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## **[Social Competence and Entrepreneurial Intentions: the case of university students in agro-food sciences]**

[The objective of this research is to investigate the relationships between social competence and entrepreneurial intention by analysing empirical data collected among the university students in agro-food sciences following the course "Entrepreneurial Skills".]

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## Abstract

The objective of this research is to investigate the relationships between social competence and entrepreneurial intention by analysing empirical data collected among the university students in agro-food sciences following the course “Entrepreneurial Skills”.

In this research we will try to give an answer to the following research question: “What are the relationship between social competence and entrepreneurial intentions?”. Taking into account the difficulties, like the widespread of definitions, encountered by prior research while measuring the social competence construct, we paid special attention to the construct’s validity and reliability. The content validity of the construct was ensured by consulting the literature and partly employing the measurement instrument used by prior studies. Criterion-related validity was ensured by using two measurement techniques to assess social competence based on video and intake forms. We developed a video assessment tool to measure social competence. With the help of three assessors this tool was tested on agro-food science students following the course “Entrepreneurial skills”. Inter-rater reliability was assessed by Fleiss Kappa. Furthermore, students filled in the intake form to assess their own social competence and entrepreneurial intention on a 5-point Likert scale. In the intake forms, which had to be filled in by the student at the beginning of the course, multiple questions about entrepreneurial intentions were asked. Reliability of the measurement was assessed by Cronbach’s alpha. A principal component analysis was applied to extract different dimensions of social competence from the data from video assessment and intake forms and then to assess the correspondence between the two. The intake form provided the following dimensions of social competence: self-promotion, social adaptability, expressiveness, ingratiation and social perception. Analysis of videos indicated two components of social competence: advanced presentation and fit to the target group.

Correspondence analysis by means of Pearson correlations has shown the correlation between social adaptability measured with the intake form and fit to target group measured with the video assessment tool. We found a negative and significant correlation between advanced presentation measured with the video assessment tool and self-promotion measured with the intake form. This means that a self-assessment measures one’s impression management only for a part and not in the same way as an outsider, for example with a video assessment tool, would measure.

Our research has shown the difference between social competence scores depending on who provided the scores: the third person or by self-assessment.

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We found a significant positive correlation between entrepreneurial intention and self-promotion, social adaptability and social perception (based on components extracted from the intake forms data). No correlation is found between entrepreneurial intention and advanced presentation and fit to the target group (based on components extracted from the video data).

Ultimately, the relationship between social competence and entrepreneurial intention depends on the way social competence is measured.

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## Management Summary

The motivation to start this research is a knowledge gap in understanding the relationship between social competence and entrepreneurial success. First, there are problems with the measurement and uniformity of the construct. In particular, social competence as well as entrepreneurial success are not well-defined concepts and their measurement remains complex. Second, there is little previous research investigating the relationship between social competence and an intention to become an entrepreneur. The present research aims to contribute to the understanding of the effect of social competence on one's intention to become an entrepreneur. The general research question is: "What is the relationship between social competence and entrepreneurial intentions?"

A literature review was conducted to find the definition of social competence and entrepreneurial intention. Based on prior research, we concluded that social competence is the effectiveness in interaction and is expressed in a combination of concepts such as social perception, expressiveness, social adaptability, impression management and persuasiveness. Entrepreneurial intention is defined as the state of mind that could lead towards entrepreneurial behaviour. Entrepreneurial intention is measured by self-assessment as a willingness to become a corporate, alternative or classical entrepreneur. All the constructs were assessed on a 5 point Likert-type scale.

The objective of this research is to investigate the relationships between social competence and entrepreneurial intention by analysing empirical data collected among the university students in agro-food sciences following the course "Entrepreneurial Skills".

Prior research found that measuring social competence is difficult, due to a widespread of definitions described in literature. Taking into account the difficulties encountered by the prior research while measuring social competence construct, we paid special attention to the construct's validity and reliability in this research. The content validity of the constructs was ensured by consulting the literature and partly by employing the measurement instruments used in prior studies. Criterion-related validity was ensured by using two measurement techniques to assess social competence; video and intake forms. We developed a video assessment tool to measure social competence. With the help of three assessors this tool was tested on agro-food science students following the course "Entrepreneurial skills". Social competence was measured by video-assessment with the help of three assessors. Inter-rater reliability was assessed by Fleiss Kappa. Furthermore, students filled in the intake form to assess their own social competence and entrepreneurial intention on a 7-point Likert scale. In the intake forms, which had to be filled in by the student at the beginning of the

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course, multiple questions about entrepreneurial intentions were asked. Reliability of the measurement was assessed by Cronbach's alpha. A principal component analysis was applied to extract different dimensions of social competence from the data from video assessment and intake forms and then to assess the correspondence between the two.

The intake form provided the following dimensions of social competence: self-promotion, social adaptability, expressiveness, impression management (ingratiation) and social perception. The basis of the video assessment tool was the dimensions found with the help of the intake form. After assessing the videos a new principal component analysis was applied. After the analysis of the videos two components of social competence were indicated: advanced presentation and fit to the target group.

The general research question: "What is the relationship between social competence and entrepreneurial intentions?" is a complex question. This is not only caused by the difficulties which exist because of the widespread of definitions of constructs like social competence and entrepreneurial intention, but also due to the ability to measure these two. Especially the entrepreneurial intention, because what we actually want to measure is the entrepreneurial behaviour. However, not every researcher is able to do so and therefore the entrepreneurial intention is accepted as a good predictor for entrepreneurial behaviour.

When we answer the general research question by the statement that there is a relationship present we are close. But what that relationship exactly is would be much harder to measure. According to literature which is described in the literature review we see that people with a higher level of social competence perform better in social contexts.

Taking a closer look to the outcome of the Pearson Correlation we find a positive and significant correlation between PA-1 (fit to target group) and social adaptability. With that information we can conclude that the statements of which PA-1 consist of gives a view of one's social adaptability. Next to that, the statements of PA-1 suggest we also measure one's social perception partly. However, therefore no significant outcome was found.

PA-2 is labelled as "advanced presentation". With this component we found a negative and significant correlation with one's impression management. A possible explanation is that assessing self-promotion can be perceived as negative by students. However, when there is a context in which self-promotion can be assessed (i.e. with videos) then self-promotion could be assessed in the right way. With this knowledge we can criticize all other research which used self-assessment to measure

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one's self-promotion. Our findings suggest that self-assessment does not measure the true situation, concerning self-promotion.

When we measure the Pearson Correlation between components of the intake form with the entrepreneurial intention we find a significant positive correlation between entrepreneurial intention and self-promotion, social adaptability and social perception. When we conduct the same test for the components of the video assessment tool and the entrepreneurial intention we do not find any significant nor positive correlation.

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## Preface

Research among entrepreneurs becomes more and more popular. Entrepreneurs are questioned about who they are. Now we see a move of the focus towards the behaviour of entrepreneurs. Behaviour is often measured with the use of questionnaires which entrepreneurs can fill in to assess their own behaviour. A little research was conducted with questioning people who stand close to the entrepreneur.

The main distinction of this research in comparison with other research to entrepreneurial intentions and entrepreneurship is that this research makes use of an assessment tool to analyse video pitches to measure the level of social competence. From a bird view we assess student entrepreneurs who attend the course “Entrepreneurial Skills”. Next to the assessment of the videos we use questionnaires in which student entrepreneurs can fill in their entrepreneurial intentions.

I have to thank my supervisors dr. ir. Thomas Lans and dr. Vincent Blok. We had long discussions how to get grip on the elements of this research. Together we turned the research model upside down and that resulted in this report. I admire their depth of thinking and their extensive knowledge.

Furthermore, I am very grateful to dr. Judith Gulikers. She gave a large contribution in the stage of developing the assessment tool, which is an essential part of the research and this model makes this research unique. Her contribution is from great importance for the quality and completeness of this model.

Last but not least, I would like to thank my family and friends for their support and especially my girlfriend Katja Grekova for helping me writing this thesis and sharing her knowledge about statistics.

Wageningen, June 2012

Paul Arts

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## 1. Introduction

Entrepreneurs are important contributors to a country's economy. The Ministry of Economics of the Netherlands (2007) positions the entrepreneurs as the force behind growing family companies, innovation and new business. Small and starting entrepreneurs have a positive effect on innovation (Ministry of Economics of the Netherlands, 2010). This is for instance caused by the fact that entrepreneurs bring into their business knowledge gained from prior experience, like working in a company or studying in a university. In the words of the Ministry of Economics, entrepreneurs transfer with their company knowledge into products, processes and services. In comparison with starting firms, the large established companies, i.e. the incumbents, develop a larger number of new products and technologies. However, small and starting firms produce more innovative products and services per employee and the innovations are qualitatively better (Ministry of Economy of the Netherlands, 2010). Next to that, small and starting firms are more flexible to launch these products and services on the market. Another reason why small and starting companies are very innovative is that they have to compete with the incumbents. As a result, the incumbents are forced to come up with innovative products, processes and services (Ministry of Economy of the Netherlands, 2010).

The CBS (Central Bureau of Statistics in the Netherlands) shows that in 2004, about 11% of the Dutch labour population was entrepreneur, i.e. the number of people who have a company as their main activity. Since 1996, this number, which is called the entrepreneurs quote, has increased fast. In 2009 this number was increased in comparison with the period 2002-2005. (Het Nederlandse ondernemingsklimaat in cijfers, 2011). This number is an important indicator of the entrepreneurial climate in a country. In the period from 2002-2009, the number of entrepreneurs in the Netherlands increased from 10% to 12,3% (Ministry of Economy of the Netherlands, 2010).

Not every person can start a business and develop it successfully. Not every person has for instance the competencies for doing so. So what makes people entrepreneurs? The literature review conducted for this research shows that it is a complex issue. Over the last decades these questions have been addressed by many studies. It has resulted in a move from personal traits towards human capital and more recently focus on entrepreneurial cognitions, decision making and the importance of social capital (Hulsink & Elfring, 2003, 2007; Lans, 2010). A focus which has been labelled as a shift from 'who is the entrepreneur' towards 'what does the entrepreneur' (Gartner, 1989). This research focuses on the social competence of the entrepreneur, since information about this issue is scarce although it is assumed that social competence is important for starting and further developing a company. The role the social competence is assumed to play in entrepreneurial efforts is diverse and

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complex. Social competence facilitates the generation of novel ideas, facilitates the access to necessary resources to the further exploitation of business opportunities and is presumed to play a role in the development of other competencies necessary for growing and innovating the firm (Baron and Markman, 2003; Baron and Tang, 2009, Lans, 2010).

This research is about the social competence of the student entrepreneur. During the course “Entrepreneurial Skills” students have the opportunity to explain their business plan in not more than 2 minutes. This elevator pitch is recorded and with this data we are able to develop an assessment tool to measure social competence. After validation of the assessment tool, we are able to assess a student on social competence to consult the student about his or her developments to become a starting entrepreneur who has the ability to be adaptable, persuasive, impressive, expressive and able to perceive other people.

In chapter 1 the research proposal is discussed. In the second chapter we take a closer look to the material and methods. Chapter 3 discusses the results and analyses. In the fourth chapter we find the discussion, followed by the conclusion in the fifth chapter. In chapter 6 we will do the recommendations.

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## 1.1 Research Background

“It is true that ever since Schumpeter revived interest in entrepreneurship, many if not all economists and sociologists interested in economic development insist on the importance of the entrepreneur” (McClelland, 1967).

According to Wayne, Liden, Graf and Ferris (1997) individuals high in social competencies achieve greater success than do people low in such competencies in many different occupations. Next to that, they attain better results in negotiations (Lewicki, Saunders and Barry, 2005). Another study shows that people high in social competencies tend to have wider social contacts than people low in social competencies (Diener and Seligman, 2002). These findings suggest that people high in social competencies would also gain higher entrepreneurial success. Research conducted by Riggio (1986) already shows that social competence (social perception, social adaptability, expressiveness) was significantly related financial success. For this research Riggio used a widely used and well-validated measure of social competence. For measuring entrepreneurial success he had one indicator, which was the income of these entrepreneurs earned for their business over several years. As Riggio shows there is a strong relation between social competence and (financial) success.

Still, there is a knowledge gap on the relationship between social competence and entrepreneurial success. Firstly, there are problems with the measurement and uniformity of the construct, because social competence as well as entrepreneurial success are not a well-defined variables and measurement remains complex. Secondly, here is little previous research about the relation of social competence of student entrepreneurs.

This research will try to contribute to this knowledge gap trying to answer the following question: What is the relationship between social competence and entrepreneurial intentions of university students in agro-food sciences? With the answer on this question we can are able to consult student entrepreneurs to improve their individual’s social competence.

This research analyses a group of 146 students who attend the course “Entrepreneurial Skills” at the Wageningen University. These students are latent entrepreneurs or have interest in entrepreneurship, because they have an (inexplicit) intention to become an entrepreneur, wherefore they attend the course “Entrepreneurial Skills”.

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## **1.2 Conceptual Design**

The conceptual design of a research gives a view on the stages of the research, starting with the objective. The objective shows what will be achieved and how that will be achieved. This conceptual design will also explain the research objective and the research questions.

