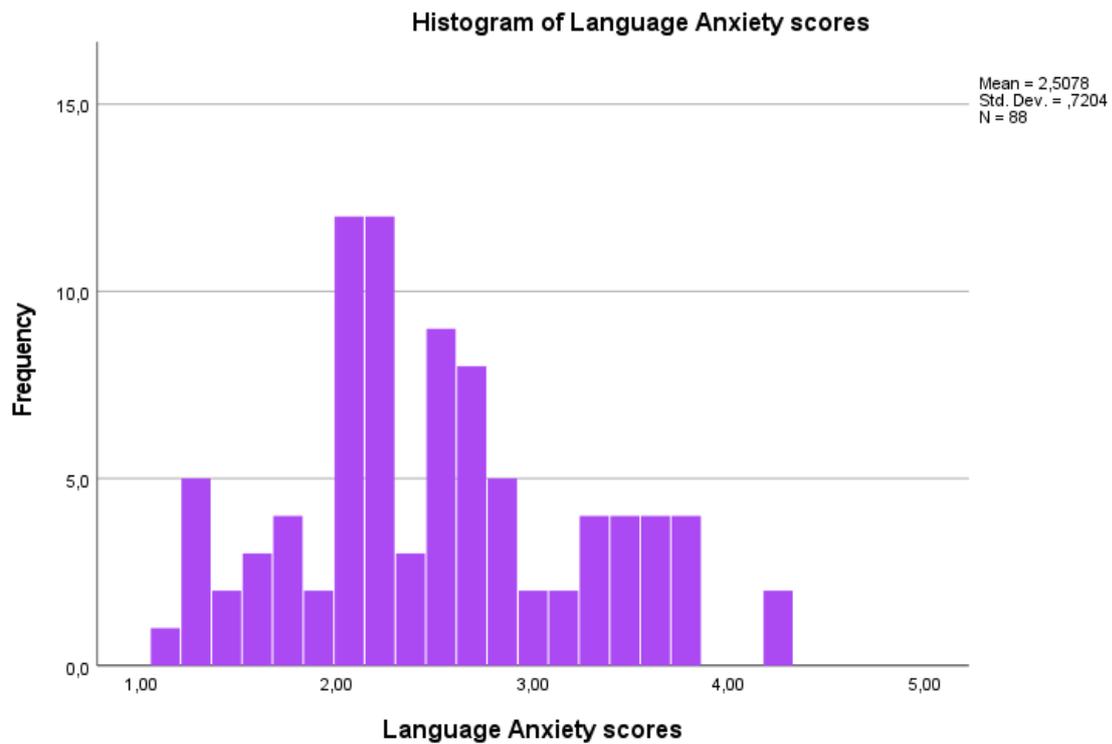
1. I would like to make friends at university with people who speak Dutch
2. I like to spend time at university with Dutch students
3. I think it would be fun to be a member of a university club where people speak Dutch
4. I would feel comfortable going to a party organized by a Dutch student association
5. I would feel comfortable going to an university café to meet Dutch students
6. I try to adopt to the attitudes and values of a Dutch student when I talk to them at university

7. I would talk to an Dutch student if I am waiting outside the lecture room
8. I wouldn't mind sharing an apartment or room with an Dutch student
9. I have the courage to ask questions in Dutch during lectures
10. I would create study groups with Dutch students to collaborate

