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Communication Science

Master Thesis

Sustainability and the attitudes of internal stakeholders:
a cross-sectional survey at a Dutch university

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Abstract

Purpose- In this study the relationship between sustainability and satisfaction with job/study (SJS), identification (IDF), and perceived external prestige (PEP) of internal stakeholders is tested. This is done in addition to demographics and perceived organization quality, to see if sustainability adds significantly to the attitudes on top of these variables. In turn, the relationship between the attitudes and the willingness to contribute (WTC) of the organization's sustainability initiatives is studied. As this study is conducted at a university, both employees and students were included. This fills a research gap as the effect of sustainability on students' attitudes has not yet been studied. The results of both stakeholders were compared, providing new insights in how they are different.

Method- The sustainability variables were split up in sustainability quality of the organization and encountered sustainability communication. Four variables measured the organizational quality: research, education, campus, and atmosphere quality. An online cross-sectional survey was used to collect data, which was targeted at employees and students from one Dutch university. Respondents were approached on campus or via a random email. Overall, 614 respondents finished the survey (235 employees and 379 students).

Results- With employees, a statistically significant relationship was found between sustainability and PEP. For students the relationships between sustainability and SJS and IDF was statistically significant. Moreover, the attitudes statistically significantly influenced the WTC of both employees and students. However, not all attitudes added significantly to this.

Theoretical and practical implications- The findings provide new insights on how sustainability influences the organization-related attitudes of both employees and students. As sustainability may positively contribute to these attitudes, it is valuable to communicate what an organization's sustainability initiatives are. This in turn positively influences the WTC, which helps the organization reach their sustainability goals.

Key words: Sustainability, Sustainable Development, Sustainability communication, Identification, Job satisfaction, Perceived external prestige, Internal stakeholders, Higher education institutes

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1. Introduction

Sustainability is an issue that is becoming increasingly important in daily life (Chang et al., 2020). Both corporate sustainability and corporate social responsibility (CSR) are “voluntary business activities” for organizations, according to Lo (2010, p. 312). These activities include social and environmental concerns and empower organizations to interact with their stakeholders. Another common term in organizations is sustainable development (SD) (Craig & Allen, 2013) which is often used interchangeably with sustainability (Maryville University, 2022). In the past decades, there have been many studies that studied the relationship between sustainability or CSR and different employee attitudes. This research has shown that engaging in sustainability initiatives and CSR can have many benefits for organizations. For instance, it appears that CSR may have an effect on job performance and employee commitment (Rupp et al., 2006), organizational commitment (Brammer et al., 2007), job satisfaction (Valentine & Fleischman, 2008), employee engagement (Duthler & Danesh, 2018), and employee performance outcomes (Carlini & Grace, 2021). Thus, in addition to improving the conditions of the environment (Craig & Allen, 2013), they also present revenue opportunities for organizations and meet the needs and wishes of stakeholders (Mincer, 2008 in Craig & Allen, 2013).

Sustainability is of great relevance and highly discussed as a topic (Correia et al., 2020). It is not only relevant for society at large and in academic research, but also for organizations in the sector of higher education institutes (HEIs) (Correia et al., 2020). HEIs form the base of educating future leaders, decision-makers, and intellectuals (Labanauskis, 2017) and they educate and train future employers (Aleixo et al., 2018). As universities lay out the structure and values for the continuing progress towards SD, they have a fundamental and influential role in society (Ferrero-Ferrero et al., 2017). According to Correia et al. (2020), HEIs are different from other organizations when it comes to contributing to sustainability and CSR. This is because they have a distinct role to promote social, environmental, and economic well-being. The Sustainable Development Solutions Network (2020) emphasizes that the role of HEIs in delivering sustainable development goals is essential. Stating that these goals will not be fully realized without the help of HEIs in education, research, innovation, and leadership (SDSN, 2020). Additionally, universities are needed to produce knowledge and shape grounded opinions (Correia et al., 2020). According to Wang and Juslin (2012), it is likely that the personal values of present-day students will affect future corporate values and ethical decision-making as a professional. Therefore, HEIs should integrate sustainability in education and research, along with fostering discussion and solutions to social and environmental matters in the context of the communities where the HEIs are placed (Geng et al., 2013). Furthermore, HEIs can develop a more sustainable oriented society by facilitating progress, bridging research efforts, and community efforts (Lozano et al., 2013).

There remains much to discover when it comes to sustainability and CSR and internal stakeholders. In 2010, Wright described the research topic of sustainability in HEIs as new and emerging, which, according to Dagiliūte et al. (2018), is still under-researched. A HEI has multiple internal stakeholders (Ferrero-Ferrero et al., 2017). Which are academic staff, non-academic staff and students. Therefore, this study is conducted at a university in the Netherlands, to explore how sustainability influences the organization-related attitudes of both employees and students. The results of both stakeholders will be compared, to see if the organization-related attitudes are influenced in a similar way. Additionally, there has been an increasing focus on CSR and sustainability communication and its impact on employees’ work-related behaviour. Which according to Schaefer et al. (2019) is under-researched. Therefore, the organization-related attitudes in this study are tested in relation to both

sustainability quality, and sustainability communication. Moreover, the step is taken to see if these attitudes of internal stakeholders in turn influence their willingness to contribute to the sustainability initiatives of the organization.

Research questions

The research questions that is leading for this study is:

“What are the relationships between the sustainability perception and organization-related attitudes of employees and students in HEIs?”

With the sub-questions:

“How does the perception of a HEI’s sustainability initiatives influence the organization-related attitudes of internal stakeholders?”;

“How do these organization-related attitudes influence internal stakeholders’ willingness to contribute to the HEI’s sustainability initiatives?”;

“How does a HEI’s sustainability communication influence the organization-related attitudes of internal stakeholders?”; and

“Are there differences between the effects of sustainability on the organization-related attitudes of employees and students, and what are they?”

The findings of this study contribute to the current research gap on sustainability in HEIs. New insights will be provided on how sustainability in HEIs relates to organization-related attitudes, as well as providing revelations regarding the effects of sustainability communication on satisfaction with job/study, identification, and perceived external prestige. The effects of sustainability will be tested in relation to multiple internal stakeholders, namely employees and students. As these results will be compared to each other it will provide new insights if these internal stakeholders’ attitudes will be affected in a similar way or not, with implications for both theory and practice as a result.

2. Theoretical framework

In the past decades, there has been an increasing body of research about corporate sustainability, sustainable development, and corporate social responsibility. In this chapter these terms and their relationships will be explained. Furthermore, the main findings of sustainability in relation to internal stakeholders and organizational communication will be highlighted. This will serve as the basis of this study which will be explained in the hypotheses and visualized in the conceptual research model.

2.1 Overview sustainability and CSR

The concept of sustainable development (SD) is very broad and combines several aspects. These aspects are economics, social justice, environmental science and management, business management, politics and law (Wilson, 2003). According to the United Nations General Assembly (2005) the three pillars of sustainability are environmental protection, social equity, and economic development. These three pillars (economic, social, and environmental) are referred to as the triple bottom line (TBL) which, in literature, is used interchangeably with the term sustainability (Alhaddi, 2015). The TBL is a framework that can be used to measure organizational success and business performance, driven by sustainability (Goel, 2010). A concept that is related to corporate sustainability is CSR (Wilson, 2003). CSR is the way an organization acts with regards to the social environment they are in, whether this is in a negative or positive way. (Schooley, 2021). CSR is a contributing factor to the paradigm of corporate sustainability as it provides ethical arguments why organizations ought to contribute to SD (Wilson, 2003). Additionally, Wilson (2003) states SD is a part of corporate sustainability as well. As an organization is undergoing CSR as a transitional stage, when implementing corporate sustainability (Lo, 2010). Therefore, they argue that CSR is subsumed under corporate sustainability.

CSR and corporate sustainability are strongly related, as there is theoretical overlap (Simon & Zhou, 2018). However, the two are different concepts. (Smith 2011, named in Simon & Zhou, 2018). Even so, sustainability and CSR both apply to the organization's behaviour towards their social environment. Thus, even though sustainability and CSR can be seen as different concepts, the same results are expected for sustainability and CSR. Therefore, this research will focus on just sustainability to narrow down the scope of the study.

2.1.1 *Sustainability of organizations*

Over the past decades, the concerns about corporate sustainability have grown (e.g., Schaefer, 2004; Epstein & Roy, 2003; Shrivastava, 1995 and Dechant et al., 1994). When it comes to corporate sustainability, it is essential for an organization to pursue societal goals related to SD. Yet, corporate growth and profits are still recognized as important (Wilson 2003). In 2015, the United Nations proposed 17 sustainable development goals, to secure sustainable development and global growth the increasement of opportunities for progress and promoting the development of individuals, families, and communities are underlined as important. Which, according to Di Fabio (2017) is also true for organizations (named in Di Fabio, 2017).

Furthermore, in the past decade there has also been a considerable interest in research when it comes to corporate sustainability (Freeman & Gilbert, 1998; Mathews, 1997; Friedman & Miles, 2001; Rotheroe et al., 2003 and Howard-Grenville et al., 2019). It has been recognized that sustainability is a key strategic asset of an organization (Gao & Zhang, 2006). Therefore,

sustainability principles should be taken up into the strategic policies and business processes of corporations, as the TBL and long-term profitability are affected by sustainability (i.e., Elkington, 1997; Russo & Fouts, 1997; and Johnson & Scholes, 1993). Organizations can benefit from integrating sustainability in their business operations in multiple ways. It can increase the performance of an organization (e.g., Judge & Douglas, 1998 and Lankoski, 2008), contribute to generating of a sustainable competitive advantage (e.g., Wagner, 2009), and it can provide organizations with legitimacy, which shields them from reputational damage (Suchman, 1995).

2.1.2 CSR of organizations

CSR involves both how organizations generate profit and how they use it (Orlitzky et al., 2003). According to Farooq et al. (2014) CSR policies and practices can be structured into four different core domains, which are customer-oriented, employee-oriented, environment-oriented, and philanthropy-oriented.

CSR has already been researched for a century, for instance by Berle (1931) and Dodd (1932). The main focus was initially on the institutional level (Lee, 2008) which revolved around the role of an organization in society (e.g., Frederick, 1960 and Preston & Post, 1975). The field of CSR has evolved throughout the years, with different related constructs as a result. For instance, corporate citizenship is a term that has been used interchangeably but also separately from CSR (Carroll, 1999). Furthermore, the influence on the environment of organizations and drivers of firm environmental performance is related (Etzion, 2007). A few topics that are focused on in this stream, according to Glavas and Kelley (2014) are: increased reputation (Westly & Vredenburg, 1991), cost saving aspect of environmental performance (Hart & Ahuja, 1996), and improved capabilities of an organization (Sharma & Vredenburg, 1998). However, other concepts that have been used to refer to this literature are sustainability (Shrivastava, 1995), sustainable development (Gladwin et al., 1995), and the natural environment (Hart, 1995). This again shows how related the areas of CSR and sustainability are.

More and more scholars have explored how CSR activities influence employees, which has yielded interesting results. For instance, the impact on improved employee relationships (Agle et al., 1999), commitment (Maignan et al., 1999), engagement (Glavas & Piderit, 2009), organizational citizenship behaviour (De Luque et al., 2008 and Jones, 2010), creative involvement (Glavas & Piderit, 2009), employee performance (Jones, 2010), and employee performance and cost (Sun and Yu, 2015) have been studied in the past decades.

2.1.3 Sustainability and CSR communication

Another key factor in sustainability and CSR is communication, which Craig and Allen (2013, p.293) describe as the “key to the understanding and implementation of sustainability initiatives and activities related to corporate social responsibility”. According to Ihlen et al. (2011) an organization ought to communicate about the CSR activities they engage in. As not communicating about them can also be seen as a form of communication. Even though CSR communication can be manipulative (e.g., to purely improve reputation) it is potentially useful for stakeholder participation and ethical business practice. For instance, CSR communication can be used for the anticipation of stakeholders’ expectations, the articulation of CSR policy and the managing of different communication tools of the organization with as a goal to provide true and transparent information in relation to the CSR activities (Podnar, 2008). Additionally, Godemann and Michelsen (2011) state that sustainability communication is about norms and values, research into causes and awareness, and lastly it is about

possibilities to take action and influence development on both individual and societal level. Fischer et al. (2016) argue that there are three forms of sustainability communication: communication *of*, *about*, or *for* sustainability.

The first form, communication *of* sustainability, is a transmissive form of communication with as a goal to transfer information (Newig et al., 2013). This can be instrumental, intentional, or managerial (Newig, 2011). Actors that engage in this form of sustainability communication use it to legitimize or defend their behaviour, for instance through corporate sustainability reporting. More specific functions of communication of sustainability are informing and educating individuals and achieving some form of social engagement and action (Moser, 2010). Communicating *about* sustainability is deliberative and it refers to “processes in which information, interpretations, and opinions regarding sustainability issues are exchanged and debated” (Fischer et al., 2016, p.6). Communication about sustainability creates a common understanding of the issues that are at stake, goals that ought to be achieved, and which people should undertake action (Brand, 2011). Lastly, communication *for* sustainability is used to make societal transformation possible (Fischer, et al., 2016). In the contrary to the first two forms of sustainability communication, communication for sustainability emphasizes the normative aspect of sustainability development. Furthermore, in this form of communication elements of communication *about* and *of* sustainability can be included, the impact of communication *for* sustainability lies in the measurable action in relation to sustainable development (Fischer et al. 2016). Some examples of how organizations communicate about CSR activities are in annual reports, newsletters, advertising or on the website of the company (Brunton et al., 2015).