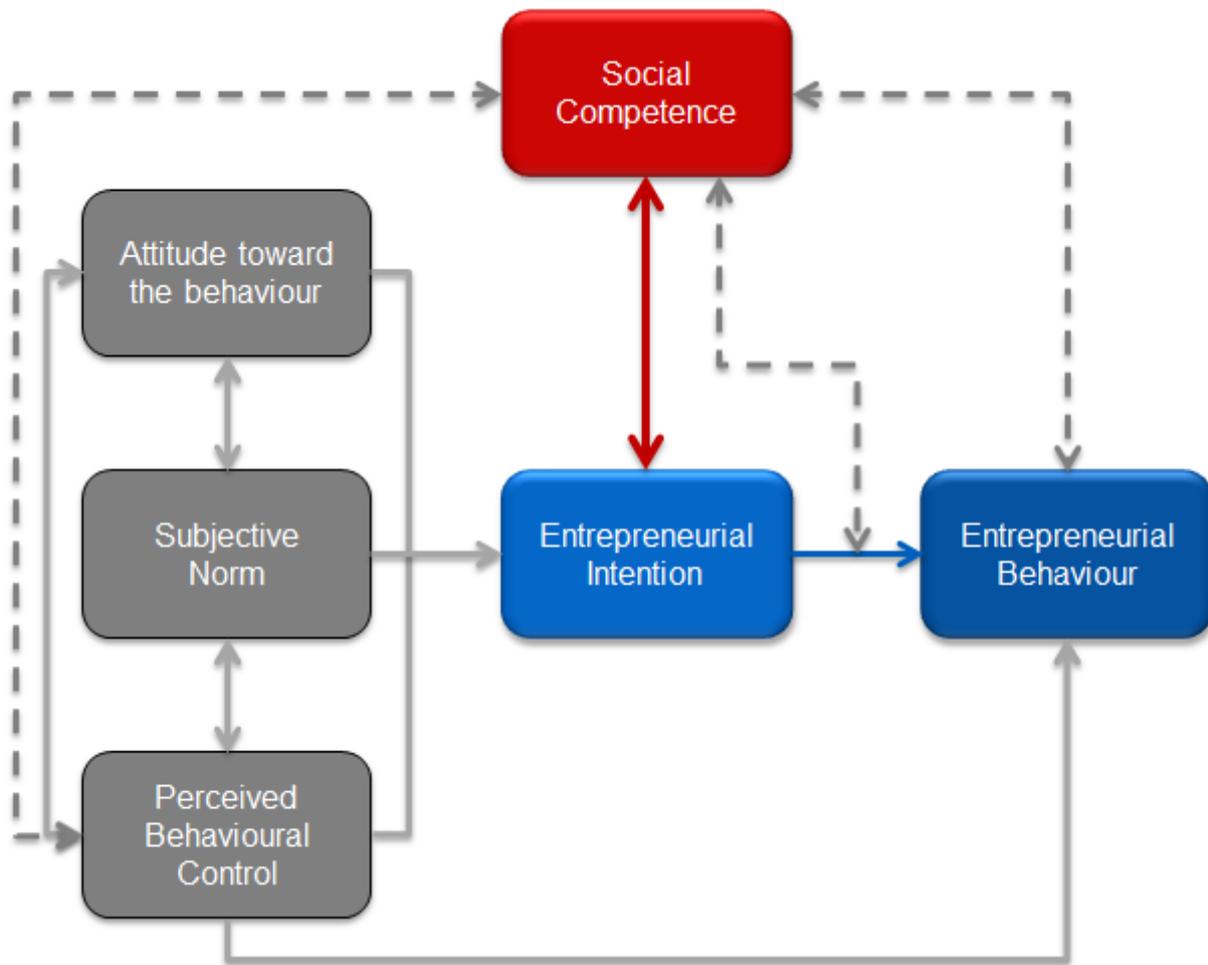
### **1.2.1 Objective**

The objective of this research is to investigate the relationships between social competence and entrepreneurial intention by analysing empirical data collected among the university students in agro-food sciences following the course “Entrepreneurial Skills”.

### **1.2.2 The Theoretical Framework**

Most of the research done in the field of entrepreneurial education uses for the final outcome the intention, because the behaviour could not be analysed. Intentions are from a crucial importance within the theory of planned behaviour from Ajzen (1991). We are conscious of the limitations of this theory. However, this research is a first start to study the relationship between social competence and entrepreneurship amongst student.

This research uses the theory of planned behaviour (Ajzen, 1991) as the base for explaining the relationship between social competence and entrepreneurial intention and entrepreneurial behaviour. The Theory of planned behaviour is widely used in diverse fields like healthcare and marketing. Ajzen’s Theory of Planned Behaviour (1991) explains the link between the one’s attitude toward the behaviour, the subjective norm and the perceived behavioural control and behavioural intentions and behaviours. The theory shows that an intention is influenced by three constructs: one’s attitude toward the behaviour, the subjective norm and the perceived behavioural control. Generally spoken, the Theory of Planned Behaviour shows that the higher the loading of the factors: one’s attitude toward the behaviour, the subjective norm and the perceived behavioural control the higher the chance that the intention will lead to a certain behaviour.



**Figure 1: Conceptual framework based on the Theory of Planned Behaviour**

The conceptual framework in figure 1 is based on the theory of planned behaviour (Ajzen, 1991) and shows that one’s attitude toward the behaviour, the subjective norm and the perceived behavioural control feed the intention of somebody to become an entrepreneur. This intention leads to an entrepreneurial behaviour. One’s attitude toward the behaviour reflects to the evaluation of the entrepreneur to reach a certain outcome of the intended behaviour. The subjective norm is the pressure around the entrepreneur which stimulate him or her positively or negatively to perform a behaviour. The perceived behavioural control is the ease or difficulty of the entrepreneur to perform the behaviour.

The red line In figure 1 shows the goal of the research, which is to investigate possible relationships between social competence and entrepreneurial intention. Further relationships are shown by the dotted lines and refers to possible relationships which are described by prior research or are subject to current investigation. In the chapter of the literature review the literature of these relationships

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between social competence and entrepreneurial intention and entrepreneurial behaviour will be reviewed.

### **1.2.3 Research Questions**

General research question:

What are the relationships between social competence and entrepreneurial intentions?

To answer the general research questions a set of specific research questions are formulated:

1. What is social competence?
2. What are entrepreneurial intentions?
3. What is entrepreneurial behaviour?
4. How can we measure social competence?
5. What are the possible relationships between social competence and intentions?

### **1.2.4 Research Framework**

The goal of this research is to find the relationship of social competence and entrepreneurial intentions of university students in agro-food sciences.

To analyse that, we have data available from a group of 146 entrepreneurial students who attended the course Entrepreneurial Skills, from the year 2008 till 2010. The group is characterised by the intention to become an entrepreneur.

The empirical data from the group of student entrepreneurs are video pitches in which the student explains his or her business idea. With support from literature and different points of view from trained assessors we will develop and validate an assessment tool. With this tool we are able to assess the student entrepreneurs on their social competence. Next to that, the students had to fill in an intake form where they assess themselves on their level of entrepreneurial intention. We will analyse a possible relationships of social competence with entrepreneurial intentions of university students in agro-food sciences.

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## 1.3 Technical Design

This chapter discusses the technical design. It will give a clear view on how, where and when the research is going to be conducted.

### 1.3.1 Research Material

The main questions in this chapter are: what kind of information do we need, wherefore are we going to use it and where can we get this information?

First, the concepts have to be explained by conducting a literature study. These concepts are social competence, entrepreneurial intention and entrepreneurial behaviour. The theoretical part of the objective can be answered with the help of a literature study and the empirical part must be gained by assessing video pitches and analysing intake forms.

The theoretical part of the objective is structured as follows:

The concepts: - Social competence  
- Entrepreneurial intention

This data can be accessed by conducting a literature study.

The empirical part of the objective will be taken from the course "Entrepreneurial Skills". From this course 146 video pitches are taken where the student entrepreneur presents his or her business idea in about 2 minutes time. From this video we are able to gain the social competence of the student entrepreneur, with the help of an assessment tool which is developed and validated with the use of literature study and empirical data.

The data from the video pitches will be analysed with the use of the assessment tool, developed during this research. The result of this assessment model is a score on different categories of social competence. With the use of statistical software SPSS we are able to see whether we can find a relation between social competence and entrepreneurial intention.

### 1.3.2 Research Strategy

Measuring the constructs of social competence is a complicated measurement. From the videos we have there is only a one-way communication possible, so questions cannot be asked. That gives an answer to the question should the research be qualitative or quantitative. In this case we have to choose for quantitative.

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This research is partly empirical, but it starts with a literature study to the previous research which was done in this field and how other researchers define social competence. The empirical part of the research is analysing social competence of 146 students who present their elevator pitch.

This research is an observatory research, since there will be videos analysed for the measurement of social competence.

## **1.4 Research Outline**

In chapter 1 the research proposal is discussed. In the second chapter we conduct a literature review. Previous research will be discussed and concepts will be explained. In the third chapter we will take a closer look to the material and methods. Chapter 4 discusses the results and analyses. In the fifth chapter we find the discussion, followed by the conclusion in the sixth chapter. In chapter 7 we will write the recommendations.

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## 2. Literature Review

In this chapter we will give a definition of the concepts used in the general research question. These concepts are social competence and entrepreneurial intention. In addition to that, entrepreneurial behaviour will be explained because it is an important part of the theory of planned behaviour (Ajzen, 1991) on which this research is based. In this chapter we will explain how to measure social competence and how to measure entrepreneurial intention.

### 2.1 Social Competence

In this chapter we will answer the first research question which is: “What is social competence?”. In the first paragraph of this chapter the previous research is discussed. The second paragraph shows the definition which is used for this research. The last paragraph shows the conclusion where an answer is given to the research question.

#### 2.1.1 Prior Research

Many researchers attempted to define social competence already. However, the term was defined in a large number of different meanings (Rose-Krasnor, 1997). The vagueness about the definition of social competence makes it very difficult to develop social skills assessments and interventions (Hughes, 1990). The spread of the definitions of social competence is caused by the focus and specificity of the research wherefore the construct was necessary to be defined. One defines social competence as “social success” (Atteli, 1990), Howes (1987) defines social competence as a behaviour that reflects successful social functioning and Ogbu (1981) describes social competence as an ability to perform culturally defined tasks. Next to these definitions, social competence is also defined in the context of personal goals in social interaction (Rubin and Rose-Krasnor, 1992). The definitions are widespread, from social success to personal development and from the performance of culturally defined tasks to adaptability and flexibility (Waters and Sroufe, 1983). However, a common understanding amongst all the definitions can be found. Almost all researchers find that the “effectiveness in interaction” an essential understanding of the construct “social competence” is (Rose-Krasnor, 1997).

Previous research on social competence is mostly done in the psychological field and mostly amongst children. Here we find research about how children make friends and how friendship amongst children develop. From this type of research it is concluded that the development of friendship is

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important for the development of social skills. It might be the case that children with a shortage of friendship lack certain social skills (Hartup, 1996). Research on the role of friendships among children is quite little, however it is becoming more and more popular. Important research on child friendship was done by Parker (1995). He found that children who have friends are less lonely than children who do not have friends. Next to that, Vandell and Hembree (1994) concluded that the number of friends is an important factor in social development. Parker and Asher (1993) conducted research among the quality of friendship and they found that the friendship quality was related negatively to loneliness. A second major issue which is found by a research to friendship among children is that children who show more social behaviour are better in problem-solving, empathy and social support (Dodge, et al., 1986; Ford, 1982).

To make a link from childhood development and friendship between children to social competence amongst entrepreneurs we would like to introduce the concept: "social capital". Burt (2004) describes social capital as: "Social capital exists where people have an advantage because of their location in a social structure". The concept social capital and the theory of friendship among children together can be linked to entrepreneurs. The easiness to find connections within the social structure and to create a position in this structure (Burt, 2004) is connected with the easiness of making friends (Hartup, 1996). The easier an entrepreneur is in making connections the more comfortable position he can create within the social structure.

Social competence is a concept which is in research literature consistently defined as one's effectiveness in social interaction. However, when social competence is defined by researchers in more detail, a broad range of definitions is found. One defines social competence as "social success" (Atteli, 1990), Howes (1987) defines social competence as a behaviour that reflect successful social functioning and Ogbu (1981) describes social competence as an ability to perform culturally defined tasks. Next to these definitions, social competence is also defined in the context of personal goals in social interaction (Rubin and Rose-Krasnor, 1992). The definitions are widespread, from social success to personal development and from the performance of culturally defined tasks to adaptability and flexibility (Waters and Sroufe, 1983).

It is clear that the definition of social competence depends on the context in which the concept is used. However, in general, social competence is always used in a common theme: effectiveness in interaction (Rose-Krasnor, 1997).

To measure social competence three specific elements of social competence have been found in literature (Baron and Tang, 2009), which are:

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- Social perception (the ability in perceiving others);
  - Expressiveness (the ability to express emotions and feelings in an appropriate manner);
  - Social adaptability (the ability to adapt to a wide range of social situations).

These elements are found by a factor analysis conducted by Baron and Markman (2003). After the factor analysis the questions of each factor were assessed with Cronbach's alpha to measure the level of reliability of the questions, i.e. to what extent do these questions fit with each other. Of all factors analysed there were three factors found. A fourth one which was found in 2003 by Baron and Markman was excluded, which was the factor: impression management. This factor was found with the factor analysis, but the questions, which belongs to this factor, did not fulfil the requirements of the Cronbach's alpha (Baron and Tang, 2009). When we take a closer look to the factor impression management found by Baron and Markman (2003), we see that this factor consist of two questions, namely:

- I am very good at flattery and can use it to my own advantage when I wish.
- I can ready seem to like another person even if this is not so.

For this research we will include impression management as one of the elements to measure social competence. To measure this element the questions will be changed into questions which are more likely to be related to impression management.

Baron and Markman (2003) conducted their research with the use of social competence which was globally defined as the ability of the entrepreneur to interact effectively with others. Their definition and so their starting point was the definition of social competence explained by six social skills: Social perception (accuracy in perceiving others), impression management (a wide range of techniques for inducing positive reactions in others), persuasiveness (the ability to change others' views or behaviour in face-to-face encounters), social adaptability (the ability to adapt to, or feel comfortable in a wide range of social situations), expressiveness (the ability to express one's emotions and feelings clearly to generate enthusiasm in others). Additional, they included Emotional Intelligence to the definition of social competence since it has been subject of attention in various others research. Emotional Intelligence explains the emotional side of life, including the emotions of the individual.

### **2.1.2 Definition of Social Competence**

The elements which forms in total the social competence for this research are as next. Social perception shows to what extent entrepreneurs are able to express themselves, how they make

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information available and to what extent their information is received, understood and applied by the target group. Expressiveness shows to what extent somebody is able to express reactions and feelings clearly and openly and to express emotions clearly and openly. Social adaptability is an indicator for reception, flexibility and self-confidence. It shows to what extent an entrepreneur is able to adapt in the case of a changing environment. Impression management gives a view on entrepreneurs' confidence level and their presentation skills. The presentation skills shows how convincing entrepreneurs are, how they transfer their information and how they express themselves. Persuasiveness is the ability to change one's view or behaviour. Baron and Markman (2003) included Emotional Intelligence as the sixth concept of which their definition of social competence is defined. For this research we exclude this factor, because we are not able to measure it. The factors of which our definition consist of is explained in the next paragraphs.