*English-language Behavior Scale*

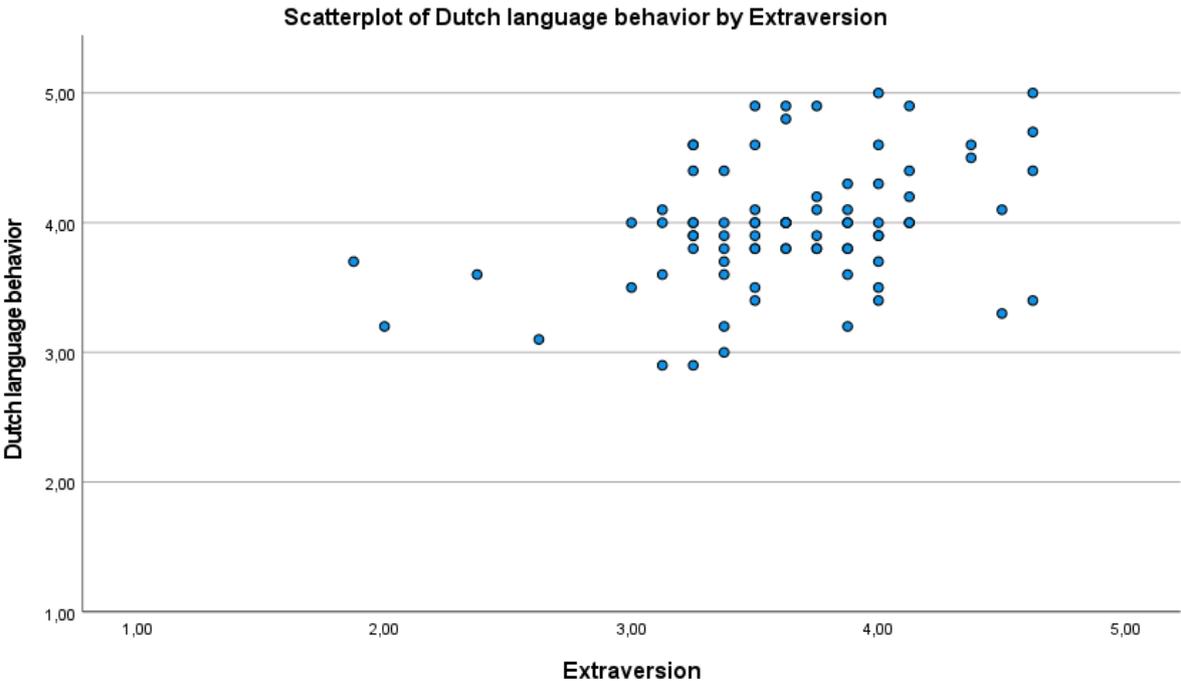
1. I would like to make friends at university with people who speak English
2. I like to spend time at university with international students who speak English
3. I think it would be fun to be a member of a university club with international students
4. I would feel comfortable going to an international party organized by an international student association
5. I would feel comfortable going to an university café to meet international students
6. I try to adopt to the attitudes and values of an international student when I talk to them at university
7. I would talk to an international student if I am waiting outside the lecture room
8. I wouldn't mind sharing an apartment or room with an international student
9. I have the courage to ask questions in English during lectures
10. I would create study groups with international students to collaborate