If CSR is addressed thoroughly and successfully in an organization, employees from all levels must be involved and have the knowledge of social and environmental matters (Pojasek, 2008). Employees are essential stakeholders in relation to CSR communication, as they ought to communicate about the CSR activities of the organization with external stakeholders. Which means they have an important role (Brunton et al., 2015). Communication provides employees with information about what has been done and the aims behind the organizational CSR efforts (Suh, 2016). Therefore, it has a critical role in shaping the evaluations and responses towards the CSR efforts of an organization.

2.2 Sustainability and CSR in higher education institutions

As higher education institutions (HEIs) provide the structure and values for progressing towards SD, HEIs have a fundamental and influential role in society (Ferrero-Ferrero et al., 2017). According to Hayter and Cahoy (2016), sustainability has become a social demand. Which is because society expects of HEIs that they not only contribute to SD, but also control their environmental and social impact and are accountable for this. Furthermore, HEIs have a social mission and public role in education, research, and community service. Ferrero-Ferrero et al. (2017) argue therefore that stakeholder engagement should be implemented, as this could connect the functions of the HEI to the expectations of stakeholders. This contributes to stakeholders adopting principles, strategies, and actions to move forward towards SD. According to Shriberg (2002) the main reasons for HEIs to be sustainable are social/ethical obligation, expertise, their model role, their responsibility in the problem, and lastly reputational benefits. To help HEIs integrate sustainability in their organization declarations, charters, and partnerships have been designed. Important elements for promoting SD in HEIs are stakeholder collaboration, engagement, and outreach (Lozano et al., 2013). According to Leal Filho et al. (2018) there are still challenges to overcome for HEIs when it comes to sustainability.

Despite the successful developments in the last 15 years, sustainability needs a holistic integration in the systems of HEIs and the integration of sustainability in research and curricula must be improved (Leal Filho et al., 2018).

Apart from sustainability, the service quality of HEI's has become increasingly important (e.g., Sultan & Wong, 2012 and Almarghani & Mijatovic, 2017). According to O'Neill and Palmer (2004), the service quality of a HEI can be defined as the difference between students' perceptions of what they actually received and what their expectations were. Monitoring the service quality is vital, as well as safeguarding stakeholders' general interest, which can be done through fulfilling the stakeholders' real needs and desires (Al-alak, 2009). Additionally, research has suggested that implementing quality and excellence management can be used as a strategy for improving the satisfaction of internal and external stakeholders (Khan & Matlay, 2009 and Sakthivel et al., 2005). If the service quality of a HEI is perceived as positive, this may lead to the satisfaction of students (Marzo-Navarro et al., 2005). Furthermore, students' satisfaction is mainly associated with the staff, systems, procedures, and support mechanisms of the HEI they study at (Pedro et al., 2018) But also the perception on the received education and classroom experiences are essential in the satisfaction of students (e.g., Elliot & Healy, 2001). Additionally, Bayraktar et al. (2008) state that the academic programmes are the main product HEIs use to attract and satisfy stakeholders. Apart from academic quality, other factors that influence student satisfaction, according to De Jager and Gbadamosi (2009, 2013), are location and logistics, sports facilities and reputation, and safety and security.

In the literature, three main internal stakeholders are identified for HEIs. These stakeholders are students, non-academic and academic staff (Burrows, 1999; Cortese, 2003; Jongbloed et al. 2008; Turan et al., 2016). Hayter and Cahoy (2016) state that these stakeholders are essential for the mission towards sustainability of universities. This is because they are both a member of a HEI, but they also have the ability to take part in the democratic governance structure of the organization. Furthermore, employees are essential stakeholders in relation to CSR, as they ought to communicate about the CSR activities of the organization with external stakeholders (Brunton et al., 2015). Whenever students have to participate in CSR activities, it is important that they are exposed to the benefits of these activities and that they are well-informed (Ahmad, 2012). Furthermore, Ahmad (2012) states that including students as part of CSR initiatives is the best way to encourage them to be socially responsible.

2.3 Sustainability and CSR and the attitudes of internal stakeholders

In the past decades, the research on the effect of sustainability and CSR on internal stakeholders' attitudes has increased, which has led to many interesting findings (e.g., Rupp et al., 2006; Craig & Allen, 2013 and Glavas & Kelley, 2014). In this study, the satisfaction with job/study, identification, and perceived external prestige will be tested in relation to sustainability, regarding both employees and students. Already existing literature suggests these attitudes are related to sustainability for employees (e.g., Valentine & Fleischmann, 2008; Gond et al., 2010 and De Roeck & Delobbe, 2012), however these results have not been confirmed for students yet. As both students, academic and non-academic staff are key stakeholders for HEIs, and this study takes place at a Dutch university both groups are key internal stakeholders. From the research of Ferrero-Ferrero et al. (2017) it becomes clear that non-academic and academic staff have the same expectations of integrating sustainability aspects in HEIs. However, there are some differences in the expectations of students and (non-)academic staff. Of the 17 sustainability aspects that were tested in this study, there was just one difference between non-academic staff and students, which was in the aspect labour and

management relations. On the other hand, there were four differences between academic staff and students. Labour and management relations was one of these aspects, but also efficient resource allocation, improving academic curricula, and relationships with stakeholders. Thus, as most of the expectations of employees and students are in line with each other, it is expected that both stakeholders will yield the same results. As there is no evidence to suggest this is not the case.

Additionally, the effect of sustainability will be tested on top of the perceived quality of the university the employees and students work for or study at. There is a current research gap on how sustainability influences internal stakeholders' attitudes in relation to other factors. From previous studies, it is known service quality is important for higher education institutes and influences students' attitudes (Sultan & Wong, 2012; Alarghani & Mijatovic and Al-alak, 2009). Which is why it is expected that sustainability will add significantly to the attitudes of employees and students on top of the perceived research, education, campus, and atmosphere quality.

2.3.1 Satisfaction with job/study

Job satisfaction reflects the attitude towards the organization the employee works for (Landis et al., 2015). When employees have positive feelings that correlate with the characteristics and requirements of their job, this means that their job satisfaction is high (Robbins & Judge, 2015). There are many factors that influence job satisfaction, according to Robbins and Judge (2015), namely the nature of the job, administration, salary, opportunities for advancement, and relationships. Furthermore, overly stressed employees are less satisfied with their job, which in turn causes employees to perform worse (Barakat et al., 2015). According to Landis et al. (2015) the working environment of the organization is better for everyone if employees are satisfied with their job. As they can increase efficiency, profits, and the satisfaction of their customers.

Key determinants of job satisfaction, according to Brown and Peterson (1993), are role ambiguity and role conflict. Furthermore, George & Jones (2008) state that four basic factors that have an effect on a person's level of job satisfaction are personality, values, the work situation, and social influence and the study of Christen et al. (2006) shows that job performance has a positive effect on job satisfaction. Some of the other factors that job satisfaction is related to are: (extrinsic) motivation (Igalens & Roussel, 1999 and Moynihan & Penday, 2007), organizational culture (Rawashdeh et al., 2015), and employee engagement (Vorina et al., 2017). Besides this, culture may play a role in job satisfaction (Sledge et al., 2008) and it is related with the value system that applies to a certain person (Theresia et al., 2018) as well.

From the research of Valentine and Fleischman (2008), it is known that perceived CSR is positively associated with the job satisfaction of employees. This positive relationship between CSR and job satisfaction is confirmed by more recent research of Mascarenhas et al. (2020). A reason for increased job satisfaction among employees is, according to Barakat et al. (2016), that CSR activities influence the organizational image positively, which in turn influences employees. The study of Pérez et al. (2018) shows a positive relationship between the perception on CSR and the wellbeing of employees. They argue that as CSR enacts a set of values that is converted into actions, policies, and decisions this might enhance a feeling of pride in the employees, which leads to higher job satisfaction and organizational citizenship behaviour (Pérez et al., 2018).

Based on this literature, the first sub-hypothesis is formulated:

H1a. *The sustainability quality of a HEI has a positive effect on the satisfaction with the job or study of internal stakeholders on top of the research, education, campus, and atmosphere quality.*

According to Ellis (2009) the awareness of the CSR policies may be even more important than the actual policies as employees could misunderstand them or be simply unaware of the activities. With the latter, this means that the CSR activities will have no impact on the attitudes and/or behaviours of the employees. And whenever the activities are misunderstood, this could lead to frustrations (Ellis, 2009). CSR communication can be used to provide true and transparent information in relation to the CSR initiatives of an organization (Podnar, 2008). Therefore, it is expected that organization-related attitudes of employees and students will be positively influenced when they encounter more communication about the sustainability initiatives, as they will become more aware of them. This is formulated in the second sub-hypothesis:

H1b. *Communication about a HEI's sustainability initiatives has a positive influence on the satisfaction with the job or study of internal stakeholders on top of the research, education, campus, and atmosphere quality.*

The sustainability quality differs from sustainability communication, as the sustainability communication applies to how internal stakeholders were informed about the organization's sustainability initiatives. On the other hand, the sustainability quality measures how employees and students perceive the quality of the sustainability initiatives the organization engages in.

2.3.2 Identification

Gautam et al. (2004) state that employees' identification with the organization they work for, is a specific form of social identification. Identification happens when employees share the values and beliefs of an organization (Pratt, 1998). The more employees identify themselves with the organization they work for, the more they think and act from the perspective of the organization (Ashforth & Mael, 1989). Bartels et al. (2006) state that the identification with an organization is important for several reasons. Namely, it makes employees more willing to strive for organizational goals (Elsbach & Glynn, 1996), as well as influencing the willingness to stay with the organization (Scott et al., 1999). Furthermore, the image that they spread of the organization they work for is positive (Bhattacharya et al., 1995), and lastly employees are more willing to cooperate with other members of the organization, when they identify with an organization (Dutton et al., 1994).

Organizational identification lies very close to organizational commitment, but research has shown that the two are different concepts (Mael & Tetrick, 1992). Organizational identification has been linked to multiple aspects of organizational life, by Ashfort and Mael (1989, 1996) and O'reilly and Chatman (1986) have suggested that identification positively affects job satisfaction and negatively affects turnover. Moreover, the study of Katrinli et al. (2009) shows that job involvement positively influences the organizational identification of nurses and whenever employees believe that an organization is positively evaluated externally, they willingly identify with this organization (Smidts et al., 2001). Which means that perceived external prestige has an effect on organizational identification.

In regard to sustainability, Gond et al. (2010) state that whenever an organization internally promotes CSR programs and these are in line with the values of employees, it is expected that the employees' identification increases. The research of Fu et al. (2014) confirms that perceptions of CSR

can enhance the identification of employees with the organization they work for. According to De Roeck et al. (2016) organizations can even use CSR as a strategic management tool to strengthen the feelings of identification of employees. According to Casey and Sieber (2016), a business culture that is aware of both social and environmental issues can be created whenever the vision of individuals and an organization are in line. If an organization consequently strives to this situation, it is expected that the identification and motivation of the employees of the organization are strengthened (Wissmann, 2013, in Casey & Sieber, 2016).

When it comes to identification with an organization of internal stakeholders, it is expected that sustainability communication has the same effect on it as sustainability quality. As communication about CSR or sustainability is used to provide information about the CSR or sustainability activities of an organization (Podnar, 2008 and Craig & Allen, 2013). These expected results of sustainability quality and sustainability communication on internal stakeholders' identification are formulated in the two sub-hypotheses for the second hypothesis.

H2a. *The sustainability quality of a HEI has a positive effect on the identification with the organization of internal stakeholders on top of the research, education, campus, and atmosphere quality.; and*

H2b. *Communication about a HEI's sustainability initiatives has a positive influence on the identification with the organization of internal stakeholders on top of the research, education, campus, and atmosphere quality.*

2.3.3 Perceived external prestige

Perceived external prestige can be described as how members of an organization interpret and assess the reputation of the organization they work for (Sulentic et al., 2017). This definition shows that perceived external prestige is not the same as organizational image or reputation, as it refers to the way employees believe the organization is seen by outsiders, instead of the image that is actually projected by the organization (Sulentic et al., 2017). With perceived external prestige, employees determine what the image of their employers is, through how they think outsiders see the organization (Kim et al., 2010). Therefore, perceived external prestige is an indirect method to build an image.

Carmeli (2005) shows that perceived external prestige has an effect on the affective commitment of employees towards an organization. In this study a difference is made between perceived external social prestige and perceived external economic prestige, but the results show both dimensions have an effect on affective commitment (Carmeli, 2005). Another study, done by Carmeli et al. (2006) confirms that perceived external prestige results in augmented affective commitment, through identification. Lastly, it appears that when employees believe the organization, they work for is appreciated, this can decrease the intention to leave an organization, through higher levels of affective commitment and job satisfaction (Carmeli & Freund, 2009). Sulentic et al. (2017) suggest that perceived external prestige is a multi-dimensional construct. The most important dimensions that they identified were past success and organizational position, the organization's social impact on immediate surroundings, the internal organization climate, and respecting employees.