#### ***2.1.2.1 Social perception***

According to Baron and Tang (2009) social perception is the ability in perceiving others accurately. Previous research showed that social perception predict beneficial outcomes in organisations. When one has skills at social perception, the performance of entrepreneurial activities is high, e.g. selecting the right business partners and conducting successful negotiations (Baron and Tang, 2009).

#### ***2.1.2.2 Expressiveness***

Expressiveness is described as the ability to express feelings and reactions clearly and openly. This skill influences the success of an entrepreneur, because entrepreneurs should be able to sell their ideas to find funds or convince new customers (Baron and Markman, 2003).

#### ***2.1.2.3 Social adaptability***

This behaviour shows the level of adaptability to a wide range of different and rapidly changing situations (Baron and Markman, 2003). Social adaptability is a skill which cannot be missed for entrepreneurial behaviour. An entrepreneur should operate effectively in all kinds of situations and must interact with people from varied backgrounds. One can say that a high level of social adaptability is a skill for entrepreneurs that contributes to the success of new businesses (Baron and Tang, 2009).

#### ***2.1.2.4 Impression management***

According to Wayne and Liden (1995) impression management is defined as those behaviours individuals employ to protect their self-images, influence the way they are perceived by significant others, or both. Impression management is based upon five different types of behaviour, which are

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supplication, intimidation, ingratiation, self-promotion and exemplification (Harris, Kacmar, Zivnuska and Shaw, 2007). When a first impression is favoured by the customers, partners or other key persons, it will strongly influence the entrepreneurial success (Baron and Tang, 2009).

#### ***2.1.2.5 Persuasiveness***

This skill assists individuals in reaching their personal goals in a wide range of contexts (Baron and Markman, 2003). In other words, persuasiveness is the ability to change others' views or behaviour in face-to-face encounters.

#### **2.1.3 Conclusion**

Conclusive, for this research we define social competence as the effectiveness in interaction and is expressed in a combination of concepts which are social perception, expressiveness, social adaptability, impression management and persuasiveness.

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## 2.2 Entrepreneurial Intention

This chapter consists of three paragraphs. In the first paragraph we will answer the second research question which is: "What is entrepreneurial intention?". In the first paragraph of this chapter the previous research about intentions is discussed. The second paragraph shows the definition which we use for our research. The last paragraph shows the conclusion which gives a clear answer to the research question.

### 2.2.1 Prior Research

There are three types of entrepreneurial intentions defined by Lans et al. (2010). These types of intentions differ from each other by the nature of entrepreneurship involved. The first intention is the one with the least entrepreneurial (Cooper and Dunkelberg, 1986) and that is the entrepreneur who wants to develop him- or herself within an established firm. The degree of entrepreneurship is defined from prior research and found by Cooper and Dunkelberg (1986). They define the degree of entrepreneurship with sets of three factors: (1) background characteristics of the entrepreneur, (2) motivations and attitudes and (3) a complex of factors associated with previous careers, incubator organisations and processes of the start-up. Corporate entrepreneurship, i.e. intrapreneurship, covers a wide range of activities such as developing new business models and to apply these models on the established firms, innovation of new products and processes of the internal company. Corporate entrepreneurship is the discovery and pursuit of new opportunities through innovation and venturing. For established firms this type of entrepreneurship is an important source of competitive advantage (Hayton and Kelley, 2006).

The second type of entrepreneurial intention is the entrepreneur who has the intention to continue an inherited or a bought company. This type is called: Alternative entrepreneur. This type of intention is characterised by their large work experience. Their motivations and attitudes are mixed. For some entrepreneurs being managerial is important. Others find a comfortable living important (Cooper and Dunkelberg, 1986). The third type of entrepreneurship is the classical entrepreneur, who have the intention to start his own business and turn his idea into a company (Lans, 2010). This group is characterised by relying upon their own savings and the lowest percentage with partners. Next to that, this group has a relatively low supervisory experience and a high degree of push from their prior organisations (Cooper and Dunkelberg, 1986). This research will make use of these distinctions based on different entrepreneurial intentions to predict entrepreneurial behaviour.

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### **2.2.2 Definition of Entrepreneurial Intention**

The theory of planned behaviour (Ajzen, 1991) states that an intention is defined in terms of a state of mind to perform a given behaviour, so an entrepreneurial intention can be defined as the state of mind that could lead to perform entrepreneurial behaviour. Entrepreneurial intention is a predictor for entrepreneurial behaviour.

### **2.2.3 Conclusion**

Entrepreneurial intention is defined as the state of mind that could lead towards entrepreneurial behaviour. The concept is operationalized as the average number found by answers of a self-assessment in which one is asked to what extent he or she wants to become a corporate, alternative or classical entrepreneur and which are assessed on a 5 point Likert-type scale.

## **2.3 Entrepreneurial Behaviour**

This chapter starts with the paragraph in which we will answer the third research question which is: “What is entrepreneurial behaviour?”. In the first paragraph of this chapter the previous research about behaviour is discussed. The second paragraph shows the definition which we use for our research. The last paragraph shows the conclusion which gives an answer to the research question. Note that entrepreneurial behaviour is not a concept within the general research question. It is explained in this chapter because it is an important concept within the theory of planned behaviour (Ajzen, 1991) on which this research is based.

### **2.3.1 Prior Research**

The question which is left is what entrepreneurial behaviour is. Chen (1998) based the entrepreneurial goals upon interviews with five local entrepreneurs. The entrepreneurial characteristics as defined by Chen (1998) are as follows:

- Innovators
- Risk taker and bearer
- Executive manager
- Relation builder
- Risk reducer
- Goal achiever

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These characteristics result in a certain behaviour which is typical for an entrepreneur. That means that entrepreneurs innovate in new products, processes and services and take risks, when necessary, to get a high return. Next to that, entrepreneurs are managers and are able to build a network. Furthermore, they set goals to achieve them. The roles named above are the characteristics of an entrepreneur and it is not necessary that an entrepreneur needs all of these roles.

Entrepreneurship can be described in five dimensions, which are: autonomy, innovativeness, risk taking, pro-activeness and competitive aggressiveness. These dimensions characterise the entrepreneurial key processes (Lumpkin and Dess, 1996).

A footnote which has to be made here is that Lumpkin and Dess (1996) conducted their research with a focus on companies. Chen (1998) focused his research on entrepreneurs as a person. A similar research which was conducted by Baron and Markman (2003) explained the entrepreneurial behaviour as gaining a financial success.

### **2.3.2 Definition of Entrepreneurial Behaviour**

Comparing the definitions we see that there is a common theme present. The definition of entrepreneurial behaviour is defined for this research as a set of characteristics which are innovativeness, taking risks and pro-activeness.

### **2.3.3 Conclusion**

For this research, we define entrepreneurial behaviour as a set of characteristics which are innovativeness, taking risks and pro-activeness.

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## 2.4 Possible Relationships between Social Competence and Intentions and Behaviour

This chapter explains three possible relationships of social competence on the theory of planned behaviour. The three possible relationships between social competence and the constructs intention and behaviour are numbered and labelled as following: (1) states that social competence relates to entrepreneurial behaviour, (2) social competence has an relationship with the process of entrepreneurial intention towards entrepreneurial behaviour and the third possible link (3) is that social competence relates directly the entrepreneurial intention.

### 2.4.1 Prior Research

Baron and Markman (2003) conducted two studies to investigate the hypothesis whether the higher the social competence of the entrepreneur is the greater their financial success. The social skills of Baron and Markman (2003) were partly confirmed (4 out of 6) after a survey among two groups of entrepreneurs, distinguished from each other by the industry they work in: cosmetics and high-tech. The two groups of entrepreneurs completed a questionnaire in which several aspects of social competence were stated. Next to that, the two groups had to submit their average yearly personal income. The method of measuring the social competence was validated with a group of people who knew the entrepreneurs well, for example close business relations. After conducting the research and performing a confirmatory factor analysis Baron and Markman (2003) decrease the number of social skills which explains social competence from six to four constructs:

- Social perception
- Impression management
- Social adaptability
- Expressiveness

Social perception was positively related to financial success for both groups of entrepreneurs. Social adaptability related with financial success for entrepreneurs in the cosmetics industry and expressiveness was related to the financial success for entrepreneurs in the high-tech industry.

Baron and Markman used the following definitions of the four aspects of social competence. Social perception is the accuracy of perceiving others (Zebrowitz, 1997). Impression management is defined as the ability to induce favourable reactions in others (Ferris et al., 2000; Wayne and Kacmar, 1991). Social adaptability is the ability to adapt to a wide range of social situations (Kilduff and Day, 1994).

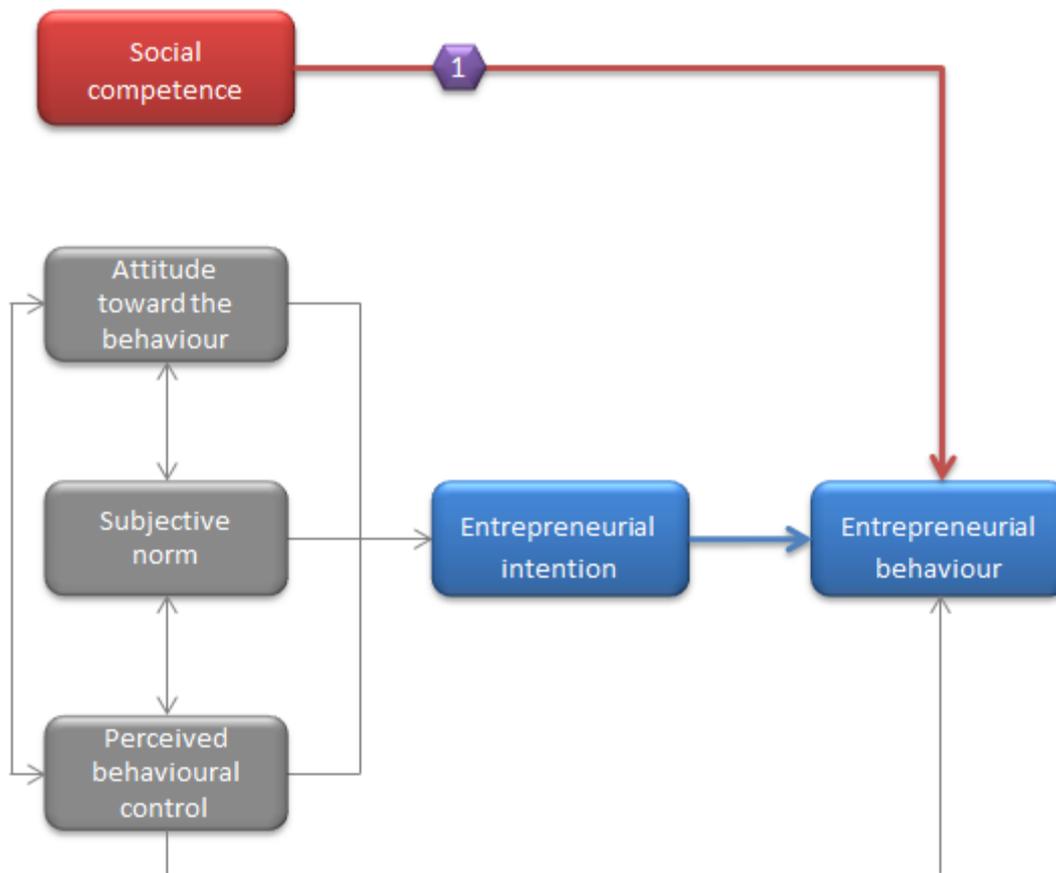
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Expressiveness is the ability to express emotions and feelings in an appropriate manner (Baron and Markman, 2003).

The logic behind the four constructs became more clear in later research. According to Baron and Tang (2009) social perception is the ability in perceiving others accurately. Previous research showed that social perception predict beneficial outcomes in organisations. When one has skills at social perception, the performance of entrepreneurial activities is high, e.g. selecting the right business partners and conducting successful negotiations (Baron and Tang, 2009). Expressiveness is described as the ability to express feelings and reactions clearly and openly. This skill influences the success of an entrepreneur, because entrepreneurs should be able to sell their ideas to find funds or convince new customers (Baron and Tang, 2009). Social adaptability is the behaviour that shows the level of adaptability to a wide range of different and rapidly changing situations (Baron and Markman, 2003). Social adaptability is a skill which cannot be missed for entrepreneurial behaviour. An entrepreneur should operate effectively in all kinds of situations and must interact with people from varied backgrounds. One can say that a high level of social adaptability is a skill for entrepreneurs that contributes to the success of new businesses (Baron and Tang, 2009). According to Wayne and Liden (1995) impression management is defined as those behaviours individuals employ to protect their self-images, influence the way they are perceived by significant others, or both. Impression management is based upon five different types of behaviour, which are supplication, intimidation, ingratiation, self-promotion and exemplification (Harris, Kacmar, Zivnuska and Shaw, 2007). When a first impression is favoured by the customers, partners or other key persons, it will strongly influence the entrepreneurial success (Baron and Tang, 2009).

#### **2.4.2 Relationships between Social Competence and Behaviour**

Research about the relationship between social competence and entrepreneurial behaviour was already conducted in 2003 by Baron and Markman. The next figure indicates where this relationship is located in Ajzen's (1991) theory of planned behaviour.



**Figure 2: Social Competence vs. Entrepreneurial Behaviour**

The research of Baron and Markman (2003) was conducted with the use of a questionnaire and a reflection from people who are close with the entrepreneur. Baron and Markman (2003) focused on the relation between social competence and entrepreneurial behaviour. This research focuses on one step before, namely: the relation between social competence and the way to entrepreneurial behaviour for people who have the intention to become an entrepreneur. The people with an intention have an intention to become a classical entrepreneur and are characterised by the fact that they are starting entrepreneurs. Baron and Markman (2003) conducted a research among entrepreneurs with already some experience in the field.