Figure 1: Histogram of Language anxiety scores



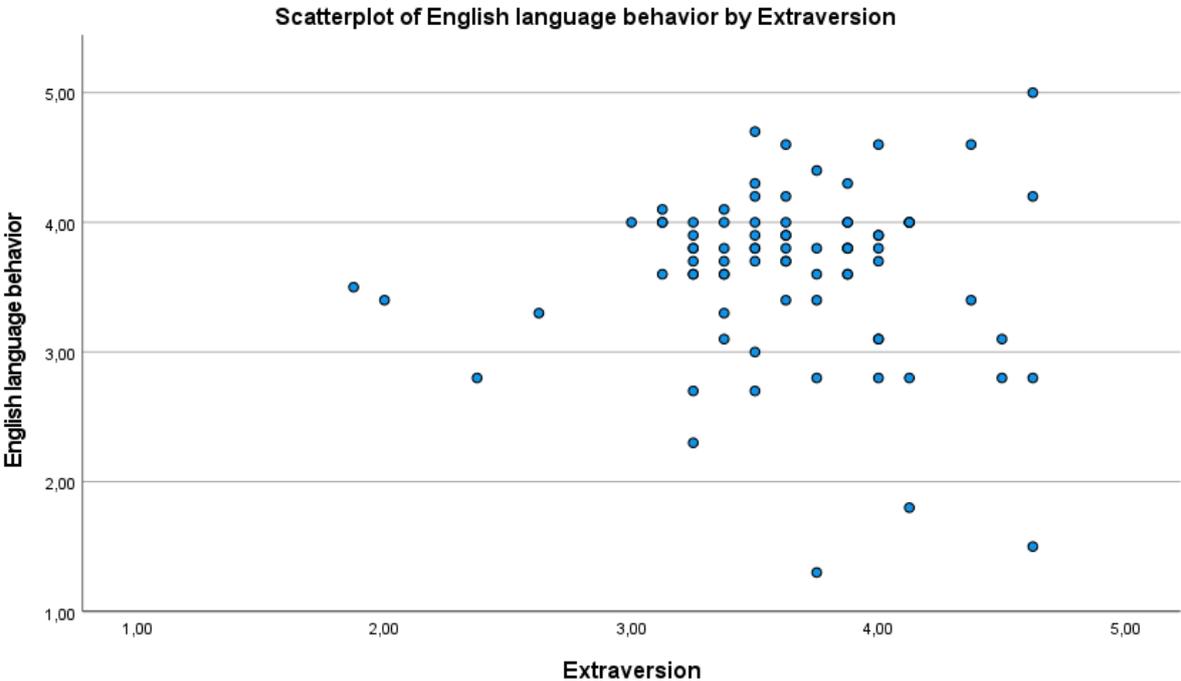
*This histogram illustrates the distribution of language anxiety scores among participants, showing significant variation. The majority of participants scored around the mean, indicating a central tendency. Notably, some participants showed no language anxiety at all, while others exhibited very high levels of anxiety. Although no one scored the highest possible score, two participants obtained scores above 4, indicating elevated anxiety levels.*

Figure 2: Scatterplot of Dutch language behavior and Extraversion



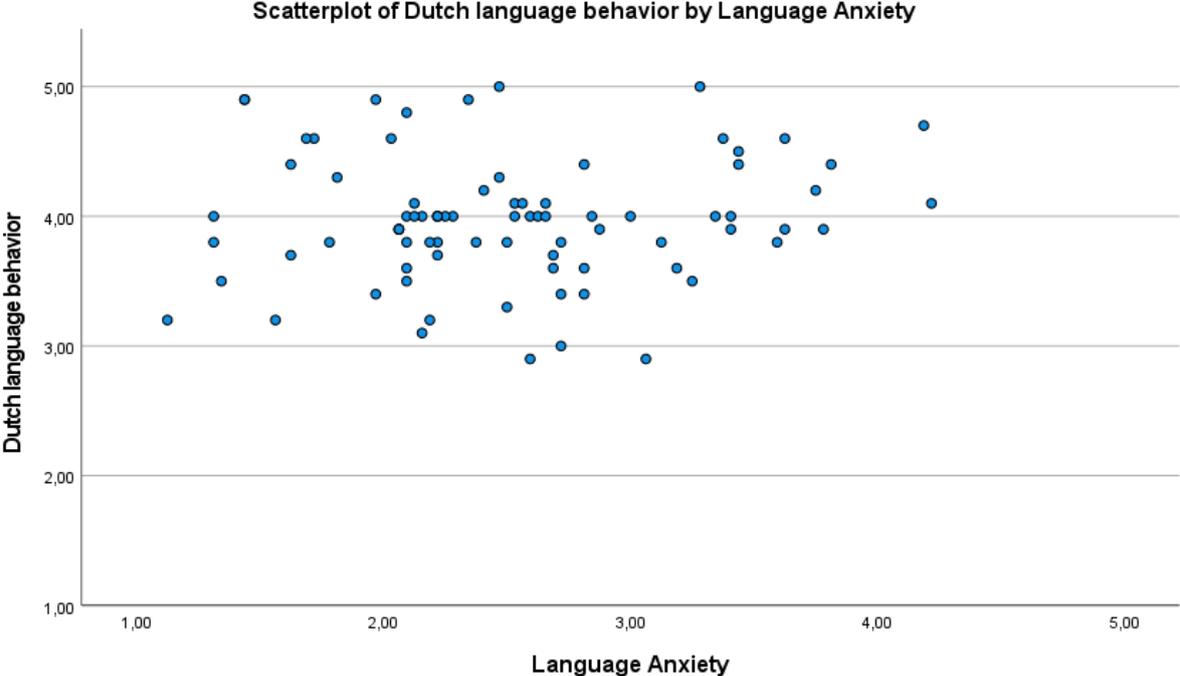
*In this scatterplot, the points are somewhat spread out but not extremely far apart. This suggests a linear moderate positive relationship between the variables Extraversion and Dutch language behavior.*