The direct link between perceived external prestige and sustainability has not been studied yet. However, it is known that CSR can improve the actual reputation of an organization (e.g., Esen, 2013; Javed et al., 2019 and Singh & Misra, 2021). Moreover, as CSR initiatives can reflect a positive image

on an organization, this can in turn intensify feelings of pride within employees, as well as the willingness to be associated with the organization as it has a favourable reputation (De Roeck & Delobbe, 2012). Furthermore, they also state that external stakeholders use CSR initiatives to make character judgements of the reputation of an organization and its members. Which is why employees pay great attention to these initiatives (De Roeck & Delobbe, 2012). Thus,

H3a. *The sustainability quality of a HEI has a positive effect on the perceived external prestige of internal stakeholders on top of the research, education, campus, and atmosphere quality.*

Additionally, the relationship between sustainability communication and perceived external prestige is expected to be the same for satisfaction with job/study and identification. This is formulated in the second sub-hypothesis for the third hypothesis.

H3b. *Communication about a HEI's sustainability initiatives has a positive influence on the perceived external prestige of internal stakeholders on top of the research, education, campus, and atmosphere quality.*

2.3.4 Willingness to contribute

Whenever an organization engages in CSR activities, it is important that the employees are willing to contribute to this, as they are enactors of the organizational CSR (Im et al., 2016). If an employee wants to participate and contribute to the CSR initiatives of an organization, this calls for a particular motivation (Mozes et al., 2011). The possible significance of adding meaning and purpose in work was highlighted by Hackman and Oldham (1980, named in Mozes et al., 2011) as a main motivating factor. This is in line with Pink (2009), who stated that one of three essential components to motivate employees is *purpose*, which is to have a greater reason to be doing the work. This, for instance, could potentially be CSR or sustainability activities. However, there is currently a research gap on the willingness of employees to contribute to the sustainability goals of an organization.

A term that is related to willingness to contribute is employee green behaviour (EGB). EGB is pro-environmental behaviour or environmentally friendly behaviour, that applies specifically to the workplace of an individual (Ramus & Steger, 2000 and Stern, 2000). However, the willingness to contribute measures the willingness to behave sustainably, instead of the actual behaviour. According to Temminck et al. (2013) organizations need to recognize that the environmental behaviour of workers is essential in the challenge of them addressing the environmental impact they have. In their study they use the term organizational citizenship behaviour directed towards the environment (OCBE) and their findings show that OCBE is related to environmental concern, perceived organizational support, and affective organizational commitment of employees. The green five taxonomy proposes five meta-categories in which employees can perform green behaviour (Ones & Dilchert, 2012). Which are: avoiding harm, conserving, working sustainably, influencing others, and taking initiative.

Varma (2017) states that internal employee motivation is derived from job satisfaction. Motivation in turn has a positive influence on the performance of employees, which subsequently affects organizational performance (Risambessy et al., 2012). Furthermore, organizational identification can be seen as a dominant factor in influencing the willingness to contribute of employees, as Elsbach and Glynn (1996) state that it has an influence on the willingness to strive for the goals of an organization. The direct relationship between perceived external prestige and willingness to

contribute, employee motivation or employee green behaviour has not been studied yet. However, Dutton et al. (1994) state that whenever employees believe that outsiders have a positive view of the organization, they develop favourable performance. An example of this is intra-organization cooperation and good citizenship behaviour. Therefore, it is interesting to see what relationship perceived external prestige will have on the willingness to contribute to the sustainability goals of an organization. Based on these findings, it is believed that all three attitudes will positively influence the willingness to contribute to the sustainability organization positively, as these are important organizational goals.

The fourth and final hypothesis reads as follows:

H4. *The satisfaction with job or study, identification, and perceived external prestige has a positive effect on the willingness to contribute to a HEI's sustainability initiatives of internal stakeholders.*

2.4 Model

To visualize the hypotheses a conceptual research model was developed, which is shown in figure 1. The model shows two relationships. First, the effect of the independent variables perceived sustainability quality and sustainability communication on the dependent variables satisfaction with job/study, identification, and perceived external prestige, on top of the perceived quality of research, education, campus, and atmosphere. Second, the effect of satisfaction with job/study, identification, and perceived external prestige on willingness to contribute. Lastly, the moderator variable can be found in the research model, which shows whether the respondent is an employee or student.

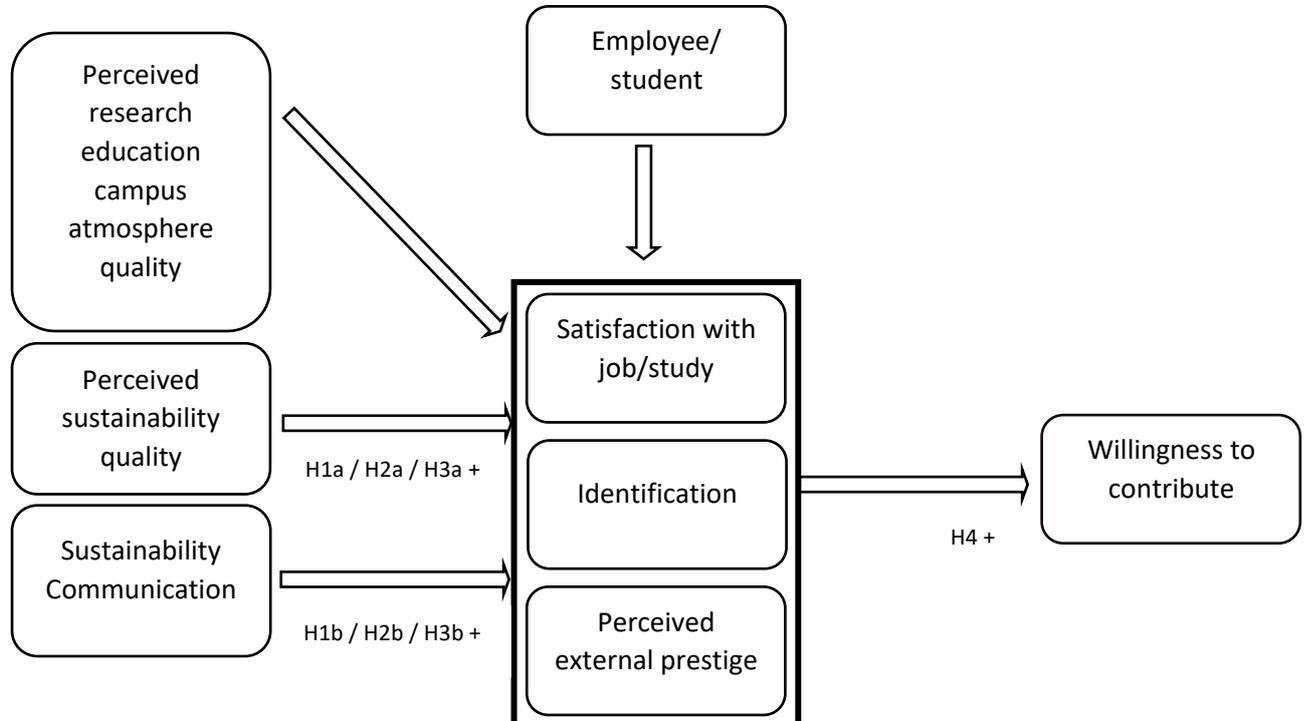


Figure 1 Conceptual research model

3. Method

3.1 Design of the study

To measure the different variables, a cross-sectional survey was done, using an online tool called Qualtrics. Beforehand, the study had received ethical approval from the Ethics Committee of the faculty of Behavioural Management and Social Sciences of the University of Twente. The data was collected in two periods of 10 days: from 15/11/2021 until 24/11/2021 and from 01/12/2021 until 10/12/2021.

3.2 Measures

To measure the different variables both self-developed items and items based on previous research were included in the study. The constructs were measured using 5-point Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree). An overview of all the items for the different scales can be found in appendix I.

3.2.1 *Organization-related attitudes*

The dependent variables in the study were the attitudes of the respondents towards the University of Twente, which is the organization the respondents work for/study at.

Satisfaction with job or study

The first variable is satisfaction with job or study which measures the extent to which students and employees are satisfied with their study or job. The scale was based on the items that were used in the study of Im et al. (2016) which were based on Cho et al. (2013 (item 1 & 2) and Valentine and Fleischman (2008) (item 3 & 4). The scale contained four items, including one reversed one. Two of the statements that were used were: *“In general, I would say my job/study is very worthwhile.”* and *“In general, I do not like my job/study.”*

Identification

The next variable was identification which can be defined as the extent to which the university the respondents work or study at is part of the self-concept of the students and employees. This construct was based on Mael and Ashforth (1992) and consists of six items. Two of the statements that were included in the survey were *“When someone praises University of Twente, it feels like a personal compliment.”* and *“I am very interested in what others think about University of Twente.”*

Perceived external prestige

The third dependent variable was perceived external prestige which is the way students and employees interpret and assess the reputation of the organization they work for/study at. The items of this variable were based on Mael and Ashfort (1992) (item 1 & 2) and the third item was based on Rodrigo et al. (2019). Statements that were asked were: *“When talking with family and friends about University of Twente they often display a positive attitude toward the organization.”* and *“I feel like University of Twente is accredited with a favourable reputation by others.”*

Willingness to contribute

The last dependent variable that was included in the questionnaire was the willingness to contribute of the respondents, which measured the extent to which students and employees were willing to perform sustainable behaviour, which contributes to the sustainability goals of the university the respondents work for/study at. The scale was self-developed and consisted of three items. Two of

the items were: *“I want to be actively involved in the sustainability initiatives University of Twente engages in.”* and *“I want to help the University of Twente become a more sustainable organization.”*

3.2.2 Quality of the organization

Next, questions were asked about how the respondents rated the quality of the organization. To see if the perception on sustainability initiatives of the organization differed from the perception the respondents have on other aspects of the organization, there were similar questions asked about their perception on the quality of research, education, campus, and atmosphere.

Sustainability quality

To measure how the employees and students at the university perceived the quality of the sustainability initiatives of the organization a self-developed scale was used. There were four items included, for example: *“The sustainability initiatives of the University of Twente are innovative.”* and *“The impact of the sustainability initiatives of the University of Twente are high.”*

Research quality

The quality of research was measured to see how employees and students perceived the quality of the research that takes place at the organization. The scale was self-developed and contained four items. Two of the items that were included in the survey were: *“The research that takes place at the University of Twente is groundbreaking.”* and *“The social impact of the research that takes place at the University of Twente is high.”*

Education quality

The next construct was the quality of education, which can be defined as the way employees and students perceive the quality of education that takes place at the organization. The construct was self-developed, with four items. Two items that were included were: *“The University of Twente provides students with extraordinary personal support during their education.”* and *“The University of Twente optimally prepares students for their work field.”*

Campus quality

The fourth construct that measured the quality of the organization, was about the perceived quality of the campus of the university. This scale was self-developed and contained four items. Statements that were asked were: *“The campus of the University of Twente provides all the facilities employees/students need.”* and *“The campus of the University of Twente makes the university unique.”*

Atmosphere quality

The last construct to measure the quality of the organization, was the quality of the atmosphere. This construct measured the way employees and students perceived the quality of the atmosphere at the organization. The self-developed scale contained four items, with two of them being: *“I feel like I can be myself at the University of Twente.”* and *“In general, people at the University of Twente are easily approachable.”*

3.2.3 Sustainability communication

The definition of the independent variable sustainability communication is the extent to which employees and students encountered communication about the sustainability initiatives of the organization. The questions and the statements for this variable were self-developed and focused on the frequency, the channel(s) of the communication and the expansion of the sustainability

communication. Two of the items that were used in the survey were: *“In the last year, how often did you encounter communication about sustainability initiatives of the University of Twente?”* and *“I feel like the University of Twente communicates about sustainability initiatives quite frequently.”* The four items did not form one scale, as the other two items (see Appendix I) were used for background information on the encountered sustainability communication. To get an idea on what platforms the messages were encountered and if the sustainability communication of the organization should be increased.

3.2.4 Background variables

Perceived relevance of sustainability

Furthermore, the perceived relevance of sustainability, was measured to see to what extent employees and students think sustainability in general is important. This scale was self-developed and contained four items, including one reversed one. Two of the items asked were: *“I think it is valuable to work on becoming more sustainable.”* and *“I don’t see why it is necessary to work on sustainability.”*

Sustainable behaviour

To find out how sustainable the current behaviour of the employees and students was, the construct sustainable behaviour was included in the questionnaire. This construct was self-developed, and four items were included. Two of them were: *“In general, I want to take part in sustainability initiatives.”* and *“In general, sustainability plays a big role in my daily life.”*

3.3 Validity and reliability

To see if the constructs that were included in the study were valid and reliable, a factor analysis and a reliability analysis were done.

3.3.1 Factor analysis

In the factor analysis, using SPSS, eleven constructs were recognized at first, the construct that was not recognized was sustainable behaviour as these items were seen as one construct with the items of willingness to contribute. Using these constructs there was an explained variance of 62.38%. When forcing a twelfth construct the explained variance increased to 64.45%, but the construct of sustainable behaviour was still not recognized.