### 2.4.3 Relationships between Social Competence and Intentions

The figures below suggest that social competence is a fourth factor within the Theory of Planned Behaviour (Ajzen, 1991) next to the attitude toward the behaviour, the subjective norm and the perceived behavioural control. Social competence could be a new concept within the theory of

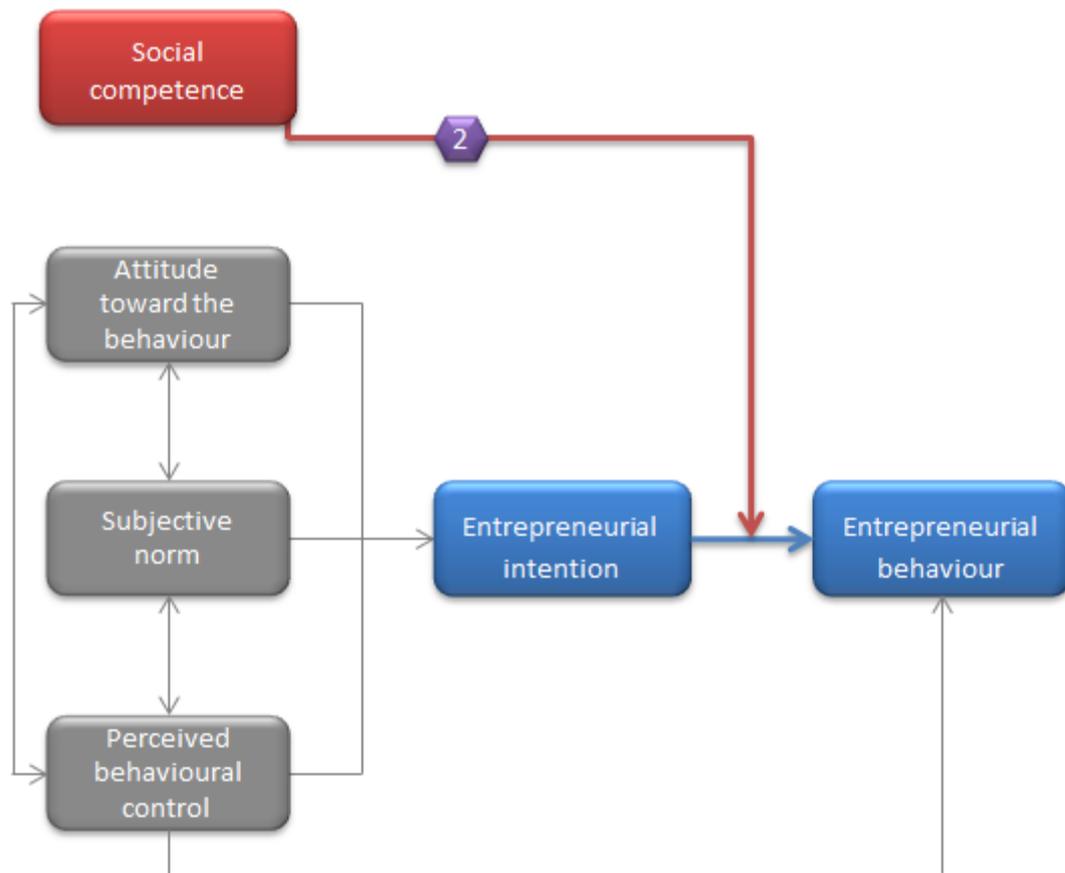
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planned behaviour since it is not covered by the other three concepts. However, there are some footnotes which have to be discussed here.

The intention in the theory of planned behaviour is defined as the readiness of an individual to perform a certain behaviour. Social competence on the other hand is defined as a construct which consists out of five concepts which indicates to what extent an individual is able to express, adapt, perceive, persuade and impress.

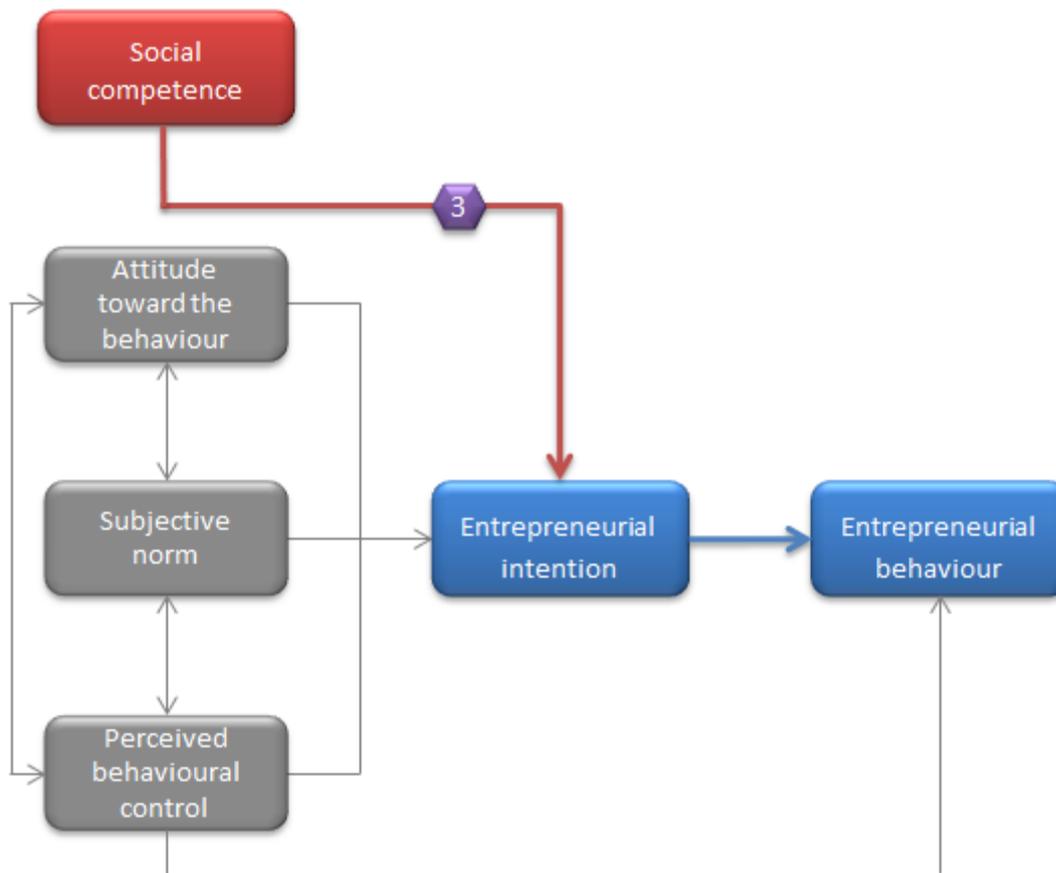
A concept within the theory of planned behaviour, one's perceived behavioural control, points out someone's self-efficacy toward an intention and a behaviour. This concept is closely defined toward the definition of social competence. However, the definition of social competence covers much more than only one's self-efficacy. Social competence is a set of skills which can make it easier for someone to establish connections and to establish a comfortable position within a social structure.

The following figure suggests a relationship between the social competence and the process from an entrepreneurial intention toward an entrepreneurial behaviour. In other words, one's possession of social competence stimulates the speed towards entrepreneurial behaviour when the individual already has an entrepreneurial intention.



**Figure 3: Social Competence vs. The Process from Intention to Behaviour**

Another possible linkage which can be analysed is the link between social competence and entrepreneurial intention. This relation is shown in the next figure.



**Figure 4: Social Competence vs. Entrepreneurial Intention**

In this figure we suggest that social competence relates to the intention. This could be negative or positive. Research shows that social competence has a relationship with intentions. We expect that social competence relates somehow to the intention to become an entrepreneur, what finally leads to entrepreneurial behaviour. The stronger the intention is, the higher the chance that it leads to the intended behaviour. Unfortunately, we are not able to measure the entrepreneurial behaviour, since data is not available and the collection of this data did not fit in the planning of this research.

#### **2.4.4 Conclusion**

Prior research shows that there is already research done towards the relationships between social competence and entrepreneurial behaviour. However, the relationships between social competence and the link between entrepreneurial intention to entrepreneurial behaviour is not measured yet. We recommend this for further research, since we are not able to include the research to these relationships in our research. The reason for that is that we cannot measure entrepreneurial

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behaviour. Conclusive, we will focus on the relationships between social competence and entrepreneurial intention.

## **2.5 Concluding Remarks**

The conclusions which we can draw from the literature review give an answer on the research questions. The research questions and the answers are as next:

1. What is social competence?

The definition of social competence is the effectiveness in interaction and is expressed in a combination of concepts which are social perception, expressiveness, social adaptability, impression management and persuasiveness.

2. What are entrepreneurial intentions?

Entrepreneurial intention is defined as the state of mind that could lead towards entrepreneurial behaviour. The concept is operationalized as the average number found by answers of a self-assessment in which one is asked to what extent he or she wants to become a corporate, alternative or classical entrepreneur and which are assessed on a 5 point Likert-type scale. Entrepreneurial intention is perceived as a predictor for entrepreneurial behaviour.

3. What is entrepreneurial behaviour?

The definition of entrepreneurial behaviour is defined for this research as a set of characteristics which are innovativeness, taking risks and pro-activeness.

4. What are the possible influences between social competence and intentions and behaviour?

Research shows that there are relationships between social competence and entrepreneurial behaviour. We expect also relationships between social competence and the link between entrepreneurial intention to entrepreneurial behaviour, which is not measured yet. Conclusive, we will focus on the relationships between social competence and entrepreneurial intention.

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## 3. Material and Methods

In this chapter the material and methods are discussed. We made a distinction between the development of the assessment tool and its application. First, the development of the tool is explained and followed by the intake form and the methods.

### 3.1 Development of the assessment tool

Developing an assessment tool is an extensive process. This process had to lead to an easy-to-use tool which gives an insight on a person's social competence. The development of the video assessment tool starts with the model which Baron and Markman (2003) used to analyse social competence. For this research a model was used to assess social competence amongst people who were employed in the biotechnology sector and in the cosmetics industry. Baron and Markman described six constructs of which five are used to create the assessment tool. The items of every construct were found with the use of existing lists from comparable research and experience from the assessors. Next to that, for every item it must be possible to be analysed on a video.

The assessment tool measures social competence with the use of different constructs, which are found by Baron and Markman (2003). A drawback of the research method, used by Baron and Markman (2003), is that they used only a self-assessment form for gaining data from the sample group. In this research people (n=230, 159 sales contractors of the cosmetics industry and 71 top executives in high-tech firms) assessed themselves on different statements, related to social competence.

Since there was no study conducted that explains influences of social skills in the context of entrepreneurship, Baron and Markman (2003) started to cast a broad empirical net in present studies. They surveyed recent literature on the impact of various social skills in business contexts. This review was used to identify the strongest and most consistent evidence.

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The identified social skills, based on this research conducted by Baron and Markman (2003), are:

- Social perception:  
Accuracy in perceiving others
- Impression management:  
A wide range of techniques for inducing positive reactions in others
- Persuasiveness:  
The ability to change others' views or behaviour in face-to-face encounters
- Social adaptability:  
The ability to adapt to, or feel comfortable in a wide range of social situations
- Expressiveness:  
The ability to express one's emotions and feelings clearly to generate enthusiasm in others
- Emotional intelligence:  
A cluster of skills relating to the emotional side of life, including the ability to regulate one's own emotions (e.g., hold one's temper in check), influence the emotions of others, motivate oneself, and develop satisfactory long-term relationships

Emotional intelligence was added because of the reason that this construct had been subject of attention in various management research and in mass media. Because of the fact that emotional intelligence is hard to measure with the use of video pitches, we have to leave this construct out of further analysis.

The assessment tool we have developed is based on five constructs: social perception, impression management, persuasiveness, social adaptability and expressiveness. For each construct we have developed statements, which we use for analysing the construct. Every statement will be analysed with the help of a score on a 5 points Likert-type scale. The Likert items used are from 1: slightly present to 5: strongly present. A 5 points Likert-type scale is preferred over a 7 points Likert-type scale, because the level of the detail is not measurable in the video pitches. Next to that, when the amount of Likert items is large the differentiation is too big and that is not necessary for this research.

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Every construct of our definition of social competence was analysed with the help of statements. These statements are as next:

Social perception:

- Student mentions clearly and explicitly the target group
- Student accounts audience for (latent) needs
- Student verifies needs
- Student mentions added value (of what he/she offers) for the audience
- Student anticipates on questions

Impression management:

- The visual impression of the student fits to the audience
- Student uses consciously (=strategically) “I” and “we”
- Student flatters the audience (makes appropriate compliments)
- Student is open for suggestions

Social adaptability:

- Student’s pitch fits to the interests of the audience
- Student responds to non-verbal signals
- Student focuses on details which are interesting for the audience
- Student interacts with audience
- Student responds adequately on environmental factors

Expressivity:

- Student creates enthusiasm among the audience
- There is an agreement on how and what the student says
- Student shows emotion in what he/she says

Persuasiveness:

- Student shows passion and conviction of his product
- Student uses language which is accessible for the audience
- Student shows certainty
- Student makes use of supporting hand gestures

This assessment tool was developed by a team of specialists. This team consists of Dr. ir. Thomas Lans, assistant professor of the department Educative Competence Skills of the Wageningen University, Dr. Judith Gulikers, educational researcher of the department Educative Competence Skills of the Wageningen University, Stefan Nortier, communication skills trainer of the department Educative Competence Skills of the Wageningen University and Paul Arts, Master of Sciences student at Wageningen University.

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Three assessors (Dr. ir. Thomas Lans, Dr. Judith Gulikers and Paul Arts) analysed two times ten different videos. All three assessors analysed the same videos. The three assessors had the task to analyse the videos separately from each other. They used the assessment tool to evaluate the statements of the five constructs which measures social competence. With this information it can be shown to what extent the three assessors find agreement when using the assessment tool. The most ideal situation would be that there is a high correlation, which says that the three assessors agree with each other on the assessment of the items. However in reality this is very hard to reach, since everyone have a (slightly) different opinion about the behaviour of someone else. One can like a presentation of a reserved presenter over somebody who is more expressive. The discussion we had after assessing the videos were fruitful and important for developing a better assessment tool.