Figure 3: Scatterplot of English language behavior by Extraversion



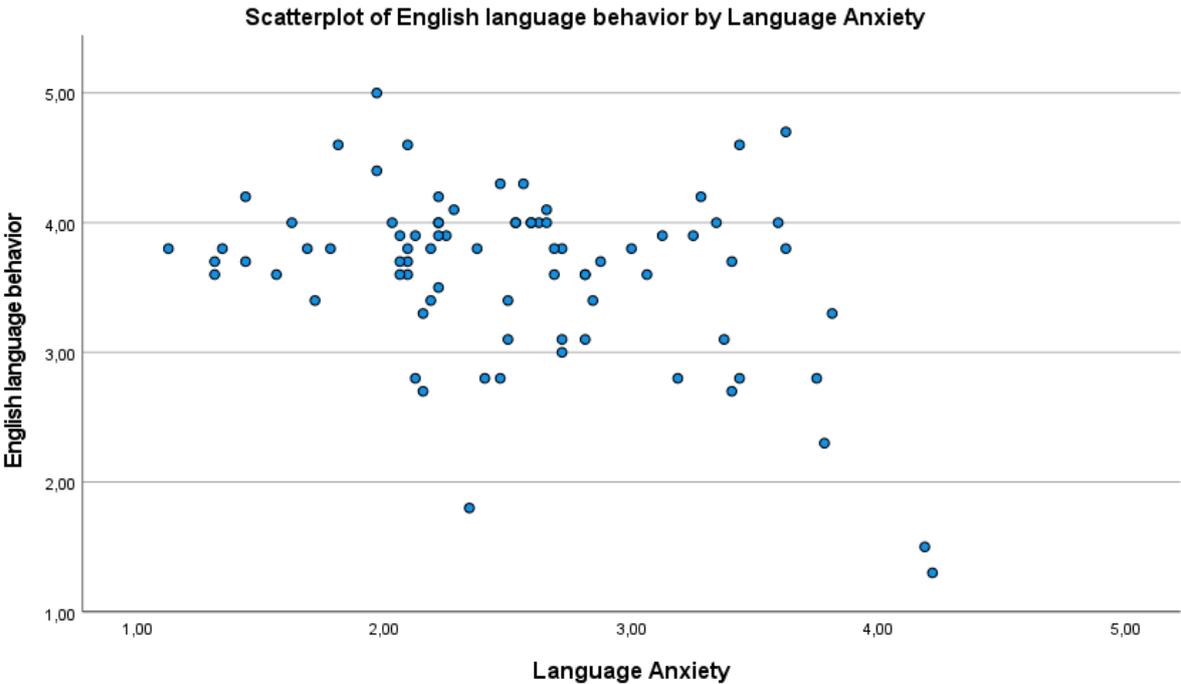
The scatterplot shows that the points are very spread out and therefore does not show a linear relationship between the variables English Language Behavior and Extraversion.

Figure 4: Scatterplot of Dutch language behavior and Language anxiety



The scatterplot shows that the points are very spread out and does not show a positive or negative linear relationship between the variables Dutch Language Behavior and Language Anxiety.

Figure 5: Scatterplot of English language behavior and Language anxiety



The scatterplot shows that the points are very spread out and show a weak negative linear relationship between the variables English Language Behavior and Language Anxiety.