Because of this, the constructs willingness to contribute and sustainable behaviour were no longer seen as different constructs but as one: willingness to contribute. Furthermore, the third item for sustainability perception was removed (see Appendix I), as this item was also seen as part of another scale. The final explained variance of the eleven constructs was 62.58% with .86 on the KMO and Bartlett’s test. As an explained variance above 50% can be considered good, the constructs in this research can be seen as valid. The results of the final factor analysis and the pattern matrix can be found in Appendix IV.

3.3.2 Reliability check

A reliability check done in SPSS shows that all eleven constructs are reliable (see table 1). The highest score was for willingness to contribute with a Cronbach’s Alpha of .89 (N of items = 7). The lowest score was for education quality with a Cronbach’s Alpha of .63 (N of items = 4).

As the third item from sustainability perception was removed, the Cronbach's Alpha increased from .79 to .81. This shows that the reliability of the construct was also better without the third statement. Furthermore, only two items of sustainability communication were included in the construct, as the second and fourth items were not in line with the other two statements and could not be taken together. However, the fourth statement was used as a variable called increasing of sustainability communication, which thus consisted of just one item.

Table 1 Final results reliability check

Reliability statistics		
	Cronbach's Alpha	N of items
Research quality	.70	4
Education quality	.63	4
Campus quality	.78	4
Atmosphere quality	.82	4
Sustainability quality	.88	4
Sustainability communication	.72	2
Satisfaction with job/study	.74	4
Identification	.79	6
Perceived external prestige	.66	3
Willingness to contribute	.89	7
Perceived relevance of sustainability	.81	3

3.4 Procedure

The first step in doing the questionnaire for the respondents, was to give consent to the terms and conditions. After this was done the first questions that were asked were about demographics and what their position in the organization was (employee/student). Next, questions were asked about the satisfaction with their job/study, identification with the organization and perceived external prestige. Then the questions about the quality of the university were asked, with the perception of sustainability at last. The survey then continued with the questions about willingness to contribute, perceived relevance of sustainability in general and their own sustainable behaviour. The survey ended with the questions about sustainability communication. The full surveys (employee and student) can be found in appendix II and III.

3.5 Participants

All participants for this study were from the University of Twente, which is located in Enschede, the Netherlands. As stated earlier, both students and employees were included in the sample. All participants had to be above 16 years old to participate in the questionnaire and could have either a Dutch or other nationality, as there are many international employees and students present at the University of Twente. The results from the groups '*employees*' and '*students*' were compared to each other, to see if the effect of sustainability communication is different for the two groups.

The participants for the study were collected both through opportunity sampling, meaning that participants from the target audience were used who were available at the time of data collection

and willing to participate (McLeod, 2019). This was done by asking people on campus of the University of Twente to fill in the questionnaire, if they were an employee or student there. Furthermore, an invitation was sent out to employees of University of Twente, using a random mailing list.

In total, 902 respondents started the online questionnaire. As only completed surveys were used for the data analysis, respondents that did not finish the survey were filtered out (N = 271). Respondents had to be either a student or employee at the University of Twente, therefore, respondents that did not meet this criterion were removed as well (N = 16). Lastly, respondents that were younger than 16 years were filtered out (N = 1).

The final number of respondents that took part in the data analysis were 614 (N = 614), while 288 respondents were removed (N = 288). In Appendix V the tables with the remaining results of the demographics can be found.

3.5.1 Distribution of demographics

From the 614 respondents, 58% was Dutch, 21% was non-Dutch, European, and the last 21% was non-European (see table 2). In 2020, the international population at University of Twente was 32% (University of Twente, 2021b), this means that there were more international respondents that participated in the survey compared to the international population of the university in general.

In the analysis nationality was used as a dichotomous variable. Therefore, the group of Non-Dutch, European and Non-European were fused together.

Table 2 Demographics

		Employees		Students		Total
		Frequency	Percent	Frequency	Percent	Percent
Nationality	Dutch	158	67	199	53	58
	Non-Dutch, European	33	14	98	26	21
	Non-European	44	19	82	22	21
Age	17 – 20	1	0	161	43	26
	21 – 40	135	57	218	58	58
	41 – 65	98	42	0	0	16
	66 – 80	1	0	0	0	0
Gender	Male	143	61	260	69	66
	Female	87	37	116	31	33
	Non-binary / third gender	1	0	1	0	0
	Prefer not to say	4	2	2	1	1
Education	High school or equivalent	5	2	229	60	38
	Post-secondary vocational education (MBO)	18	8	2	1	3
	College degree (HBO)	39	17	26	7	11
	University degree bachelor	12	5	113	30	20
	University degree master	92	39	9	2	16
	University degree PhD	69	29	0	0	11

The average age of the respondents was 28.7 years old. The youngest respondents that participated were 17 years old and the eldest 66 years (see table 2). As a lot of the respondents were students it makes sense that the average age is on the younger side, as students are often younger in age than employees. The average of the group employees was 40.3 years old, and the students had an average age of 21.5 years old.

Most of the respondents, 66%, identified as male, the second biggest group, with 33%, identified as female. The rest of the respondents identified as third gender/non-binary, or preferred not to say their gender. In the annual report of University of Twente, it is stated that 36% of the bachelor students, 44% of the pre-master students and 36% of the master students were female in 2020 (University of Twente, 2021b). When it comes to the full-time employees, a little under 50% of the non-academic staff was male and approximately 70% of the academic staff was male (University of Twente, 2021b). This data shows that there are both more male employees and students at the University of Twente, which at least partly explains these results.

Of the respondents, 38% completed high school as their highest level of education, 3% completed their post-secondary vocational education, 11% completed a college degree, and the remaining 48% of the respondents completed a university degree. This could be a bachelor, master, or a PhD.

3.5.2 Distribution of employees

From the 614 respondents, 38% were employees. This could be academic staff (N = 135 or 57%) or non-academic staff (N = 100 or 43%). Employees from all five faculties of the university took part in the survey (see table 3), as well as employees from service departments. The average time the employees were working for the University of Twente was 11.2 years, with less than a full year being the shortest time respondents had been employed (N = 27), and 41 years the longest (N = 1).

Table 3 Distribution employees and students among faculties

Distribution respondents among faculties					
	Employees		Students		Total
	Frequency	Percent	Frequency	Percent	Percent
Faculty of BMS	32	5	95	16	21
Faculty of EEMCS	50	8	119	19	28
Faculty of ET	40	6	75	12	19
Faculty of ITC	18	3	28	5	8
Faculty of TNW	39	6	62	10	17
Services	56	9	0	0	9

In the annual report of the University of Twente (2021b) it is stated of those full-time employees 59% is academic staff, and 41% is non-academic staff. Even though part-time employees took part in the survey as well, these percentages show, that the distribution of academic and non-academic staff is quite similar.

3.5.3 Distribution of students

The other 62% of the respondents were students at the University of Twente. The students were either studying for their bachelor (N = 235 or 62%), pre-master (N = 21 or 6%), or master (N = 123 or 33%). Students from all five faculties took part in the research (see table 3). The average study time

was 1.8 years, with the shortest time respondents had been studying being less than a full year (N = 95) and the longest 12 years (N = 1).

According to the University of Twente (2021a), there were 7114 bachelor students (57%), 417 pre-master students (3%) and 4377 master students (35%) in 2020. Additionally, there were 770 students that followed another programme. This shows that the distribution of the respondents that took part in the survey, are quite similar to the general population of the University of Twente.

3.6 Analysis

To analyse the data, the first thing that was done was to see if the results were normally distributed and if there were any outliers in the results. Boxplots showed that there were outliers for the variables research quality, campus quality, atmosphere quality, sustainability quality, satisfaction with job/study, identification, perceived external prestige, willingness to contribute, increasing of sustainability communication, and perceived relevance of sustainability. The normality of the results was often skewed, but the skewedness was similar for both employees and students. As there was a high number of outliers (N = 125) the choice was made to keep them in the dataset.

After this, statistical tests were used to see how the variables affected each other. Firstly, independent samples t-tests were run to see if there were differences between employees and students. Hereafter, a correlation analysis was done to get an idea of the relationships between the variables and lastly a regression analysis was run to see the effect of sustainability on employees' and students' organizational-related attitudes and how these attitudes in turn influenced their willingness to contribute to the sustainability initiatives of the organization.

4. Results

4.1 Descriptive statistics: differences between employees and students

Independent samples t-tests were run to determine if there were differences between employees and students (see table 4). The results show that there were statistically significant differences between students and employees for five of the twelve variables with a significance level of $\alpha = > 0.05$. These variables were campus quality, atmosphere quality, sustainability quality, identification, and willingness to contribute. Which means that employees and students assess the quality of the organization differently and have different attitudes towards the organization as well.

The mean scores showed that the identification, and willingness to contribute of employees was higher than that of students. On the other hand, students perceived the quality of the campus, atmosphere, and sustainability initiatives as higher. The results also showed that there were no significant differences between the perceived research and education quality, encountered sustainability communication, satisfaction with job/study, perceived external prestige, perceived relevance of sustainability, and the finding that the sustainability communication should be increased. However, as there were some statistically significant (mean) differences between employees and students. The correlation and regression analysis were done separately for the two groups to study the differences between employees and students further.

Table 4 Overview results group statistics, independent samples t-test with assumed equal variances, and effect size

	Employees		Students		t-test for equality of means		Effect size
	Mean	SD	Mean	SD	t	Sig.	Cohens's D
Research quality	3.5	.53	3.5	.50	1.70	.09	
Education quality	3.4	.52	3.4	.58	-.29	.78	
Campus quality	4.2	.60	4.4	.56	-3.56	.00****	0.29
Atmosphere quality	4.0	.60	4.2	.57	-2.76	.01**	0.23
Sustainability quality	2.9	.73	3.2	.61	-4.54	.00****	0.37
Sustainability communication	2.8	.78	2.7	.84	1.58	.12	
Satisfaction with job/study	4.2	.50	4.1	.55	2.13	.33	
Identification	3.2	.68	2.9	.75	5.76	.00****	0.48
Perceived external prestige	3.6	.60	3.6	.62	-.87	.38	
Willingness to contribute	3.6	.66	3.5	.73	2.70	.01**	0.23
Perceived relevance of sustainability	4.2	.62	4.3	.62	-1.96	.05	0.16
Increasing of sustainability communication	3.5	.86	3.6	.92	-.78	.44	

Note. Scale from 1 (strongly disagree) to 5 (strongly agree).

*Note. * = $p < .05$ level. ** = $p < .01$ level. *** = $p < .005$ level. **** = $p < .001$ level.*

4.2 Correlations between the variables

To assess the relationship between the different variables, a Pearson's product-moment correlation was run. As stated above, the correlation was run separately for employees and students.

Employees

First, the correlation analysis was done for the employees (see table 5). From the results of the correlation analysis, it becomes clear that a lot of the variables correlated with each other. However, there are a few things that stand out. First, all variables that measured the perceived quality of the organization statistically significantly correlated with each other, except for sustainability quality and campus quality. The rest of the correlations were positive and either weak or moderate. With the relationship between campus quality and atmosphere quality being the strongest. Furthermore, the perceived quality of the organization, including sustainability quality, statistically significantly correlated with the organization-related attitudes of employees. These relationships were again all positive and weak or moderate. Next, the results show that willingness to contribute only statistically significantly correlated with two of the three attitudes, namely, identification and perceived external prestige. These relationships were weak and positive. Another thing that stands out is that the perceived relevance of sustainability barely correlated with any variables, however the results did show a strong positive relationship between willingness to contribute which is statistically significant. Lastly, it appears that the increasing of sustainability communication had moderate positive correlations with willingness to contribute and general perception on sustainability, which were statistically significant. However, this variable also showed a statistically significant relationship, which was weak and negative, with sustainability communication.

Table 5 Pearson correlations for employees

	Correlations										
	RQ	EQ	CQ	AQ	SQ	SCOM	SJS	IDF	PEP	WTC	PRS
Education quality (EQ)	.40****										
Campus quality (CQ)	.26****	.21***									
Atmosphere quality (AQ)	.23****	.28****	.50****								
Sustainability quality (SQ)	.40****	.47****	.07	.14*							
Sustainability communication (SCOM)	.06	.23****	-.05	.16*	.25****						
Satisfaction with job/study (SJS)	.25****	.36****	.30****	.40****	.23****	.17**					
Identification (IDF)	.29****	.28****	.32****	.21***	.32****	.07	.19****				
Perceived external prestige (PEP)	.49****	.33****	.23****	.27***	.46****	.20***	.34****	.44****			
Willingness to contribute (WTC)	.17**	.12	-.08	.03	.14*	.16*	.09	.14*	.21***		
Perceived relevance of sustainability (PRS)	.06	.03	.08	.13	-.12	.07	.13*	-.04	.10	.66****	
Increasing of sustainability communication	.17**	.07	-.03	-.02	.09	-.21***	.08	.10	.17*	.53****	.41****

tion (ISCOM)

Note. * = $p < .05$ level. ** = $p < .01$ level. *** = $p < .005$ level. **** = $p < .001$ level.