The results of the assessment of ten videos, analysed by the three different assessors, are compared. This was done with the use of three different measurements. The first one which is used is Spearman's correlation, which measures the correlation between the answers chosen by the assessors.

The second measurement instrument to analyse the results is the difference between the answers, expressed as the absolute value. The reason that this measurement instrument is chosen is because when there is a high Spearman correlation, the answers on the statements of the three assessors could be very different, i.e. when assessor 1 answers 2 to the statements and assessor 2 answers 5 to the statements the correlation is 1, however the absolute value is 3.

The third measurement which is used is the interrater reliability, expressed in kappa. The method to calculate these outcomes are shown in the next chapters.

### **3.1.1 Spearman's correlation**

Spearman's correlation coefficient is a non-parametric statistic and can be used when the data have violated parametric assumptions such as non-normally distributed data. Spearman's correlation coefficient is expressed in Spearman's rho (Field, 2009).

The correlation coefficient varies between  $-1$  to  $1$ . The highest value of  $1$  implies that a 100% linear relationship between two variables exist. A value of  $-1$  implies that data do not correlate at all, more clearly: when one variable increases, the other variable decreases. A value of  $0$  implies that there is no linear correlation between the variables (Field, 2009).

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To analyse the correlations the Spearman's test for nonparametric correlations was used. The syntax which is used in PASW SPSS is as follows:

```
NONPAR CORR
/VARIABLES=J_SP1 P_SP1 T_SP1
/PRINT=SPEARMAN TWOTAIL NOSIG
/MISSING=PAIRWISE.
```

### **3.1.2 Absolute differences**

The absolute differences are measured in two ways. On the one hand, the differences between the analysis of the statements are measured. This result shows to what extent the assessors reach agreement for the single statements. On the other hand, the differences between the analysis of the students are measured. This result shows the level of agreement of the assessors on the level of the students. The differences are pairwise calculated and the number of agreement is shown in the section Results.

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### 3.1.3 Interrater Reliability: Fleiss' Kappa

Fleiss' Kappa is used to measure the agreement between multiple assessors. In the case of this research Fleiss' Kappa is a useful tool since we want to measure the agreement between three difference assessors. In the next paragraph the calculation of Fleiss' Kappa is explained with the example of statement E1: "Student creates enthusiasm among the target group."

Cat2	E1_J	E1_P	E1_T
<b>Student 1</b>	3	3	3
<b>Student 2</b>	3	2	2
<b>Student 3</b>	5	4	5
<b>Student 4</b>	2	1	1
<b>Student 5</b>	1	1	1
<b>Student 6</b>	4	4	4
<b>Student 7</b>	5	5	4
<b>Student 8</b>	3	2	2
<b>Student 9</b>	1	2	1
<b>Student 10</b>	4	4	3

Table 1: Rankings of statement E1 for 10 students by three assessors

In the table above the rankings of the statement E1: "Student creates enthusiasm among the target group" shown. The statement is ranked by three assessors (E1\_J, E1\_P and E1\_T) for ten students with the use of a 5 point Likert-type scale. All the ranks of the 5 point Likert-type scale are counted and the frequencies are shown in the next table.

E1	1	2	3	4	5
Student 1	0	0	3	0	0
Student 2	0	2	1	0	0
Student 3	0	0	0	1	2
Student 4	2	1	0	0	0
Student 5	3	0	0	0	0
Student 6	0	0	0	3	0
Student 7	0	0	0	1	2
Student 8	0	2	1	0	0
Student 9	2	1	0	0	0
Student 10	0	0	1	2	0

**Table 2: Frequencies of the rankings of the 5 point Likert-type scale**

The table have to be read as follows. For rank 1 of the 5 point Likert-type scale the frequency is 2 for student 4. That means that 2 assessors ranked student 4 with 1 for creating enthusiasm among the audience.

The table above, about the frequencies of the rankings, shows the results for ten students (N=10) which are assessed by three assessors (n=3) with the 5 point Likert-type scale used as the ranking method (k=5). This information gives also the total amount of cells, which is  $N * n = 10 * 3 = 30$ .

Continuing with the calculation of Fleiss' Kappa, we sum up the first column and divide that by the total amount of cells. This is done as next:

$$\frac{0 + 0 + 0 + 2 + 3 + 0 + 0 + 0 + 2 + 0}{30} = 0.2333 \text{ (p1)}$$

This calculation is done for every column, what results in the next figures:

	p1	p2	p3	p4	p5
Result	0.2333	0.2000	0.2000	0.2333	0.1333

Table: p1 – p2 – p3 – p4 – p5 calculated

Next, for the rows of the table, about the frequencies, the  $P_i$  ( $i = 1, 2, \dots, 10$ ) is calculated. The  $P_1$ , for the first row, is calculated as next.

1.

$$n * (n-1) * (0^2 + 0^2 + 3^2 + 0^2 + 0^2) = 1$$

Following, the numbers of  $p_1, p_2, p_3, p_4$  and  $p_5$  are summed up to a total of 1. Further,  $P_1, P_2, P_3, P_4, P_5, P_6, P_7, P_8, P_9$  and  $P_{10}$  are summed up to a total of 5.3333. This number is multiplied by  $1/N = 0.1$  and that results in 0.5333. next,  $P_e$  is calculated by squaring  $p_1, p_2, p_3, p_4$  and  $p_5$ . That resulted in the following:

$$0.2333^2 + 0.2000^2 + 0.2000^2 + 0.2333^2 + 0.1333^2 = 0.2067.$$

Finally, all the necessary data is collected and the Fleiss' Kappa can be calculated with the following formula:

$$\frac{P_{tot} - P_e}{1 - P_e} = \frac{0.5333 - 0.2067}{1 - 0.2067} = 0.4118$$

The Fleiss' Kappa can be interpreted with the use of the table below (Landis, 1977). A Fleiss' Kappa of 0.4118 can be interpreted as a moderate agreement amongst the assessors. In other words, the three assessors find a moderate agreement about statement E1 "Student creates enthusiasm among the audience", calculated amongst ten students with the use of a 5 point Likert-type scale.

Kappa	Strength of agreement
<0.00 or not significant	Poor
0.00 – 0.20	Slight
0.21 – 0.40	Fair
0.41 – 0.60	Moderate
0.61 – 0.80	Substantial
0.81 – 1.00	Almost perfect

**Table 3: Interpretation of Kappa**

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## 3.2 Material and Method: Assessment Tool vs. Intake Form

### 3.2.1 Intake form

In this research we will make use of data gained from the intake form. Before the start of the course “Entrepreneurial Skills” the student entrepreneurs had to fill in a questionnaire with statements in which they could assess themselves on social competence and their entrepreneurial intentions. The form consist out of questions which give information about the background of the student entrepreneur. The background information which is available from the intake forms are the gender, year of entrance to the Wageningen University, the level (BSc, MSc or PhD) and the current study.

The next part is about the history of the student entrepreneur with respect to prior working experience. The options which can be filled in are as follows: the student has no working experience at all, only have working experience as an employee, only have managerial working experience and/or have prior entrepreneurial experience, i.e. already a founder of a company.

In relation to the background of the student entrepreneur and to the environment (subjective norm) the student entrepreneur was asked whether he or she has entrepreneurial parents, i.e. parent with an own company.

The following set of questions within the intake form are about the entrepreneurial intention. There are three types of entrepreneurial intentions described (Lans et al., 2010). The corporate entrepreneur, who is a proactive entrepreneurial employee working within a company. The classic entrepreneur, who is the type who starts its own enterprise and the alternative entrepreneur, who inherits or buys a company (Lans, 2010). Student entrepreneurs can fill in whether they have an intention to become an entrepreneurial individual (intrapreneur), start their own company (classical entrepreneur), start and build a high growth business (classical entrepreneur or alternative entrepreneur), acquiring or inheriting a small business (alternative entrepreneur) and acquiring or inheriting a company and build it to a high growth business (alternative entrepreneur).

We will use the average intention of every individual student to measure the entrepreneurial intention. The choice to make use of an average intention is because of the fact that for this research we measure the degree of entrepreneurship (Cooper and Dunkelberg, 1986). Every type of intention contains a certain degree of entrepreneurship. By calculating the average intention, we cover the full intention to become entrepreneur.

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In the part of the questionnaire in which student entrepreneurs could fill in their social competence, statements were set on a 7 point Likert-type scale where 1 is disagree and 7 agree. The statements are about their social perception, social adaptability, expressiveness and impression management (self-promotion and ingratiation). The scores of the statements per construct are summed up and divided by the amount of statements to calculate the average. This average shows the loading of the construct and will be used for comparing with the outcome of the averages of the video assessment tool.

### 3.2.2 Video Assessment Tool

In paragraph 3.1 development of the video assessment tool is already discussed extensively. In this chapter we will discuss how we are going to use the data which is gained by assessing the video pitches.

The five constructs which we used to define social competence consist out of a number of statements. These statements are assessed with the use of a 5 point Likert-type scale. The scores of the statements are enumerated and an average was calculated. All the statements weight the same in the average.

For example: the construct social perception consists of five statements which have the following score for student 1:

- Student makes clear who the target group is : 4
- Student mentions the relevance of the product/service : 4
- Student verifies needs : 3
- Student mentions the added value for the target group : 4
- Student mentions possible/latent questions : 3

The scores are enumerated to 18 and divided by 5 to calculate the average of 3.6. This number represents the construct social perception for student 1. The same calculation was done for impression management, social adaptability, expressiveness and persuasiveness. For calculating the averages we use SPSS, because with this program the new variables were calculated and shown in a new column in the data sheet.

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### **3.2.3 Analysis to be conducted**

For this analysis we have 46 student available who attend the course “Entrepreneurial Skills”. From these students we have 46 intake forms completed and 36 videos are linked to the students. That means that we have complete data available for 36 students.

#### **3.2.3.1 Principal Component Analysis**

The Principal Component Analysis is a common used statistical method to reduce data and to create new variables. This type of analysis describes new variables from a larger amount of data. These new variables consist of the “old” variables and are somehow related to each other. This common relation can be described and can be used to describe the new variable which is gained from the analysis.

By conducting a Principal Component Analysis (PCA) we test whether the constructs of social competence are still valid. The data which we reduce to new variables are the statements from the intake form and the statements from the video assessment tool. As already known, the statements from the intake form and from the video assessment tool describes the constructs of which social competence consist of. The constructs of the intake form are based on the research which is conducted by Baron and Markman (2003). The constructs of the video assessment tool are new and will describe social competence partly.

The Principal Component Analysis which is conducted for this research will make use of a varimax rotation, which does not allow a correlation between the extracted components. The results of the Principal Component Analysis have to fulfil the next requirements:

- Numbers of the Correlation Matrix must be in between 0.3 and 0.9.
- The numbers in the diagonal of the Anti-Image Matrix must be higher than 0.5.
- The Total Variance Explained must be higher than 60%.
- The loadings of the Communalities must be greater than 0.4.
- The Reproduced Correlations must be smaller than 50% and  $<0.05$ . (Field, 2009).

After the Principal Component Analysis new components will be found. These new components will be checked whether they correlate or not with the construct of social competence according to Baron and Markman (2003).

#### **3.2.3.2 Pearson Correlation**

The correlation coefficient is a widely used measurement to describe the relations between two variables. The most used type of correlation is founded by Karl Pearson in the end of the 19<sup>th</sup> century.

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Today we will use this correlation coefficient to measure the correlations between the factors from the intake form and from the video assessment tool. As already mentioned in paragraph 3.2.3.1, depending on the Principal Component Analysis the factors could be different then from the research conducted by Baron and Markman (2003).

With the result gained from Pearson Correlation we can state whether there is a relation between social competence measured by an intake form, based on self-assessment and social competence measured with the use of the video assessment tool.

In case of a high correlation between the both measurement tools (intake form and video assessment tool) we can use this data to find a correlation with entrepreneurial intention. That implies that we are going to conduct another test where Pearson Correlation is measured. This time we will compare the entrepreneurial intention with social competence (measured with the use of the intake form and/or the video assessment tool).

When we find this result we are able to answer the general research question: What is the relationship between social competence and entrepreneurial intentions?

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## 4. Results

### 4.1 Results: Testing the assessment tool

To improve the video assessment tool it is inescapable to discuss it with specialists. These specialists are listed in our team of assessors and introduced in the previous chapter. Together, we discussed the results of the videos and the assessment tool after we had seen the videos. Some interesting topics were pointed out during this discussion.

One of them was that the words 'audience' and 'target group' were mixed during the analysis. The use of two different concepts was chosen to make a distinction between the users of the presented product of service (target group) and the people who were listening to the presentation (audience). To make it more clear the team of assessors decided to use one concept here, which is target group. So in the new assessment tool, which will be used for further analysis, the concept 'target group' which refers to the potential customer of the presented product or service.

The second point of discussion is that some statements are closely related to the behaviour which is shown in the video. For example, statements IM3 (Student is open for suggestions), SA4 (Student interacts with audience) and IM2 (Student flatters the audience (makes appropriate compliments)) are closely related to the level of openness of the student. The fact that these statements are related closely to each other does not mean that we have to delete some of them. The team of assessors decided that the statements can be used. The reason for that is that one statement (SA4) looks at the student from the view of social adaptability and the other two look at the student from the view of impression management. The two statements of impression management are 'Student flatters the audience (makes appropriate compliments)' and 'Student is open for suggestions'. Since the both statements are closely related to each other, they mean something completely different and therefore essential. For that reason, we decided to keep these two statements of impression management in the video assessment tool.

The third point we discussed is statement SA4: 'Student interacts with audience'. Interaction is hard to measure in an elevator pitch which is taped on a video. There is only a one-way communication towards the audience and the audience is not recorded, which makes it hard to analyse the level of interaction. Therefore, we changed this statement into: 'Student is focused on the audience'. Note: here we can use audience since we want to see that the student gives his or her elevator pitch in front of people. We changed the concept 'interacts with' into 'focus on', what makes it possible to

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measure. The student can put his or her focus only on the camera, to the paper which he or she holds in her hands, to the teacher which is most of the times present in the room or to the audience, which would be the ideal case.

The fourth point of discussion was statement OK3: 'Student shows certainty'. The level of certainty which someone shows can be interpreted differently for every assessor. Therefore, we would like to put the focus on the word the student uses. The team of assessors agreed to focus on words like 'maybe' and 'perhaps'. These words show to what extent someone is certain or not about his or her product or service.

The fifth point we discussed was statement EX2: 'Student creates enthusiasm among the audience'. The team of assessors agreed to focus here not only on the nonverbal behaviour of the student but also on the verbal part, like words he or she uses, but also the tone of voice and the inspiring use of the voice and the silences in between the sentences. This is also the case for statement OK1: 'Student shows passion and conviction of his product'.

The sixth point of discussion is an overall comment about the way of analysing the students on social competence. When the assessors assess the first student, with whom do they compare that person? Do the assessor only look at the student by answering the question: can he or she do better than that? Or with other students in the video? It seem to happen unconsciously that the assessors do both. This is a point for the chapter Discussion of the conclusion. It can give a distortion in the data set, because when the assessor compare the student with other students in the same video, it can happen that all of the students do not perform that well on social competence. This leads to rankings as 'best of the worst', which can be still bad, however the scores are high and 'worst of the best', which can be still good but the scores are low.

After the discussions and after the rounds of assessing the videos we developed an improved version of the video assessment tool. This new video assessment tool consist of the following statements:

Social perception:

- Student mentions clearly and explicitly the target group
- Student mentions the relevance of the product/service
- Student verifies needs
- Student mentions added value (of what he/she offers) for the target group
- Student mentions possible/latent questions

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Impression management:

- Student uses consciously (=strategically) “I” and “we”
- Student flatters the target group (makes appropriate compliments)
- Student is open for suggestions

Social adaptability:

- Student’s pitch fits to the interests of the target group
- Student focuses on details which are interesting for the target group
- Student is open for suggestions

Expressivity:

- Student creates enthusiasm among the target group
- There is an agreement on how and what the student says
- Student shows emotion in what he/she says

Persuasiveness:

- Student shows passion and conviction of his product
- Student uses language which is accessible for the target group
- Student shows certainty
- Student makes use of supporting hand gestures

The ranking of the statements is the same as before testing the assessment tool. The level of detail which a 5 point Likert-type scale gives is sufficient to this type of research.

#### **4.1.1 Spearman’s correlation**

In the syntax discussed in the Material and Methods section the variables J\_SP1, P\_SP1 and T\_SP1 represent the statement. The syntax named above was used to analyse the social perception of five items. The syntax was made and processed for all eighteen items, of which the results are shown below.

Code		Assessment round 1			Assessment round 2		
		Paul-Thomas	Thomas-Judith	Judith-Paul	Paul-Thomas	Thomas-Judith	Judith-Paul
<b>SP</b>	<b>SOCIAL PERCEPTION</b>						
SP_1	Student makes clear who the target group is.	0.296	0.469	0.777**	0.503	0.621	0.921**
SP_2	Student mentions the relevance of the product/service.	0.423	0.820**	0.477	0.000	0.345	0.559+
SP_3	Student verifies needs.	0.438	0.700*	0.807**	0.631*	0.119	0.386
SP_4	Student mentions the added value for the audience.	0.261	-0.130	0.141	0.689*	0.267	0.632*
SP_5	Student mentions possible/latent questions.	0.550	0.870**	0.798**	0.646*	0.800**	0.538
<b>I</b>	<b>IMPRESSION MANAGEMENT</b>						
I_1	Student uses consciously (=strategically) "I" and "we".	-0.040	0.472	0.565+	0.664*	0.582+	0.029
I_2	Student flatters the audience (makes appropriate compliments).	0.850**	0.786**	0.793**	0.094	0.922**	0.198
I_3	Student is open for suggestions.	0.352	0.392	0.711*	0.183	0.386	0.465
<b>SA</b>	<b>SOCIAL ADAPTABILITY</b>						
SA_1	Student's pitch fits to the interests of the audience.	0.325	0.466	0.499	0.438	0.150	0.377
SA_2	Student focuses on details which are interesting for the audience.	0.802**	0.683*	0.782**	0.589+	0.014	0.204
SA_3	Student interacts with the audience.	0.530	0.498	0.900**	0.462	0.530	0.284
<b>E</b>	<b>EXPRESSIVITY</b>						
E_1	Student creates enthusiasm among the audience.	0.911**	0.953**	0.908**	0.568+	0.488	0.791**
E_2	There is an agreement on how and what the student says.	0.600	0.537	0.522	0.705*	0.482	0.572+
E_3	Student shows emotion in what he/she says.	0.912**	0.468	0.671*	0.705*	0.754*	0.483
<b>OK</b>	<b>PERSUASIVENESS</b>						
OK_1	Student shows passion and conviction of his product.	0.691*	0.640*	0.767**	0.606+	0.881**	0.423
OK_2	Student uses language which is accessible for the audience.	0.390	0.912**	0.308	0.383	0.257	0.487
OK_3	Student shows certainty.	0.350	0.746*	0.667*	0.548	0.794**	0.565+
OK_4	Student makes use of supporting hand gestures.	0.451	0.720*	0.692*	0.778**	0.384	0.473

**Table 4: Spearman's correlation between evaluators for two assessment rounds**

In the previous table (N=10) some exponents are used behind the outcomes. The meaning of these characters is as follows:  $P \leq 0.01$  : \*\*,  $P \leq 0.05$  : \*,  $P \leq 0.10$  : +.

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Spearman's rho can be measured between two variables. In the upper table shows the Spearman's rho for the results found by the different assessors. The numbers which are shown in the table are the Spearman's rho's for two assessors, calculated for one pair. The pairs are named above each column. As shown in the table there are a couple of scenarios possible:

- There is a full agreement for one statement between three pairs of assessors
- All three pairs of correlations of one statement are positive and have a P-value  $\leq 0.10$
- There is an agreement for one statement between two pairs out of three pairs of assessors
- Two of three pairs of correlations of one statement are positive and have a P-value  $\leq 0.10$  and one pair is negative or is positive and have a P-value  $\geq 0.10$ .
- There is an agreement for one statement between one pair of three pairs of assessors
- One of three pairs of correlations of one statement is positive and have a P-value  $\leq 0.10$  and two pairs are negative or positive and have a P-value  $\geq 0.10$ .
- There is no agreement for one statement between all three pairs of assessors
- Three of three pairs of correlations of one statement is negative and have a P-value  $\leq 0.10$  or three of three pairs are positive or do not have a P-value  $\leq 0.10$ .

In the first round of assessing the videos (assessment round 1) the first scenario, which is most ideal for the research occurred four times in the test case. The second scenario, in which two out of three pairs are positive and have a P-value  $\leq 0.10$ , occurred five times. The third scenario, in which one out of three pairs are positive and have a P-value  $\leq 0.10$ , occurred six times. The fourth scenario, where there was no correlation found, occurred three times. In the second round of assessing the videos (assessment round 2) this most ideal scenario occurred zero times. The second scenario, which is described above, occurred eight times. The third scenario occurred six times and the fourth and least ideal scenario occurred four times.

In assessment round 1 the first and most ideal situation occurred for the statements I\_2, SA\_2, E\_1 and OK\_1. I\_2 states whether the students flatters the audience. Spearman's rho shows us a high correlation, so the assessors agree with each other. When we look at the raw data we find there that this statement scores low in general. The raw data shows for the assessors Judith, Paul and Thomas an average score of 2.2, 1.7 and 2.5 respectively. This data and a short discussion with the three assessors shows that the students almost not flatter the audience. Therefore, we can eliminate this statement for further research. However, for the second round of assessing the videos we included the statement to make a comparison. This comparison between I\_2 for the first round and the second round results into a big difference. Where the assessors first had full agreement (scenario 1), there is now agreement of two assessors (scenario 3). This is caused by assessor Paul and looking at the raw data of calculation round 2 we find that Paul ranked 8 out of 10 students on 1 for this

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statement, because they were not seen by him. Thomas and Judith did see the presence of I\_2 and scored slightly and for every student higher. For the other three statements which are discussed in this scenario (SA\_2, E\_1 and OK\_1) we can say the following. SA\_2 states whether students focus on the details which are interesting for the audience. In the first round of assessment Spearman's rho is high, so the assessors agree highly with each other. The raw data shows us that the values are high. On average Judith found a score of 3.8, Paul 3.6 and Thomas 3.3. With this data we can conclude that the students focus on the details which are interesting for the audience and that they try to satisfy the audience with their pitch. In the second round of assessment SA\_2 shows the same pattern as I\_2. First there was full agreement, now there is only agreement between two assessors (scenario 3). The cause of this can be found in the raw data. Here we find that Judith has very high rankings for this statement (2 x 4 and 8 x 5). Paul and Thomas ranked the students lower on the statement. Statement E\_1 is about whether the student create enthusiasm amongst the audience. In the first round the assessors agree fully with each other, because we find a high Spearman's rho. The raw data gives a wide spread of scores. Some students do create a high enthusiasm and some do that less. Since the assessors agree fully with each other, we can conclude that it is clear when a student create enthusiasm amongst the audience and when not. In the second round of assessment E\_1 goes from scenario 1 to scenario 2 in which two assessors do not find agreement. OK\_1 states whether a student shows passion and conviction of his product. In round 1 Spearman's rho shows us a high score, so we can state that the three assessors agree with each other on this statement. The data shows a wide spread of scores. This finding in combination with a high Spearman's rho leads to the conclusion that it is clear to assess whether a student shows passion and conviction of his product and when not. In round 2 statement OK\_1 shows the same pattern as E\_1 and also here we find that two assessors do not find agreement.

The second scenario, where two out of three pairs of assessors score a positive and significant Spearman's rho and one pair is negative or positive and a  $P\text{-value} \geq 0.10$ , is found five times. The statements of which this scenario is found in the first round of assessing the videos are SP\_3, SP\_5, E\_3, OK\_3 and OK\_4.

SP\_3 is about the verification of the needs of the audience done by the student in his or her pitch. In the first round of assessment we found that the pairs of assessors who did agree were Thomas and Judith (0.700\*) and Paul and Judith (0.807\*\*). Thomas and Paul scored a Spearman's rho of 0.438 with a  $P\text{-value} \geq 0.10$ , so this result was not significant, so there is no correlation between their scores. The second round shows only a correlation for the assessors Thomas and Paul. SP\_5 states whether a student mention possible latent questions. Comparable data was found for SP\_5 as was found before for statement SP\_3, however SP\_5 scored the same in the second round of assessing the videos as in

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the first round. Statement E\_3, whether a student shows emotion, shows high Spearman's rho's for the pairs Paul-Thomas and Judith-Paul in the first round, but shows a positive but not significant Spearman's rho for the pair Thomas-Judith. In the second round a comparable result was found. OK\_3 shows the certainty of a student. A positive but not significant rho was found for the pair Paul-Thomas, but high and significant ( $P\text{-value} \leq 0.05$ ) was found for the other two pairs in the first round. The second round shows the same pattern. OK\_4, about using hand gestures, showed the same Spearman's rho's as for OK\_3 in the first round. In the second round scenario 3 was applicable for OK\_4.

Scenarios 3, in which one out of three pairs are positive and have a  $P\text{-value} \leq 0.10$ , occurred six times in round 1 and six times in round 2. Scenario 4, where no correlation was found, occurred 3 times in round 1 and four times in round 2. Scenario 3 was found in round 1 for the statements SP\_1, SP\_2, I\_1, I\_3, SA\_3 and OK\_2. Scenario 4 was found in round 1 for the statements SP\_4, SA\_1 and E\_2. In the table below we can see a change from scenario for every statement.

For round 1 the two least ideal scenarios (3 and 4) was found most in the categories Social Perception (3 out of 5), Impression Management (2 out of 3) and Social Adaptability (2 out of 3). For round 2 scenario 3 and 4 were found most in Social Perception (3 out of 5), Impression Management (2 out of 3), Social Adaptability (3 out of 3) and Persuasiveness (2 out of 4).

For assessing the total sample of video pitches it is highly recommended that enough time should be taken to watch every video in detail. Next to that, the focus should be at the categories which seem to be hard to analyse. These categories are Social Perception, Impression Management and Social Adaptability for round 1 and also for round 2, next to Persuasiveness.

	Social Perception					Impression Management			Social Adaptability			Expressiveness			Persuasiveness				
Round. scenario	1	2	3	4	5	1	2	3	1	2	3	1	2	3	1	2	3	4	
1.1							x			x		x			x				
1.2			x		x									x				x	x
1.3	x	x				x		x			x						x		
1.4				x					x				x						
2.1																			
2.2				x	x	x						x	x	x	x			x	
2.3	x	x	x					x			x								x
2.4									x	x	x							x	

**Table 5: Cross table assessment round 1 and assessment round 2**

In the table above an overview is shown of the changes of scenario for every statement. As shown above some categories, like Social Perception and Expressiveness show an overall improvement. The other three show a decline. The reason of the decline could be that the discussion after round 1 was influencing the assessors and it make them looking more careful to the videos.