Students

The same analysis was run for the student respondents, to see if the associations between the different variables were the same for the two groups (see table 6). The first thing that stands out in these results is that there was quite an amount of statistically significant correlations between these variables. However, none of the relationships were negative. The statistically significant positive relationships were either weak or moderate. When looking more closely at the variables itself, it appears that the variables that measured the perceived quality of the organization statistically significantly correlated with each other. The only case of there being no relationship was between atmosphere quality and sustainability quality. The strongest relationship was between the quality of the campus and the atmosphere. Furthermore, the perceived quality of the organization also statistically significantly correlated with the organization-related attitudes of the students. There was only one exception here, which was between sustainability quality and satisfaction with job/study. The rest of the variables had a weak or moderate positive relationship with each other. Furthermore, sustainability communication statistically significantly correlated with nearly all variables which were research quality, education quality, campus quality, sustainability quality, satisfaction with job/study, identification, perceived external prestige, and willingness to contribute. Next, the willingness to contribute of students showed a statistically significant correlation between satisfaction with job/study and identification. However, the relationship with perceived external prestige was not statistically significant. The results show that there were only a few statistically significant correlations with students' perceived relevance of sustainability. However, the relationship with willingness to contribute was the strongest correlation of the table. Lastly, the increasing of sustainability communication strongly correlated with the willingness to contribute of students, with a statistically significant positive relationship.

Table 6 Pearson correlations for students

	Correlations										
	RQ	EQ	CQ	AQ	SQ	SCOM	SJS	IDF	PEP	WTC	PRS
Education quality (EQ)	.35****										
Campus quality (CQ)	.18***	.26****									
Atmosphere quality (AQ)	.21****	.28****	.48****								
Sustainability quality (SQ)	.31****	.37****	.12*	.10							
Sustainability communication (SCOM)	.26****	.22****	.14**	.08	.37****						
Satisfaction with job/study (SJS)	.26****	.40****	.27****	.32****	.02	.17***					
Identification (IDF)	.30****	.36****	.27****	.25****	.24****	.28****	.25****				
Perceived external prestige	.34****	.42****	.19****	.15***	.29****	.21****	.21****	.21****			

(PEP)											
Willingness to contribute (WTC)	.20****	.15**	.09	.04	.17***	.25****	.18***	.24****	.09		
Perceived relevance of sustainability (PRS)	.05	-.04	.14**	.10	-.06	.04	.17***	.03	.00	.51****	
Increasing of sustainability communication (ISCOM)	.12*	.04	.12*	-.01	.01	-.02	.08	.18****	.04	.47****	.30****

Note. * = $p < .05$ level. ** = $p < .01$ level. *** = $p < .005$ level. **** = $p < .001$ level.

Differences between employees and students

When comparing the results of the correlation analysis of employees and students, it appears that there are slightly more correlations for students. However, this is just a slight difference. What does stand out, is that there was one statistically significant correlation for employees that showed a negative relationship, between increasing of sustainability communication and encountered sustainability communication. This was not the case for students.

There were also some differences in the correlations between the perceived quality of the organization and the organization-related attitudes of the respondents. For employees the perceived research, education, campus, atmosphere, and sustainability quality statistically significantly correlated with all three attitudes. However, this was not the case for students, as sustainability quality did not statistically significantly correlate with satisfaction with job/study. The rest of the correlations were similar. There were differences between the correlations of the attitudes and willingness to contribute as well. The willingness to contribute of employees statistically significantly correlated with the attitudes identification and perceived external prestige, but not with satisfaction with job/study. On the other hand, students' willingness to contribute statistically significantly correlated with satisfaction with job/study and identification, but not with perceived external prestige. Lastly, another difference between the internal stakeholders that stands out is that sustainability communication correlated with a lot more variables when it comes to students, compared to employees.

What is similar for both employees and students is that the relationship between the perceived relevance of sustainability and the willingness to contribute was the strongest correlation of them all. However, this relationship was stronger for employees than it was for students.

4.3 The relationship between sustainability and internal stakeholders' attitudes

A regression analysis was done, to find out how the addition of sustainability influenced the organization-related attitudes of employees and students and how these attitudes in turn influenced their willingness to contribute to the sustainability initiatives of the organization. The outcomes of employees and students were compared to each other, to see if the fourth hypothesis can be confirmed or rejected.

4.3.1 The relationship between sustainability quality and sustainability communication and attitudes of internal stakeholders

The first part of the regression analysis is the hierarchical regression, which was run to determine if the addition of sustainability quality and sustainability communication improved the satisfaction with job/study, identification, and perceived external prestige on top of the perceived quality of the organization. Therefore, these two variables were added on top of research quality, education quality, campus quality, and atmosphere quality, and demographics. Namely, years at the organization, age, nationality, and position. The variable position was only included in the analysis for the employees, as students did not fall into the categories of non-academic and academic staff.

Employees

The hierarchical regression analysis contained three models: the first one included the demographic variables. Namely, years at the organization, age, nationality, and position. In the second model the variables quality of research, education, campus, and atmosphere were added. Lastly, the third and last model also included sustainability quality and sustainability communication to test the relationship between sustainability and the attitudes of internal stakeholders, on top of the perceived quality of the organization.

Firstly, the satisfaction with job was not statistically significantly influenced by sustainability quality and sustainability communication (see table 7). From the results it also became clear that the quality of research, education, campus, and atmosphere did have a statistically significant influence on the satisfaction of employees with their job. Both the second and third model were statistically significant (see table 7), however the first one, only including the demographics, was not.

Table 7 Results hierarchical regression for employees

	Model Summary				Anova		Coefficients			
	Model	Adjusted R Square	F Change	Sig. F Change	F	Sig.	Beta	t	Sig.	
Satisfaction with job/study	1	-.10	.44	.78	.44	.78	Constant		18.57	.00****
							Years at organization	-.05	-.38	.70
							Age	.07	.52	.60
							Nationality	-.03	.35	.72
							Position	-.09	-1.23	.22
	2	.23	18.47	.00****	9.52	.00****	Constant		5.04	.00****
							Years at organization	.00	.01	1.00
							Age	.13	1.09	.28
							Nationality	-.02	-.22	.83
							Position	-.09	-1.35	.18
							Research quality	.08	1.20	.23
							Education quality	.23	3.32	.00***
	3	.23	1.35	.26	7.91	.00****	Atmosphere quality	.29	4.16	.00****
							Constant		4.91	.00****
							Years at organization	.000	.00	1.00
Identification	1	.05	3.93	.00***	3.93	.00***	Age	.124	1.05	.30
							Nationality	-.042	-.57	.57
							Position	-.101	-1.50	.14
							Research quality	.057	.84	.40
							Education quality	.187	2.60	.01**
							Campus quality	.123	1.78	.08
							Atmosphere quality	.270	3.86	.00****
							Sustainability quality	.078	1.08	.28
							Sustainability communication	.063	1.03	.31
							Constant		7.72	.00****
Years at organization	-.10	-.75	.46							
Age	.06	.46	.64							
Nationality	.25	3.39	.00****							
Position	.17	2.35	.02**							

	2	.21	12.60	.00****	8.66	.00****	Constant		-.93	.36
							Years at organization	-.06	-.48	.63
							Age	.11	.96	.34
							Nationality	.28	3.95	.00****
							Position	.14	2.09	.04*
							Research quality	.17	2.53	.01*
							Education quality	.10	1.49	.14
							Campus quality	.27	3.86	.00****
							Atmosphere quality	.05	.67	.50
	3	.22	2.36	.10	7.48	.00****	Constant		-.73	.47
							Years at organization	-.07	-.60	.55
							Age	.13	1.05	.29
							Nationality	.23	3.10	.00***
							Position	.12	1.79	.08
							Research quality	.12	1.79	.08
							Education quality	.05	.75	.46
							Campus quality	.28	3.96	.00****
							Atmosphere quality	.04	.57	.57
							Sustainability quality	.16	2.14	.03*
							Sustainability communication	-.00	-.03	.98
Perceived external prestige	1	.03	2.88	.02*	2.88	.02*	Constant		11.36	.00****
							Years at organization	-.04	-.30	.76
							Age	-.08	-.59	.55
							Nationality	.14	1.93	.06
							Position	.22	2.94	.00****
	2	.29	22.03	.00****	12.99	.00****	Constant		.62	.54
							Years at organization	-.00	-.02	.99
							Age	-.02	-.20	.84
							Nationality	.14	2.16	.03*
							Position	.19	3.00	.00****
							Research quality	.39	6.38	.00****
							Education quality	.11	1.74	.08
							Campus quality	.03	.47	.64
							Atmosphere quality	.15	2.23	.03*
	3	.35	10.38	.00****	13.33	.00****	Constant		.72	.47
							Years at organization	-.01	-.13	.90
							Age	-.02	-.19	.85
							Nationality	.06	.89	.37
							Position	.16	2.53	.01*
							Research quality	.33	5.22	.00****
							Education quality	.01	.19	.85
							Campus quality	.06	1.00	.32
							Atmosphere quality	.12	1.79	.08
							Sustainability quality	.26	3.84	.00****
							Sustainability communication	.10	1.71	.08

Note. * = $p < .05$ level. ** = $p < .01$ level. *** = $p < .005$ level. **** = $p < .001$ level.

When it comes to identification, it appeared that the addition of sustainability quality and communication led to a small improvement. However, this change was not statistically significant. With this variable, both the first and second model led to a statistically significant increase in identification and all three models were statistically significant (see table 7).

Lastly, the relationship with perceived external prestige was explored. It seemed that the addition of all three models led to an increase in employees' perceived external prestige, with the biggest increase through the second model. The results showed that all three additions did indeed lead to a statistically significant change, with sustainability quality and sustainability communication explaining 6% of perceived external prestige and the full model accounting for 35% of employees' perceived external prestige. Furthermore, all three models were statistically significant, as shown by the Anova (see table 7).

Students

The hierarchical regression analysis for students contained the same three models as the analysis for employees (see table 8). However, there was one difference, as the variable position was not included in the first model for students as this was variable not applicable here.

Table 8 Results hierarchical regression for students

	Model Summary				Anova		Coefficients			
	Model	Adjusted R Square	F Change	Sig. F Change	F	Sig.		Beta	t	Sig.
Satisfaction with job/study	1	.00	1.50	.22	1.50	.22	Constant		19.21	.00****
							Years at organization	.06	.99	.32
							Age	-.08	-1.34	.18
	2	.23	28.34	.00****	17.02	.00****	Nationality	-.06	-1.05	.30
							Constant		5.59	.00****
							Years at organization	.13	2.41	.02*
	3	.25	6.97	.00***	15.21	.00****	Age	-.04	-.79	.43
							Nationality	-.07	-1.33	.18
							Research quality	.11	2.24	.03*
							Education quality	.34	6.48	.00****
							Campus quality	.09	1.75	.08
							Atmosphere quality	.13	2.30	.02*
							Constant		6.28	.00****
							Years at organization	.09	1.53	.13
							Age	-.06	-1.15	.25
Identification	1	.02	2.97	.03*	2.97	.03*	Nationality	-.04	-.84	.40
							Research quality	.13	2.54	.01*
							Education quality	.36	6.80	.00****
	2	.19	21.41	.00****	13.78	.00****	Campus quality	.08	1.63	.11
							Atmosphere quality	.14	2.51	.01*
							Sustainability quality	-.19	-3.41	.00***
							Sustainability communication	.12	2.47	.01*
							Constant		8.45	.00****
							Years at organization	-.05	-.89	.38
	3	.21	5.63	.00**	6.45	.00****	Age	-.01	-.17	.87
							Nationality	.13	2.28	.02*
							Constant		-1.47	.14
							Years at organization	-.01	-.17	.87
							Age	.02	.38	.70
							Nationality	.12	2.29	.02*
Research quality							.16	3.14	.00***	
Education quality							.21	3.95	.00****	
Campus quality							.14	2.54	.01*	
Perceived external prestige	1	.04	6.45	.00****	16.50	.00****	Atmosphere quality	.12	2.11	.04*
							Constant		-1.51	.13
							Years at organization	.00	.01	.99
	2	.22	22.90	.00****	13.39	.00****	Age	.01	.18	.86
							Nationality	.11	2.12	.04*
							Research quality	.12	2.40	.02*
							Education quality	.19	3.50	.00****
							Campus quality	.12	2.30	.02*
							Atmosphere quality	.12	2.18	.03*
	3						Sustainability quality	.02	.31	.76
							Sustainability communication	.16	3.10	.00***
							Constant		13.72	.00****
							Years at organization	-.05	-.83	.41
							Age	-.06	-1.10	.27
							Nationality	.19	3.50	.00****
2						Constant		2.91	.00****	
						Years at organization	.01	.19	.85	
						Age	-.04	-.70	.48	
						Nationality	.14	2.77	.01**	
3						Research quality	.20	4.07	.00****	

						Education quality	.30	5.64	.00****
						Campus quality	.07	1.29	.20
						Atmosphere quality	.02	.35	.72
						Constant		2.58	.01*
3	.23	2.16	.12	13.33	.00****	Years at organization	.03	.56	.57
						Age	-.04	-.72	.47
						Nationality	.13	2.47	.01*
						Research quality	.17	3.41	.00***
						Education quality	.28	5.18	.00****
						Campus quality	.06	1.17	.24
						Atmosphere quality	.02	.33	.75
						Sustainability quality	.07	1.28	.20
						Sustainability communication	.06	1.19	.24

Note. * = $p < .05$ level. ** = $p < .01$ level. *** = $p < .005$ level. **** = $p < .001$ level.

The satisfaction of students with their study seemed to be influenced by the variables from all three models (see table 8). However, the results showed that the increase was only statistically significant for the second and third model. Meaning that the sustainability quality and sustainability communication positively influenced the satisfaction with study on top of the demographics and perceived quality of research, education, campus, and atmosphere. The third model added 3% to the total of 25% that was accounted for, by all three models. The Anova showed that the second and third model were statistically significant, but the first one was not (see table 8).

The second variable that was tested in the hierarchical regression was identification. The results showed a statistically significant increase in identification through all three models (see table 8). The identification with the organization of students was accounted for 2% by sustainability quality and communication. The full model accounted for 21%. Additionally, all three models were statistically significant as well.

The last variable that was tested was perceived external prestige. This attitude was not statistically significantly influenced by the sustainability quality and communication. However, the quality of research, education, campus, and atmosphere did increase the R^2 statistically significantly. Furthermore, all three models were statistically significant, as shown by the Anova (see table 8).

Differences between employees and students

When comparing the outcomes of employees to the results of students, the results differ from each other. First of all, the addition of sustainability quality and sustainability communication did not lead to a significant increase in R^2 for the satisfaction with job/study of employees, but it did for students. However, the second model did lead to a statistically significance increase in R^2 for both groups, but the first model did not lead to any statistically significant increase in the satisfaction with job/study. This was the case for both employees and students. Furthermore, both full models were statistically significant.

When the effects on the identification of students and employees are compared, there is again one main difference. This is that the last model, including sustainability quality and communication, did lead to a statistically significant increase in R^2 for students, but not for employees. On the other hand, the first and second model led to a statistically significant increase for both employees and students and both full models were statistically significant. This means that the only difference lay in the statistical significance of the addition of the third model.

Interestingly, the only variable that was statistically significantly influenced by sustainability quality and sustainability communication for employees, was not statistically significantly influenced for

students. Both the first and second model did lead to a statistically significantly increase in R^2 for perceived external prestige. Which was similar for the two groups. Lastly, the full models were both statistically significant.

4.3.2 *The relationship between satisfaction with job/study, identification, and perceived external prestige and willingness to contribute*

Next, a multiple regression was run to test the second part of the model. To predict willingness to contribute from satisfaction with job/study, identification, and perceived external prestige. This regression analysis was done separately for employees and students as well.

Employees

First, the multiple regression was run for the employees. The results showed that satisfaction with job, identification, and perceived external prestige did statistically significantly predict the willingness to contribute to the sustainability initiatives of the organization of employees (see table 9). However, the variance that was explained through the attitudes of employees was extremely small, with just 3%.

Table 9 Prediction willingness to contribute for employees

Model summary			Anova		Coefficients			
Model	R	Adjusted R Square	F	Sig.	Beta	t	Sig.	
1	.22	.03	3.77	.01*	Constant	6.81	.00****	
					Satisfaction with job	.02	.26	.79
					Identification	.06	.79	.43
					Perceived external prestige	.18	2.38	.02*

Note. * = $p < .05$ level. ** = $p < .01$ level. *** = $p < .005$ level. **** = $p < .001$ level.

The only variable that added statistically significantly employees' willingness to contribute with $p < .05$ was perceived external prestige. This is in not fully line with the results of the correlation analysis, as these previously reported results also showed a statistically significant correlation with identification.

Students

When the multiple regression was run for the students, it showed that the attitudes satisfaction with study, identification and perceived external prestige did statistically significantly predict the willingness to contribute as well with an explained variance of 7% (see table 10).

Table 10 Prediction willingness to contribute for students

Model summary			Anova		Coefficients			
Model	R	Adjusted R Square	F	Sig.	Beta	t	Sig.	
1	.27	.07	9.79	.00****	Constant	6.62	.00****	
					Satisfaction with job	.12	2.35	.02*
					Identification	.20	3.92	.00****
					Perceived external prestige	.02	.46	.65

Note. * = $p < .05$ level. ** = $p < .01$ level. *** = $p < .005$ level. **** = $p < .001$ level.

However, not all three variables added significantly to the prediction (see table 10), as the significance of perceived external prestige was $p = .65$, which is in line with there being no correlation between perceived external prestige and willingness to contribute.

Differences between employees and students

When the results of this multiple regression for employees and students are compared, it becomes clear that the willingness to contribute of students had a higher prediction through the attitudes towards the organization. However, the only variable (perceived external prestige) that was not statistically significantly adding to the willingness to contribute of students, was statistically significantly contributing to the willingness of employees.

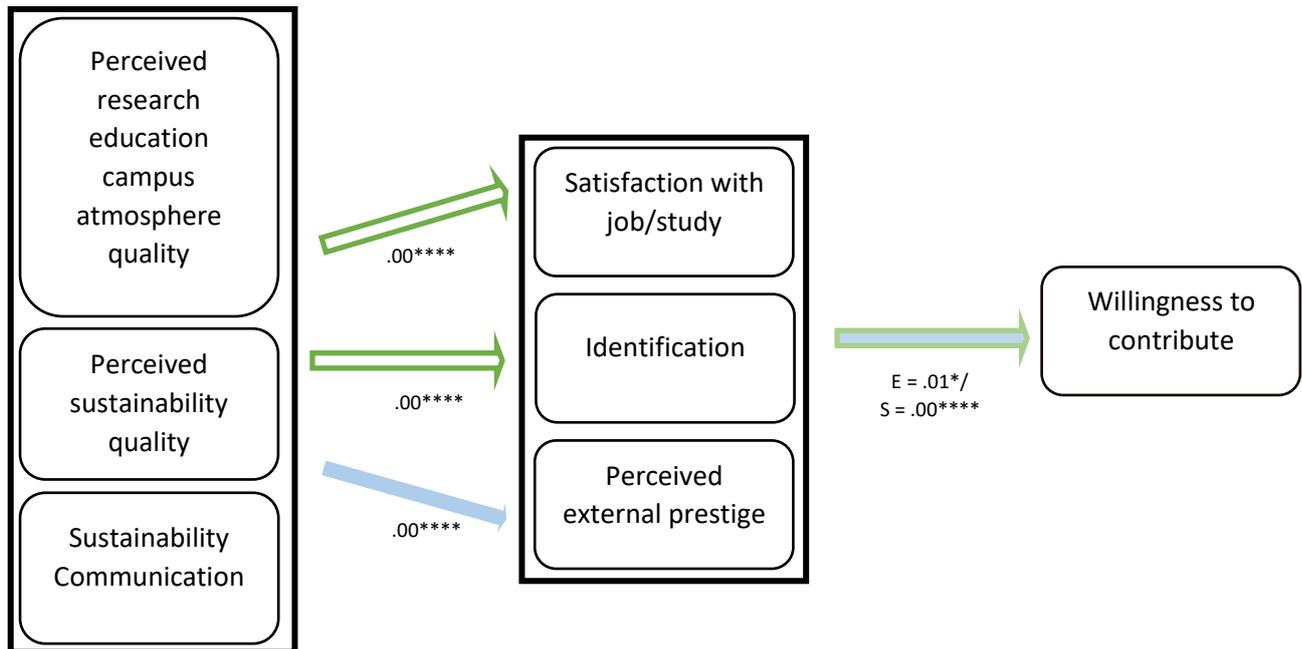
5. Discussion

5.1 Main findings

It appears that the organization-related attitudes and the perceived sustainability quality correlate with each other. This is the case for both employees and students, but there are some differences between the stakeholders. When it comes to the employees, the sustainability quality correlates with all three organization-related attitudes. For students, the sustainability quality does not correlate with study satisfaction, but it does with both identification and perceived external prestige. These correlations were already expected, as previous research has shown that sustainability or CSR activities have a positive on attitudes of employees (Valentine & Fleischmann, 2008; Fu et al., 2014 and De Roeck & Delobbe, 2012). However, it is interesting to see that it can also have a positive effect on students, even though they have a different position in the organization (Ferrero-Ferrero, 2014). Moreover, there were expected relationships between sustainability communication and the attitudes towards the organization of both employees and students. These relationships are confirmed through the correlation analysis for both stakeholders. It makes sense that whenever stakeholders encounter communication about sustainability initiatives of an organization their attitudes are influenced, as communication about sustainability is used for exchanging and discussing information, interpretations, and opinions that regard sustainability issues (Baguley, 1994 in Genç, 2017). However, it is interesting that sustainability communication and identification do not correlate for employees. Especially as the relationship between sustainability and identification has been confirmed in previous research (Gond et al., 2010 and Fu et al., 2014). When the results of the effect of sustainability communication are compared to the effects of the perceived sustainability quality there are big differences. For instance, there is a statistically significant relationship between study satisfaction and sustainability communication, but not between study satisfaction and sustainability quality. On the other hand, for employees, there is no relationship between identification and sustainability communication, but there is with sustainability quality. This shows that the perceived sustainability quality and sustainability communication have different effects on internal stakeholders.

Even though the perceived quality of the organizational sustainability activities and the communication about these activities correlate with the attitudes of internal stakeholders, the addition of sustainability does not influence the attitudes of internal stakeholders on top of the demographic variables and the perceived quality of the organization (see model 2). The only exception for employees is perceived external prestige, which shows a slight increase through the addition sustainability quality and communication. For students, two of the attitudes are positively influenced through the addition of sustainability, namely satisfaction with study and identification. Based on this, only the third hypothesis is accepted for employees (H3a and H3b) and for students the first and second hypotheses are accepted (H1a, H1b, H2a and H2b).

Model 2 Final results in research model



Note. Blue filling = statistically significant for employees (E). Green border = statistically significant for students (S).
 Note. * = $p < .05$ level. ** = $p < .01$ level. *** = $p < .005$ level. **** = $p < .001$ level.

However, it can be concluded that the quality of research, education, campus, and atmosphere play a more important role in influencing the attitudes of internal stakeholders. The studies of De Jager and Gbadamosi (2009, 2013) identified several factors that were to be considered to measure the satisfaction of HE-students. Some of them were academic quality, location & logistics, sports reputation & facilities, and safety & security, which are all related to either research, education, campus, or atmosphere quality. Furthermore, the quality of a HEI is one of the main factors that students take into account when choosing the university to study abroad (Roga et al., 2013). The findings of this study confirm that students' attitudes are indeed formed through the quality of the HEI and add that it is also the case for employees.

Another finding is that the perceived relevance of sustainability is a lot higher than the perceived quality of sustainability activities of the organization. When this is compared to the sustainability communication that was encountered by the respondents, it appears that this might be a reason that both employees and students for the low score on sustainability quality. As it is known that sustainability communication is used to inform stakeholders about the activities of an organization, which influences their evaluation and responses to the activities (Suh, 2016). Furthermore, employees and students also indicate that they think the communication about the sustainability initiatives should be increased.

The fourth hypothesis showed very different results for students and employees. First of all, there only seems to be a relationship between perceived external prestige and the willingness to contribute of employees. This is interesting, as it was expected that both identification and satisfaction with job would have a positive effect on the willingness to contribute as well (Varma, 2017 and Elsbach & Glynn). Even though there seems to be no relationship between the willingness to contribute and the other two organization-related attitudes, the attitudes positively influenced their willingness to contribute to the sustainability goals of an organization. Therefore, the fourth

hypothesis is accepted for employees. However, this effect was extremely small and only perceived external prestige added statistically significantly to the relationship. When it comes to students, both identification and satisfaction with study correlate positively with their willingness to contribute and the attitudes also statistically significantly influence the willingness to contribute in a positive way. Confirming the fourth hypothesis for students. Interestingly, the mean score of the willingness to contribute to the sustainability goals of the organization of employees is higher than the willingness to contribute of students. Nonetheless, the willingness of students is influenced more by their attitudes towards the organization. The results of the study of Emanuel and Adams (2011) showed that American students were willing to support and participate in sustainability initiatives. However, the study of Abubakar et al. (2016) had opposite results. As students from Saudi Arabia lacked interest and willingness to participate in sustainability initiatives, even though they were concerned and aware about campus environmental sustainability (Abubakar et al., 2016). The reason for the willingness of employees being higher, may be because contributing to organizational sustainability goals is already a part of their job, as employees are the enactors of organizational CSR. (Im et al., 2016) However, it is interesting that only perceived external prestige has an effect on the variable. Especially as previous research has shown that the motivation of employees is derived from job satisfaction (Varma, 2017) and that organizational commitment makes employees want to strive for organizational goals (Elsbach & Glynn, 1996). Thus, it can be concluded that employees find it important if outsiders view the organization positively because of the sustainability activities and this makes them more willing to work on the sustainability goals as well. On the other hand, students that are more satisfied with their study and identify with the organization are more willing to contribute to organizational sustainability goals because of this.