#### 4.1.2 Absolute differences:

The differences are pairwise calculated and the number of agreement is shown below:

Code		Assessment round 1					Assessment round 2				
		$\Delta$ =0	$\Delta$ =1	$\Delta$ =2	$\Delta$ =3	$\Delta$ =4	$\Delta$ =0	$\Delta$ =1	$\Delta$ =2	$\Delta$ =3	$\Delta$ =4
<b>SP</b>	<b>SOCIAL PERCEPTION</b>										
SP_1	Student makes clear who the target group is.	4	6	0	0	0	7	3	0	0	0
SP_2	Student mentions the relevance of the product/service.	3	5	2	0	0	2	7	1	0	0
SP_3	Student verifies needs.	4	5	1	0	0	3	4	3	0	0
SP_4	Student mentions the added value for the audience.	5	4	1	0	0	4	5	1	0	0
SP_5	Student mentions possible/latent questions.	3	5	2	0	0	1	7	1	0	1
<b>I</b>	<b>IMPRESSION MANAGEMENT</b>										
I_1	Student uses consciously (=strategically) "I" and "we".	2	8	0	0	0	1	7	2	0	0
I_2	Student flatters the audience (makes appropriate compliments).	6	3	1	0	0	0	5	4	1	0
I_3	Student is open for suggestions.	6	4	0	0	0	6	3	1	0	0
<b>SA</b>	<b>SOCIAL ADAPTABILITY</b>										
SA_1	Student's pitch fits to the interests of the audience.	4	6	0	0	0	5	4	1	0	0
SA_2	Student focuses on details which are interesting for the audience.	6	4	0	0	0	4	4	2	0	0
SA_3	Student interacts with the audience.	5	5	0	0	0	3	4	3	0	0
<b>E</b>	<b>EXPRESSIVITY</b>										
E_1	Student creates enthusiasm among the audience.	5	5	0	0	0	6	4	0	0	0
E_2	There is an agreement on how and what the student says.	3	4	3	0	0	5	4	1	0	0
E_3	Student shows emotion in what he/she says.	6	3	1	0	0	3	5	2	0	0
<b>OK</b>	<b>PERSUASIVENESS</b>										
OK_1	Student shows passion and conviction of his product.	5	4	1	0	0	3	6	1	0	0
OK_2	Student uses language which is accessible for the audience.	3	5	1	0	0	5	4	0	1	0
OK_3	Student shows certainty.	6	3	1	0	0	4	1	5	0	0
OK_4	Student makes use of supporting hand gestures.	2	7	1	0	0	4	4	2	0	0
	Total	78	86	15	1	0	66	81	30	2	1

Table 6: Absolute differences between Judith and Paul on level of statements

The table shows the differences between the assessors Judith and Paul on the level of the statements of the assessment tool. The results of assessment round 1 conclude that there is a high

level of agreement between these assessors. The level of agreement peaks at  $\Delta = 1$  and second  $\Delta = 0$ .  $\Delta = 3$  occurred 15 times and only one time  $\Delta = 3$  is found. In the second round the agreement slightly declined since  $\Delta = 0$  was less present and  $\Delta = 2$  increased. Also  $\Delta = 3$  and  $\Delta = 4$  were found respectively 2 times and one time.

Student	Assessment round 1					Assessment round 2				
	$\Delta = 0$	$\Delta = 1$	$\Delta = 2$	$\Delta = 3$	$\Delta = 4$	$\Delta = 0$	$\Delta = 1$	$\Delta = 2$	$\Delta = 3$	$\Delta = 4$
Student 1	10	7	0	1	0	3	5	9	1	0
Student 2	9	9	0	0	0	7	7	4	0	0
Student 3	6	9	3	0	0	4	13	1	0	0
Student 4	6	8	4	0	0	5	10	3	0	0
Student 5	8	7	3	0	0	5	10	3	0	0
Student 6	6	11	1	0	0	7	8	3	0	0
Student 7	12	6	0	0	0	10	7	1	0	0
Student 8	6	12	0	0	0	10	4	3	1	0
Student 9	7	10	1	0	0	7	8	3	0	0
Student 10	8	7	3	0	0	8	9	0	0	1

**Table 7: Absolute differences between Judith and Paul on level of students**

In the upper table the number of difference in absolute values are shown on the level of students. These results are found by comparing the assessment results of the assessors Judith and Paul. The results in the table show the level of agreement on student level between the results of analysis of the assessors. The results of assessment round 1 show that the peak can be found around  $\Delta = 0$  and  $\Delta = 1$ . There are some outliers shown for student 1 ( $\Delta = 3$  occurred one time) and for students 3, 4, 5, 6, 9 and 10 the  $\Delta = 2$  occurred. In the second round of assessment we see that the peak moved slightly towards  $\Delta = 2$ . For three students less agreement was found, these students are number 1, number 8 and number 10.

Code		Assessment round 1					Assessment round 2				
		$\Delta$ =0	$\Delta$ =1	$\Delta$ =2	$\Delta$ =3	$\Delta$ =4	$\Delta$ =0	$\Delta$ =1	$\Delta$ =2	$\Delta$ =3	$\Delta$ =4
<b>SP</b>	<b>SOCIAL PERCEPTION</b>										
SP_1	Student makes clear who the target group is.	4	4	1	1	0	1	5	4	0	0
SP_2	Student mentions the relevance of the product/service.	6	3	1	0	0	3	6	0	0	1
SP_3	Student verifies needs.	5	4	1	0	0	1	5	3	1	0
SP_4	Student mentions the added value for the audience.	4	5	0	0	1	3	6	0	1	0
SP_5	Student mentions possible/latent questions.	3	6	1	0	0	0	4	6	0	0
<b>I</b>	<b>IMPRESSION MANAGEMENT</b>										
I_1	Student uses consciously (=strategically) "I" and "we".	4	3	2	1	0	0	5	4	1	0
I_2	Student flatters the audience (makes appropriate compliments).	5	5	0	0	0	1	9	0	0	0
I_3	Student is open for suggestions.	5	2	2	0	0	1	7	2	0	0
<b>SA</b>	<b>SOCIAL ADAPTABILITY</b>										
SA_1	Student's pitch fits to the interests of the audience.	3	5	2	0	0	3	5	0	1	1
SA_2	Student focuses on details which are interesting for the audience.	4	3	3	0	0	0	7	1	0	2
SA_3	Student interacts with the audience.	6	2	1	1	0	3	4	2	1	0
<b>E</b>	<b>EXPRESSIVITY</b>										
E_1	Student creates enthusiasm among the audience.	5	5	0	0	0	2	5	2	1	0
E_2	There is an agreement on how and what the student says.	3	4	2	1	0	4	5	1	0	0
E_3	Student shows emotion in what he/she says.	5	3	1	1	0	4	4	2	0	0
<b>OK</b>	<b>PERSUASIVENESS</b>										
OK_1	Student shows passion and conviction of his product.	3	3	4	0	0	0	8	2	0	0
OK_2	Student uses language which is accessible for the audience.	8	2	0	0	0	3	7	0	0	0
OK_3	Student shows certainty.	5	4	1	0	0	1	6	3	0	0
OK_4	Student makes use of supporting hand gestures.	3	5	2	0	0	3	7	0	0	0
	Total	81	68	24	5	1	33	105	32	6	4

**Table 8: Absolute differences between Judith and Thomas on level of statements**

In the table above the number of differences are shown per statement for the assessors Judith and Thomas. For assessment round 1, here again a peak is shown for  $\Delta = 0$  and  $\Delta = 1$ . However, this number is lower in comparison with the number of differences between assessors Judith and Paul.  $\Delta = 2$  occurred 24 times,  $\Delta = 3$  occurred 5 times and  $\Delta = 4$  occurred 1 time. We can conclude that there is less agreement between the assessors Judith and Thomas then between the assessors Judith and

Paul in round 1. The second round shows different data. Here we see that the peak moves from  $\Delta = 0$  towards  $\Delta = 1$ . Also  $\Delta = 2$ ,  $\Delta = 3$  and  $\Delta = 4$  are increased.

Student	Assessment round 1					Assessment round 2				
	$\Delta = 0$	$\Delta = 1$	$\Delta = 2$	$\Delta = 3$	$\Delta = 4$	$\Delta = 0$	$\Delta = 1$	$\Delta = 2$	$\Delta = 3$	$\Delta = 4$
Student 1	9	8	1	0	0	3	9	6	0	0
Student 2	8	7	3	0	0	4	13	1	0	0
Student 3	10	6	2	0	0	1	10	3	2	2
Student 4	11	7	0	0	0	4	9	4	1	0
Student 5	7	9	2	0	0	2	13	3	0	0
Student 6	7	8	3	0	0	6	10	2	0	0
Student 7	7	6	3	2	0	6	11	1	0	0
Student 8	5	5	6	1	1	4	11	3	0	0
Student 9	9	6	2	0	0	2	7	4	3	2
Student 10	8	6	2	2	0	1	12	5	0	0

**Table 9: Absolute differences between Judith and Thomas on level of students**

The table above shows a spread from  $\Delta = 0$  to  $\Delta = 1$  to  $\Delta = 2$  and some outliers to  $\Delta = 3$  and  $\Delta = 4$  for the first round of assessment. Also these results state that there is less agreement between assessors Judith and Thomas then between assessors Judith and Paul. In the second round of assessment a clear move towards  $\Delta = 1$  from  $\Delta = 0$  is visible. Also the larger differences found in the last two columns show less agreement.

Code		Assessment round 1					Assessment round 2				
		Δ =0	Δ =1	Δ =2	Δ =3	Δ =4	Δ =0	Δ =1	Δ =2	Δ =3	Δ =4
<b>SP</b>	<b>SOCIAL PERCEPTION</b>										
SP_1	Student makes clear who the target group is.	6	1	1	2	0	1	4	5	0	0
SP_2	Student mentions the relevance of the product/service.	1	8	1	0	0	4	4	1	1	0
SP_3	Student verifies needs.	4	4	1	1	0	5	4	1	0	0
SP_4	Student mentions the added value for the audience.	5	4	0	1	0	7	2	1	0	0
SP_5	Student mentions possible/latent questions.	2	2	5	1	0	4	5	1	0	0
<b>I</b>	<b>IMPRESSION MANAGEMENT</b>										
I_1	Student uses consciously (=strategically) "I" and "we".	3	3	3	1	0	4	2	3	1	0
I_2	Student flatters the audience (makes appropriate compliments).	3	6	1	0	0	4	3	1	2	0
I_3	Student is open for suggestions.	5	2	1	1	0	3	3	3	1	0
<b>SA</b>	<b>SOCIAL ADAPTABILITY</b>										
SA_1	Student's pitch fits to the interests of the audience.	6	2	1	1	0	6	2	0	2	0
SA_2	Student focuses on details which are interesting for the audience.	4	5	1	0	0	3	4	2	1	0
SA_3	Student interacts with the audience.	5	3	1	1	0	5	3	2	0	0
<b>E</b>	<b>EXPRESSIVITY</b>										
E_1	Student creates enthusiasm among the audience.	6	4	0	0	0	3	5	1	1	0
E_2	There is an agreement on how and what the student says.	4	5	1	0	0	6	3	1	0	0
E_3	Student shows emotion in what he/she says.	5	5	0	0	0	4	5	1	0	0
<b>OK</b>	<b>PERSUASIVENESS</b>										
OK_1	Student shows passion and conviction of his product.	2	5	3	0	0	4	4	2	0	0
OK_2	Student uses language which is accessible for the audience.	2	7	0	1	0	4	5	0	1	0
OK_3	Student shows certainty.	2	5	3	0	0	4	5	1	0	0
OK_4	Student makes use of supporting hand gestures.	4	4	2	0	0	3	7	0	0	0
	Total	69	75	25	10	0	74	70	26	10	0

**Table 10: Absolute differences between Paul and Thomas on level of statements**

Also between assessors Paul and Thomas the level of agreement is analysed for round 1 and round 2. In the table above it is shown that there is a peak at  $\Delta = 1$  for assessment round 1.  $\Delta = 0$  occurs 69 times and  $\Delta = 2$  and  $\Delta = 3$  occurs respectively 25 and 10 times. Differences of 4 are not found. In assessment round 2 it becomes visible that the differences do not change significantly.

Student	Assessment round 1					Assessment round 2				
	$\Delta = 0$	$\Delta = 1$	$\Delta = 2$	$\Delta = 3$	$\Delta = 4$	$\Delta = 0$	$\Delta = 1$	$\Delta = 2$	$\Delta = 3$	$\Delta = 4$
Student 1	8	7	2	1	0	10	4	3	1	0
Student 2	5	10	3	0	0	6	9	2	1	0
Student 3	8	6	3	1	0	6	7	3	2	0
Student 4	8	6	3	1	0	9	8	1	0	0
Student 5	10	7	0	1	0	10	5	3	0	0
Student 6	7	8	2	1	0	7	8	3	0	0
Student 7	8	5	4	1	0	6	11	0	1	0
Student 8	7	5	3	3	0	9	7	1	1	0
Student 9	5	9	3	0	0	4	5	6	3	0
Student 10	3	12	2	1	0	7	6	4	1	0

**Table 11: Absolute differences between Paul and Thomas on level of students**

In the upper table it is shown that there is a wider spread in occurred differences when it is compared with the results of analysis of Judith and Paul. Also for the second round of assessment we do not see much difference in comparison with assessment round 1.

### 4.1.3 Interrater reliability: Fleiss' Kappa

Fleiss' Kappa is calculated with the use of Microsoft Excel 2010 and the results are shown in the next table.

Code	Statement	Fleiss' Kappa	
		Round 1	Round 2
<b>SOCIAL PERCEPTION</b>			
SP_1	Student makes clear who the target group is.	0.28	0.09
SP_2	Student mentions the relevance of the product/service.	0.06	-0.21
SP_3	Student verifies needs.	0.20	0.06
SP_4	Student mentions the added value for the audience.	0.04	0.20
SP_5	Student mentions possible/latent questions.	0.06	-0.11
<b>IMPRESSION MANAGEMENT</b>			
I_1	Student uses consciously (=strategically) "I" and "we".	0.04	-0.15
I_2	Student flatters the audience (makes appropriate compliments).	0.25	-0.16
I_3	Student is open for suggestions.	0.33	0.07
<b>SOCIAL ADAPTABILITY</b>			
SA_1	Student's pitch fits to the interests of the audience.	0.11	0.22
SA_2	Student focuses on details which are interesting for the audience.	0.24	-0.06
SA_3	Student interacts with the audience.	0.37	0.09
<b>EXPRESSIVITY</b>			
E_1	Student creates enthusiasm among the audience.	0.41	0.14
E_2	There is an agreement on how and what the student says.	0.05	0.15
E_3	Student shows emotion in what he/she says.	0.38	0.15
<b>PERSUASIVENESS</b>			
OK_1	Student shows passion and conviction of his product.	0.15	-0.04
OK_2	Student uses language which is accessible for the audience.	0.25	-0.02
OK_3	Student shows certainty.	0.23	0.08
OK_4	Student makes use of supporting hand gestures.	0.05	-0.01

**Table 12: Interrater reliability analyses using Fleiss' Kappa**

In total we found for the first assessment round 9 times a slight agreement, 8 times a fair agreement and 1 time a moderate agreement. The Kappa's we found are low what means that there is slight to fair agreement among the assessors. The second assessment round shows 8 times a poor agreement, 8 times a slight agreement and 2 times a fair agreement.