Through these findings it can be concluded that there are differences between employees and students. The differences might be explained because employees and students have a different position in the organization. An example of this is in the teaching-learning process where the students are on one side and employees on the other (Ferrero-Ferrero, 2017). This could also explain why some attitudes are influenced by sustainability quality or communication for employees, but not for students. Furthermore, according to the stakeholder theory of Freeman (1984), which is closely related to CSR (Glavas & Kelley, 2014), organizations must keep in mind that stakeholders have different perspectives and expectations. Thus, even though students and employees are both internal stakeholders for a HEI, they still differ from each other on some points.

5.2 Theoretical and practical implications

The findings of this study have implications for theory as they contribute to the body of research on how sustainability relates to the attitudes of internal stakeholders. For instance, an important finding is that there is a relationship between sustainability and the perceived external prestige of internal stakeholders. The relationship between sustainability and CSR and organizational reputation has already been confirmed in previous research (e.g., Esen, 2013 and Javed et al., 2019). However, the direct relationship between perceived external prestige and sustainability had not been studied yet. Thus, it can be concluded that not only the actual reputation of organizations is influenced through sustainability, but also how members of an organization believe the organization is seen by outsiders. Additionally, the results indicate positive relationships between students and sustainability as well. Recently, there has been an increasing body of research on sustainability in HEIs in relation to students (e.g., Farinha et al., 2018, Correia et al., 2020 and Alm et al., 2021), but the area of student's attitudes towards HEIs in relation to sustainability has been largely neglected. Therefore, the results of this study broaden this field. Furthermore, the results show that students

are more willing to contribute to the sustainability initiatives of an organization if their attitudes towards an organization are positive. These positive attitudes towards the organization can actually increase as a result of sustainability initiatives and communication. These findings suggest promising insights, which is a basis to keep building on to find out more about students as internal stakeholders in relation to sustainability.

Furthermore, the study also brings implications for practice to light. First, through the mean scores of the survey it has become clear that students take a big interest in sustainability in general. Moreover, they also want to hear about the sustainability initiatives their university engages in, as it was indicated that the sustainability communication should be increased. This is a clear signal for HEIs which they can use for their internal communication strategy. Furthermore, there is not only an interest in sustainability, but the attitudes of students are actually influenced by the perceived quality of the initiatives and the communication about it. HEIs can use this in their favour, by using their sustainability initiatives as a way to improve the satisfaction with their study, identification with the organization and the perceived external prestige. These attitudes in turn positively influence the willingness of the students to contribute to the sustainability goals of the organizations. Which is an important issue for society as a whole (Anabaraonye et al., 2017). Additionally, students show a clear interest in sustainability. As universities and other (higher) education institutes have a crucial role when it comes to educating students about sustainability (e.g., Ferrero-Ferrero, 2017 and Wang & Juslin, 2012) it is important to include this in the curriculum of studies even though this is much debated (Martin & Jucker, 2005). Furthermore, employees are also positively influenced by sustainability quality and communication, but not exactly the same as students. This shows that there should be differentiated between students and employees in the communication about sustainability to optimize the effects on both stakeholders. Using these results HEIs can optimize their sustainability communication for employees and students, to eventually have them contribute to the sustainability goals of the organization. This is important, as the help of employees is essential in organizational sustainability and CSR (Temminck, 2013 and Im et al., 2016) and students can contribute to this as well. Especially, as the best way to encourage students to be socially responsible is to include them as a part of the CSR initiatives (Ahmad, 2012).

5.3 Limitations

The first limitation of the study is the fact that it was conducted at just one HEI in the Netherlands. This may have caused bias in the results, as this particular university may have a unique standpoint when it comes to sustainability, which is distinct from other HEIs. This in turn could influence the perception of the respondents. Another limitation was that the respondents did not encounter a lot of communication about the sustainability initiatives. It is possible that reduced communication about the initiatives may have indirectly influenced their responses and thus the effect it had on their attitudes. Furthermore, two of the constructs did have a moderate score on the Cronbach's Alpha (Taber, 2017). This means that the scales for perceived external prestige and education quality were not as reliable. Lastly, the study is limited as it measured just the relationship between the variables, but not the actual effects. This means the relationships that were found could be caused by something else than sustainability.

5.4 Suggestions for future research

In the future, there should be more research on willingness to contribute to organizational sustainability goals of internal stakeholders. Some of the results did not show the expected

relationships, which calls for more research on how the willingness of both students and employees can be enhanced. This is important, as the success of strategic initiatives rely on the collective effort and accumulation of employee behaviour (Carmeli et al., 2017 and Strauss et al., 2017). Additionally, future research should study if sustainability has an actual effect on the attitudes of internal stakeholders, as this study merely tested the relationships. This ought to be done in an experimental setting.

Furthermore, the differences between students and employees should be further investigated. In the previous years there have been a lot of studies on how sustainability and CSR activities influence (internal) stakeholders (e.g., Duthler & Danesh, 2018; Carlini & Grace, 2021 and Tetrault Sirsly & Lvina, 2016), but students have been largely neglected. As this study shows significant differences between the groups, further research should be conducted to find out where these differences rely on. Lastly, future research should be broadened by studying if the same relationships are found for employees and students at different HEIs. This should not only be Dutch HEIs, but also HEIs in other countries. As students are the leaders of tomorrow (Wang & Juslin, 2012) and climate change is an established challenge nowadays (Anabaraonye et al., 2017) it is important to not only know what their perceptions are, but also how these can be positively influenced.

5.5 Conclusion

Apart from confirming outcomes of previous research, this study has also revealed new relationships when it comes to sustainability (communication) and the attitudes of internal stakeholders. What can be taken from this research is that the perceived sustainability quality and the encountered sustainability communication positively influences both students and employees when it comes to satisfaction with job/study, identification, and perceived external prestige. However, these attitudes in turn influence the willingness to contribute to organizational sustainability activities as well. However, this is only a very slight effect, which is a lot higher for students, than for employees. These findings invite further research to continue this path, to continue to investigate the differences between employees and students as internal stakeholders of an organization.

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Appendix I Overview constructs

<i>Scale</i>	<i>N of items</i>	<i>Items</i>
Demographics	8	<ul style="list-style-type: none"> * What is your nationality? * What is your age, in years? * What is your gender? * What is the highest level of education you completed? * Are you a student or employee at University of Twente * What department do you work for? * What is your position in University of Twente? * How long have you been working at University of Twente, in years? * Are you a student or employee at University of Twente * What faculty do you study at? * What is programme are you currently studying? * How long have you been studying at University of Twente, in years?
Research quality <i>Self-developed scale.</i>	4	<ul style="list-style-type: none"> * The research that takes place at the University of Twente is groundbreaking. * The research that takes place at the University of Twente is innovative. * The research that takes place at the University of Twente is unique compared to research at other Dutch universities. * The societal impact of the research that takes place at the University of Twente is high.
Education Quality <i>Self-developed scale.</i>	4	<ul style="list-style-type: none"> * The education at the University of Twente is innovative. * The University of Twente provides students with personal support during their education. * The quality of education at the University of Twente is high compared to the education at other Dutch universities. * The University of Twente optimally prepares students for their work field.
Campus Quality <i>Self-developed scale.</i>	4	<ul style="list-style-type: none"> * I really enjoy being on the campus of the University of Twente. * The campus of the University of Twente provides all the facilities students need. * The campus of the University of Twente makes the university unique. * The campus of the University of Twente is a pleasant place to study. * I really enjoy being on the campus of the University of Twente.

		<ul style="list-style-type: none"> * The campus of the University of Twente provides all the facilities employees need. * The campus of the University of Twente makes the university unique. * The campus of the University of Twente is a pleasant place to work.
<p>Atmosphere quality</p> <p><i>Self-developed scale.</i></p>	4	<ul style="list-style-type: none"> * Whenever I am working at the University of Twente, I feel welcome to be there. * I feel like I can be myself at the University of Twente. * In general, there is an open and accepting atmosphere at the University of Twente. * In general, people at the University of Twente are easily approachable. <ul style="list-style-type: none"> * Whenever I am studying at the University of Twente, I feel welcome to be there. * I feel like I can be myself at the University of Twente. * In general, there is an open and accepting atmosphere at the University of Twente. * In general, people at the University of Twente are easily approachable.
<p>Sustainability quality</p> <p><i>Self-developed scale.</i></p>	4	<ul style="list-style-type: none"> * The sustainability initiatives of the University of Twente are groundbreaking. * The sustainability initiatives of the University of Twente are innovative. * The sustainability initiatives of the University of Twente are unique compared to other Dutch universities. * The impact of the sustainability initiatives of the University of Twente are high.
<p>Satisfaction with job/study</p> <p><i>Based on Im et al. (2016) based on Cho et al. (2013) (Item 1 & 2) and based on Valentine and Fleischman (2008) (Item 3 & 4). Rephrased to be applicable for students.</i></p>	4	<ul style="list-style-type: none"> * In general, I would say my job is very worthwhile. * All in all, I am very content with my job. * In general, I like working at University of Twente. * In general, I do not like my job. <i>(Reversed)</i> <ul style="list-style-type: none"> * In general, I would say my study is very worthwhile. * All in all, I am very content with my study. * In general, I like studying at University of Twente * In general, I do not like my study. <i>(Reversed)</i>
<p>Identification</p> <p><i>Based on Mael and Ashforth (1992). Rephrased to be applicable for employees and students of the University of Twente.</i></p>	6	<ul style="list-style-type: none"> * When someone criticizes University of Twente, it feels like a personal insult. * I am very interested in what others think about University of Twente. * When I talk about University of Twente, I usually say “we” rather than “they”. * University of Twente’s successes are also my successes.

		<ul style="list-style-type: none"> * When someone praises University of Twente, it feels like a personal compliment. * If a story in the media criticized University of Twente, I would feel embarrassed.
<p>Perceived external prestige</p> <p><i>Based on Mael and Ashfort (1992) (Item 1 & 2) and Rodrigo et al. (2019) (Item 3), rephrased to be applicable for sustainability.</i></p>	3	<ul style="list-style-type: none"> * I feel like the University of Twente is accredited with a favourable reputation by others. * I feel like the University of Twente is viewed as a prestigious university by others. * When talking with family and friends about the University of Twente they often display a positive attitude toward the organization.
<p>Willingness to contribute</p> <p><i>Self-developed scale.</i></p>	3	<ul style="list-style-type: none"> * I want to be actively involved in the sustainability initiatives the University of Twente engages in. * I want to contribute to the sustainability of the University of Twente, by becoming more sustainable myself. * I want to help the University of Twente become a more sustainable organization.
<p>Perceived relevance of sustainability</p> <p><i>Self-developed scale.</i></p>	4	<ul style="list-style-type: none"> * I think is important to work on becoming more sustainable. * I think it is valuable to work on becoming more sustainable * I am motivated to include sustainability in my work. * I don't see why it is necessary to work on sustainability. (<i>Reversed</i>) * I think is important to work on becoming more sustainable. * I think it is valuable to work on becoming more sustainable * I am motivated to include sustainability in my study. * I don't see why it is necessary to work on sustainability. (<i>Reversed</i>)
<p>Sustainable behaviour</p> <p><i>Self-developed scale.</i></p>	4	<ul style="list-style-type: none"> * In general, I am interested in sustainability and sustainability initiatives. * In general, I want to take part in sustainability initiatives. * In general, I take sustainability into account when making decisions. * In general, sustainability plays a big role in my daily life.
<p>Sustainability communication</p> <p><i>Self-developed scale.</i></p>	4	<ul style="list-style-type: none"> * In the last year, how often did you encounter communication about the sustainability initiatives of the University of Twente? * Where did you read, hear, or see about sustainability at the University of Twente? You can choose multiple answers. * I feel like the University of Twente

		communicates about sustainability initiatives quite frequently. * I feel like the University of Twente could communicate more about their sustainability initiatives.
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Appendix II Online questionnaire employee

* Are you a student or employee at the University of Twente?

- Student
- Employee
- Neither

* What is your nationality?

- Dutch
- Non-Dutch, European
- Non-European

* What is your age, in years?

- ...

* What is your gender?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

* What is the highest level of education you completed?

- High school or equivalent
- Post-secondary vocational education (MBO)
- College degree (HBO)
- University degree bachelor
- University degree master
- University degree PhD

* What department do you work for?

- Faculty of BMS
- Faculty of EEMCS
- Faculty of ET
- Faculty of ITC
- Faculty of TNW
- Services (GA, CES, FIN, C&FM, M&C, HR, LISA, S&P, or SBD)

* What is your position at the University of Twente?

- Academic staff (research and teaching)
- Academic staff (research only)
- Academic staff (teaching only)
- Non-academic staff

* How long have you been working at the University of Twente, in years?

- ...

Please answer the following statements about how you feel about the UT by indicating how accurate they are for you. The scale goes from 1 (strongly disagree) to 5 (strongly agree).

* In general, I would say my job is very worthwhile.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* All in all, I am very content with my job.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, I like working at the University of Twente

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, I do not like my job.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* When someone criticizes the University of Twente, it feels like a personal insult.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I am very interested in what others think about the University of Twente.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree

- Strongly agree

* When I talk about the University of Twente, I usually say “we” rather than “they”.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The University of Twente’s successes are also my successes.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* When someone praises the University of Twente, it feels like a personal compliment.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* If a story in the media criticized the University of Twente, I would feel embarrassed.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I feel like the University of Twente is accredited with a favourable reputation by others.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I feel like the University of Twente is viewed as a prestigious university by others.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* When talking with family and friends about the University of Twente they often display a positive attitude toward the organization.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The research that takes place at the University of Twente is groundbreaking.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The research that takes place at the University of Twente is innovative.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The research that takes place at the University of Twente is unique compared to research at other Dutch universities.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The societal impact of the research that takes place at the University of Twente is high.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The education at the University of Twente is innovative

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree

- Strongly agree

* The University of Twente provides students with extraordinary personal support during their education.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The quality of education at the University of Twente is high compared to the education at other Dutch universities.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The University of Twente optimally prepares students for their work field.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I really enjoy being on the campus of the University of Twente.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The campus of the University of Twente provides all the facilities employees need.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The campus of the University of Twente makes the university unique.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree

- Strongly agree

* The campus of the University of Twente is a great place to work.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* Whenever I am working at the University of Twente, I feel welcome to be there.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I feel like I can be myself at the University of Twente.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, there is an open and accepting atmosphere at the University of Twente.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, people at the University of Twente are easily approachable.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

Please answer the following statements about how you feel about sustainability at the UT by indicating how accurate they are for you. The scale goes from 1 (strongly disagree) to 5 (strongly agree).

* The sustainability initiatives of the University of Twente are groundbreaking.

- Strongly disagree

- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The sustainability initiatives of the University of Twente are innovative.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The sustainability initiatives of University of Twente are unique compared to other Dutch universities.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The impact of the sustainability initiatives of the University of Twente are high.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I want to be actively involved in the sustainability initiatives of the University of Twente.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I want to contribute to the sustainability of the University of Twente, by becoming more sustainable myself.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I want to help the University of Twente become a more sustainable organization.

- Strongly disagree

- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I think is important to work on becoming more sustainable.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I think it is valuable to work on becoming more sustainable

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I am motivated to include sustainability in my work.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I don't see why it is necessary to work on sustainability.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, I am interested in sustainability and sustainability initiatives.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, I want to take part in sustainability initiatives.

- Strongly disagree
- Disagree

- Agree nor disagree
- Agree
- Strongly agree

* In general, I take sustainability into account when making decisions.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, sustainability plays a big role in my daily life.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

Please answer the following questions about sustainability at the UT as best as possible. Both scales and multiple choice questions are included.

* In the last year, how often did you encounter communication about sustainability initiatives from the University of Twente?

- Never
- Rarely
- Sometimes
- Often
- Very often

* Where did you read, hear, or see about sustainability at the University of Twente? You can choose multiple answers.

- UT Website
- Email
- Newsletter
- In a meeting
- In a conversation
- Utoday
- During a lecture
- Policy document
- Social media UT (Facebook, Twitter, Instagram or LinkedIn)
- Other, namely

* I feel like the University of Twente communicates about sustainability initiatives quite frequently.

- Strongly disagree
- Disagree

- Agree nor disagree
- Agree
- Strongly agree

* I feel like the University of Twente should communicate more about its sustainability initiatives.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

Appendix III Online questionnaire student

* Are you a student or employee at the University of Twente?

- Student
- Employee
- Neither

* What is your nationality?

- Dutch
- Non-Dutch, European
- Non-European

* What is your age, in years?

- ...

* What is your gender?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

* What is the highest level of education you completed?

- High school or equivalent
- Post-secondary vocational education (MBO)
- College degree (HBO)
- University degree bachelor
- University degree master
- University degree PhD

* Which faculty do you study at?

- Faculty of BMS
- Faculty of EEMCS
- Faculty of ET
- Faculty of ITC
- Faculty of TNW

* Which programme are you currently studying?

- Bachelor
- Pre-master
- Master

* How long have you been studying at the University of Twente, in years?

- ...

Please answer the following statements about how you feel about the UT by indicating how accurate they are for you. The scale goes from 1 (strongly disagree) to 5 (strongly agree).

* In general, I would say my study is very worthwhile.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* All in all, I am very content with my study.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, I like studying at the University of Twente

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, I do not like my study.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I am very interested in what others think about the University of Twente.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* When I talk about the University of Twente, I usually say “we” rather than “they”.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree

- Strongly agree

* The University of Twente's successes are also my successes.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* When someone praises the University of Twente, it feels like a personal compliment.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* When someone criticizes the University of Twente, it feels like a personal insult.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* If a story in the media criticized the University of Twente, I would feel embarrassed.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I feel like the University of Twente is accredited with a favourable reputation by others.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I feel like the University of Twente is viewed as a prestigious university by others.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* When talking with family and friends about the University of Twente they often display a positive attitude toward the organization.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The research that takes place at the University of Twente is groundbreaking.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The research that takes place at the University of Twente is innovative.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The research that takes place at the University of Twente is unique compared to research at other Dutch universities.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The societal impact of the research that takes place at the University of Twente is high.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The education at the University of Twente is innovative.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree

- Strongly agree

* The University of Twente provides students with extraordinary personal support during their education.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The quality of education at the University of Twente is high compared to the education at other Dutch universities.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The University of Twente optimally prepares students for their work field.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I really enjoy being on the campus of the University of Twente.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The campus of the University of Twente provides all the facilities students need.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The campus of the University of Twente makes the university unique.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree

- Strongly agree

* The campus of the University of Twente is a great place to study.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* Whenever I am studying at the University of Twente, I feel welcome to be there.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I feel like I can be myself at the University of Twente.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, there is an open and accepting atmosphere at the University of Twente.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, people at the University of Twente are easily approachable.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

Please answer the following statements about how you feel about sustainability at the UT by indicating how accurate they are for you. The scale goes from 1 (strongly disagree) to 5 (strongly agree).

* The sustainability initiatives of the University of Twente are groundbreaking.

- Strongly disagree

- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The sustainability initiatives of the University of Twente are innovative.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The sustainability initiatives of the University of Twente are unique compared to other Dutch universities.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* The impact of the sustainability initiatives of the University of Twente are high.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I want to be actively involved in the sustainability initiatives the University of Twente engages in.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I want to contribute to the sustainability of the University of Twente, by becoming more sustainable myself.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I want to help the University of Twente become a more sustainable organization.

- Strongly disagree

- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I think is important to work on becoming more sustainable.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I think it is valuable to work on becoming more sustainable

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I am motivated to include sustainability in my work.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I don't see why it is necessary to work on sustainability.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, I am interested in sustainability and sustainability initiatives.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, I want to take part in sustainability initiatives.

- Strongly disagree
- Disagree

- Agree nor disagree
- Agree
- Strongly agree

* In general, I take sustainability into account when making decisions.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* In general, sustainability plays a big role in my daily life.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

Please answer the following questions about sustainability at the UT as best as possible. Both scales and multiple choice questions are included.

* In the last year, how often did you encounter communication about sustainability initiatives of the University of Twente?

- Never
- Rarely
- Sometimes
- Often
- Very often

* Where did you read, hear, or see about sustainability at the University of Twente? You can choose multiple answers.

- UT Website
- Email
- Newsletter
- In a meeting
- In a conversation
- Utoday
- During a lecture
- Policy document
- Social media UT (Facebook, Twitter, Instagram or LinkedIn)
- Other, namely...

* I feel like the University of Twente communicates about sustainability initiatives quite frequently.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

* I feel like the University of Twente should communicate more about its sustainability initiatives.

- Strongly disagree
- Disagree
- Agree nor disagree
- Agree
- Strongly agree

Appendix IV Final results factor analysis and pattern matrix

Total variance explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	7.84	17	17	4.05
2	4.83	11	28	5.21
3	3.48	8	36	3.62
4	2.33	5	41	4.00
5	2.00	4	46	3.34
6	1.67	4	49	2.58
7	1.37	3	52	3.81
8	1.31	3	55	2.45
9	1.23	3	58	3.10
10	1.08	2	60	3.45
11	1.03	2	63	2.98

Pattern Matrix

	Component										
	1	2	3	4	5	6	7	8	9	10	11
SJS1					-.77						
SJS2					-.83						
SJS3					-.52						
SJS4R					-.75						
IDF1				-.78							
IDF2				-.48							
IDF3				-.58							
IDF4				-.67							
IDF5				-.81							
IDF6				-.70							
PEP1									-.81		
PEP2									-.68		
PEP3									-.62		
RQ1						-.74					
RQ2						-.69					
RQ3						-.58					.34
RQ4						-.48					
EQ1											.64
EQ2											.56
EQ3											.61
EQ4											.53
CQ1			.72								

CQ2		.68		
CQ3		.78		
CQ4		.79		
AQ1				-.65
AQ2				-.75
AQ3				-.86
AQ4				-.80
SQ1	.86			
SQ2	.85			
SQ3	.82			
SQ4	.78			
WTC1		.84		
WTC2		.73		
WTC3		.82		
CSRP1				.81
CSRP2				.82
CSRP4R				.74
SB1	.67			
SB2	.74			
SB3	.55			.31
SB4	.66			
SCOM1			.88	
SCOM3			.84	

Appendix V Results demographics

Distribution age					
	Employees		Students		Total
	Frequency	Percent	Frequency	Percent	Percent
17	0	0.0	2	.5	.3
18	0	0.0	38	10.0	6.2
19	1	0.4	62	16.4	10.3
20	0	0.0	59	15.6	9.6
21	1	0.4	55	14.5	9.1
22	0	0.0	43	11.3	7.0
23	2	.9	43	11.3	7.3
24	6	2.6	26	6.9	5.2
25	8	3.4	14	3.7	3.6
26	10	4.3	16	4.2	4.2
27	10	4.3	7	1.8	2.8
28	11	4.7	4	1.1	2.4
29	12	5.1	6	1.6	2.9
30	8	3.4	1	0.3	1.5
31	6	2.6	1	0.3	1.1
32	14	6.0	1	0.3	2.4
33	9	3.8	1	0.3	1.6
34	9	3.8	0	0.0	1.5
35	6	2.6	0	0.0	1.0
36	3	1.3	0	0.0	.5
37	3	1.3	0	0.0	.5
38	8	3.4	0	0.0	1.3
39	4	1.7	0	0.0	.7
40	5	2.1	0	0.0	.8
41	2	.9	0	0.0	.3
42	6	2.6	0	0.0	1.0
43	3	1.3	0	0.0	.5
44	5	2.1	0	0.0	.8
45	8	3.4	0	0.0	1.3
46	4	1.7	0	0.0	.7
47	3	1.3	0	0.0	.5
48	3	1.3	0	0.0	.5
50	4	1.7	0	0.0	.7
51	1	.4	0	0.0	.2

52	5	2.1	0	0.0	.8
53	3	1.3	0	0.0	.5
54	3	1.3	0	0.0	.5
55	7	3.0	0	0.0	1.1
56	4	1.7	0	0.0	.7
57	4	1.7	0	0.0	.7
58	1	.4	0	0.0	.2
59	3	1.3	0	0.0	.5
60	8	3.4	0	0.0	1.3
61	3	1.3	0	0.0	.5
62	4	1.7	0	0.0	.7
63	6	2.6	0	0.0	1.0
64	2	.9	0	0.0	.3
65	6	2.6	0	0.0	1.0
66	1	.4	0	0.0	.2

Years at UT

	Employees		Students		Total
	Frequency	Percent	Frequency	Percent	Percent
0	27	11.5	95	25.1	19.9
1	30	12.8	117	30.9	23.9
2	22	9.4	63	16.6	13.8
3	20	8.5	44	11.6	10.4
4	15	6.4	25	6.6	6.5
5	9	3.8	15	4.0	3.9
6	5	2.1	8	2.1	2.1
7	7	3.0	5	1.3	2.0
8	5	2.1	4	1.1	1.5
9	1	.4	1	0.3	.3
10	3	1.3	0	0.0	.5
11	3	1.3	1	0.3	.7
12	6	2.6	1	0.3	1.1
13	6	2.6	0	0.0	1.0
14	3	1.3	0	0.0	.5
15	1	.4	0	0.0	.2
16	2	.9	0	0.0	.3
17	2	.9	0	0.0	.3
18	1	.4	0	0.0	.2
19	2	.9	0	0.0	.3
20	6	2.6	0	0.0	1.0
21	4	1.7	0	0.0	.7

22	3	1.3	0	0.0	.5
23	4	1.7	0	0.0	.7
24	2	.9	0	0.0	.3
25	4	1.7	0	0.0	.7
26	3	1.3	0	0.0	.5
27	4	1.7	0	0.0	.7
28	2	.9	0	0.0	.3
30	6	2.6	0	0.0	1.0
31	2	.9	0	0.0	.3
32	2	.9	0	0.0	.3
33	5	2.1	0	0.0	.8
34	5	2.1	0	0.0	.8
35	4	1.7	0	0.0	.7
36	1	.4	0	0.0	.2
38	2	.9	0	0.0	.3
39	3	1.3	0	0.0	.5
40	2	.9	0	0.0	.3
41	1	.4	0	0.0	.2

Distribution staff

	Frequency	Percent
Academic staff (research and teaching)	76	12
Academic staff (research only)	45	7
Academic staff (teaching only)	14	2
Non-academic staff	100	16

Distribution study programme

	Frequency	Percent
Bachelor	235	38
Pre-master	21	3
Master	123	20