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## **4.2 Principal Component Analysis**

In this chapter we conduct two Principal Component Analyses. The first analysis will be done on the statements of the intake forms. The data will be reduced to a number of factors, which will be labelled. The second analysis will be done on the statements of the video assessment tool. Here the data will be reduced to factors and labelled with the category as well. The chapter will be closed with the conclusion.

### **4.2.1 Principal Component Analysis for Intake Forms**

The first Principal Component Analysis which we apply is the one on the statements of the intake form. This is done to reduce the statements to a smaller amount of variables and to find new factors which represent the statements in categories. The Cronbach's alpha measured for the reliability of the statements is 0.827. In the table below we show the results.

Statement	Component					
	1	2	3	4	5	6
Make others aware of my talents	0.912					
Make others aware of my accomplishments	0.865					
Reputation of being competent	0.847					
Talk proudly about my experience/education	0.506					
Comfortable with all types		0.849				
Adjust to social situation		0.838				
Talk with anybody		0.736				
No problem with introducing		0.671				
Others can read my emotions			0.896			
Others can read me easily			0.880			
I show my inside to the outside			0.867			
I do personal favours				0.860		
I use flattery and favours				0.755		
Praise others for their accomplishments				0.749		
I compliment others				0.504		
Recognise others traits					0.859	
I am sensitive and understanding					0.658	
Read others well					0.629	
Know when to ask for favours					0.605	
Good judge						0.759
Explain why people act in a way						-0.530

**Table 13: Principal Component Analysis on Intake Forms**

In the table above we find high factor loadings for five components. Two statements are not in line with others, which are: “Good judge” and “Explain why people act in a way”. Component 1 is related to the confidence level of the individual to perform a certain behaviour. We label component 1 as “**Self-Promotion (Impression Management)**”. Component 2 is related to the adaptability of an individual in social situations and therefore we want to label this component as “**Social Adaptability**”. Component 3 shows the emotional openness of an individual to the outside world. This component will be labelled as “**Expressiveness**”. Component 4 is about the behaviour of the individual towards other people and we will label this component as “**Ingratiation (Impression Management)**”. Component 5 is about the perceiving other people and know what lives among the people. This component will be labelled as “**Social Perception**”. Component 6 will not be labelled and

will not be taken into account for further analysis.

#### 4.2.2 Principal Component Analysis for Video Assessment Tool

The second Principal Component Analysis which we conduct is the one on the statements of the video assessment tool. The statements of the video assessment tool are based on prior research (Riggio, 1986; Baron and Markman, 2003), but the way to assess the statements was done differently. In the next table it is shown that two new components are defined. For this Principal Component Analysis we used data from 146 video assessments.

Statement	Component	
	1	2
Student verifies needs.	0.594	0.334
Student mentions possible/latent questions.	0.773	
Student flatters the target group (makes appropriate compliments).	0.380	0.689
Student focuses on details which are interesting for the target group.	0.699	
Student focuses on the target group.	0.589	0.355
There is an agreement on how and what the student says.	0.339	0.681
Student shows passion and conviction of this product.		0.751
Student makes clear who the target group is.	0.720	
Student mentions the added value for the target group.	0.754	
Student is open for suggestions.		0.805

**Table 14: Principal Component Analysis on Video Assessment Tool**

With the use of SPSS we measured the Cronbach's alpha on 0.832. The factor loadings are shown from 0.300, because we found that some loadings of the factors were quite close to the required loading of 0.400. This means that some statements overlapped both of the components and that the components are closely together for some aspects.

As shown in the table, some statements are excluded from the list. This is done to let the Principal Component Analysis fulfil to the requirements (Field, 2009). The Principal Component Analysis did not completely fulfil to the requirements mentions in the Material and Method section.

- Numbers of the Correlation Matrix must be in between 0.3 and 0.9.  
10 out of 100 numbers scored in between 0.214 and 0.291.
- The numbers in the diagonal of the Anti-Image Matrix must be higher than 0.5.  
Completed.

- 
- The Total Variance Explained must be higher than 60%.  
Only 57.802% was explained by two components.
  - The loadings of the Communalities must be greater than 0.4.  
Completed.
  - The Reproduced Correlations must be smaller than 50% and  $<0.05$ . (Field, 2009).  
Completed.

We want to label the two components which are found by the Principal Component Analysis as follows. Component 1 consist of the statements:

- Student verifies needs
- Student mentions possible/latent questions
- Student focuses on details which are interesting for the target group.
- Student focuses on the target group
- Student makes clear who the target group is
- Student mentions the added value for the target group.

The general theme of the statements indicates the strive to fit the presentation to the target group. It seems to be the external communication towards the target group which is covered here. The label which will be attached to component 1 is: "Fit to target group" and abbreviated as PA-1.

The second component which was derived from the Principal Component Analysis consist of the next statements:

- Student flatters the target group (makes appropriate compliments).
- There is an agreement on how and what the student says.
- Student shows passion and conviction of this product.
- Student is open for suggestions.

The general theme of these statements indicates the presentation skills of the student and how the student brings the message to the target group. The label which will be attached to this component is: "advanced presentation" and abbreviated as PA-2.

### **4.2.3 Conclusion**

The Principal Component Analysis which was conducted for the statements of the intake form shows that the same components are derived as Baron and Markman (2003) found. The verification of the is completed.

The next Principal Component Analysis derived two new components. Component 1 referred to the external communication and the fit to the target group. The second component referred to the

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presentation skills of the student. Note that some statements had a high loading (i.e. close to 0.400) and seems to have some overlap between the components.

### 4.3 Pearson Correlations

With the information from the Principal Component Analysis conducted on the statements of the intake form and on the statements of the video assessment tool we can conduct a test to measure the Pearson Correlation between the new components.

First, we will give an overview of the statements and the component to which the statements belong. This will be done for the intake form and for the video assessment tool. Second, we will conduct the Pearson Correlation on the components and finally we will draw the conclusions. Finally, an overview of the findings of the tests is shown in the last paragraph of this chapter.

#### 4.3.1 Pearson Correlation between the Components

The components and the statements for the *intake form* are grouped as follows:

Component 1: Self-Promotion (Impression Management), code: INT.Comp.1.SP.IM

- V13 Make others aware of my talents
- V14 Make others aware of my accomplishments
- V12 Reputation of being competent
- V16 Talk proudly about my experience/education

Component 2: Social Adaptability, code: INT.Comp.2.SA

- V2 Comfortable with all types
- V3 Adjust to social situation
- V4 Talk with anybody
- V11 No problem with introducing

Component 3: Expressiveness, code: INT.Comp.3.EX

- V19 Others can read my emotions
- V18 Others can read me easily
- V21 I show my inside to the outside

Component 4: Ingratiation (Impression Management), code: INT.Comp.4.IN.IM

- V9 I do personal favours

- 
- V17 I use flattery and favours
  - V15 Praise others for their accomplishments
  - V8 I compliment others

Component 5: Social Perception, code: INT.Comp.5.SP

- V7 Recognise others traits
- V20 I am sensitive and understanding
- V6 Read others well
- V10 Know when to ask for favours

Component 6

- V1 Good judge
- V5 Explain why people act in a way

Component 6 which was found out of the statements of the intake forms consist of two variables. The practical meaning of these variables are not related with each other and therefore we leave component 6 out of the further analyses.

The components and the statements for the *video assessment tool* are grouped as next:

Component 1: Fit to target group, code: PA-1

- SP\_3 Student verifies needs
- SP\_5 Student mentions possible/latent questions
- SA\_2 Student focuses on details which are interesting for the target group.
- SA\_3 Student focuses on the target group
- SP\_1 Student makes clear who the target group is
- SP\_4 Student mentions the added value for the target group.

Component 2: Advanced presentation, code: PA-2

- IM\_2 Student flatters the target group (makes appropriate compliments).
- EX\_2 There is an agreement on how and what the student says.
- OK\_1 Student shows passion and conviction of this product.
- IM\_3 Student is open for suggestions.

The above mentioned statements are grouped and a new variable is computed in SPSS which represents the components. These components are compared by conducting the Pearson Correlation (N=36). The results can be found in the next table.

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	PA-1	PA-2
INT.Comp.2.SA	0.294*	0.203
INT.Comp.5.SP	0.148	0.221+
INT.Comp.3.EX	-0.008	0.174
INT.Comp.1.SP.IM	-0.265+	-0.397**
INT.Comp.4.IN.IM	-0.076	-0.129

**Table 15: Pearson Correlation between Intake Form and Assessment Tool**

\*\* Correlation is significant at the 0.01 level (1-tailed)

\* Correlation is significant at the 0.05 level (1-tailed)

+ Correlation is significant at the 0.10 level (1-tailed)

The table shows the Pearson Correlations between the components from the intake form according to Baron and Markman (2003) and the components (PA-1 and PA-2) which are derived from the video assessment. For PA-1 (Fit to target group) we see one correlation with social adaptability. Note that there is also a correlation found which is negative and slightly significant with ingratiation (impression management). For PA-2 (advanced presentation) we see one significant and negative correlation with self-promotion (impression management). Next to that there is a slightly significant and positive correlation with social perception. The Cronbach's alpha is measured with the use of SPSS. The result of this was a Cronbach's alpha of 0.554.

#### **4.3.2 Pearson Correlation between Social Competence and Entrepreneurial Intention**

In this chapter we will conduct a Pearson Correlation between social competence and entrepreneurial intention. Since social competence was measured with the use of an intake form as well as with the use of a video assessment tool, we will conduct two Pearson Correlation tests. One test will be conducted between the social competence measured with the use of the intake form and with the entrepreneurial intention as defined in this research. The second test will be conducted between the social competence measured with the use of the video assessment tool and with the entrepreneurial intention as defined earlier.

In the next table the results are shown of the Pearson Correlation (N=36) between social competence (intake) and the entrepreneurial intention.

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Construct	Entrepreneurial intention
Self-promotion (IM)	0.337*
Social adaptability	0.413**
Expressiveness	0.181
Ingratiation (IM)	0.144
Social perception	0.565**

**Table 16: Pearson Correlation Intake and Entrepreneurial Intention**

\*\* Correlation is significant at the 0.01 level

\* Correlation is significant at the 0.05 level

+ Correlation is significant at the 0.10 level

The Cronbach's alpha is measured with the use of SPSS. The result of this was a Cronbach's alpha of 0.870. The table shows that there is a significant positive correlation between entrepreneurial intention and self-promotion, social adaptability and social perception. In the next table the results are shown of the Pearson Correlation (N=36) between social competence (video) and the entrepreneurial intention.

Construct	Entrepreneurial intention
PA-1	-0.137
PA-2	-0.102

**Table 17: Pearson Correlation Video and Entrepreneurial Intention**

\*\* Correlation is significant at the 0.01 level

\* Correlation is significant at the 0.05 level

+ Correlation is significant at the 0.10 level

In the upper table there is no significant and positive relation shown between the constructs of social competence measured with the video assessment tool and the entrepreneurial intention as defined before.

### 4.3.3. Conclusions

The Pearson Correlation between the components of the intake form and the components of the video assessment tool shows that there is only one significant positive relation. That is the correlation between social adaptability measured with the intake form and PA-1 measured by the video assessment tool. Further, no significant results are found from the Pearson Correlation test. . Note that there is also a correlation found which is negative and slightly significant with ingratiation

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(impression management). For PA-2 we find one significant and negative correlation with self-promotion (impression management). Next to that there is a slightly significant and positive correlation with social perception.

When we measure the Pearson Correlation between components of the intake form with the entrepreneurial intention we find a significant positive correlation between entrepreneurial intention and self-promotion, social adaptability and social perception. When we conduct the same test for the components of the video assessment tool and the entrepreneurial intention we do not find any significant nor positive correlation.

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## 5. Discussion

This study is a contribution to research to the relationships between social competence and entrepreneurial intentions. As for every research also we had to handle with limitations and constraints which certainly had some influence on the results of this research.

In the start of the research we expected that social competence has a relationship with intentions, behaviour and the link between intentions and behaviour. The focus of the research was put on the relationships between social competence and entrepreneurial intentions. One should understand that there are more than one relationship possible than the ones that are described in this report. For example, it would be logical that there is a relationship present between social competence and self-efficacy. Self-efficacy is ones level of confidence towards an intention. When an individual has a high level of social competence, it would be logical when he or she is more confident towards an intention to perform a certain behaviour.

A constraint which is closely related to that is that the operationalization of social competence has a big influence on where social competence has a relationships with. We can describe this with an example which occurred during this research. The students who attended the course “Entrepreneurial Skills” had to fill in an intake form. This intake form was the measurement instrument to measure social competence from their point of view. Later, the same group who had to fill in this intake form had to give a presentation which was recorded on a video. This video was later assessed on social competence of the student with the use of a custom build video assessment tool. These two measurement instruments should measure the same, but looking at the correlations, we can conclude that there is no correlation found. This can be declared that one’s own assessment of social competence is completely different than the assessment of social competence by somebody else. We should then expect that the social competence measured with the intake form is more related to one’s self-efficacy. One of the drawbacks of self-assessment by intake form is possibly that assessing self-promotion is perceived negatively by students when they have to assess themselves

Furthermore, social competence was measured from the intake form by self-assessment. Therefore, it could be that we did not measure one’s social competence, but one’s perceived behavioural control

This research discussed only direct relations. In other words, this research describes possible relationships between social competence and intentions, between social competence and behaviour

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and between social competence and the link between intentions and behaviour. However, it could be the case that there are moderating variables which make social competence indirectly influencing the constructs which are discussed before.

Concerning the constraints of measuring one's social competence with the use of an intake form and the use of a video assessment tool, more limitations can be discussed. When we look at the results of this research it seems to be the case that the assessed individual have a different view on him- or herself than a third person, in this case the assessor of the video. This difference is also caused by the fact that assessing one's social competence is harder by only looking at a video. A video has a one-sided communication and not all videos are recorded in the same way. Besides that, this research had to deal with a relatively small sample size, because not all data was available.

Another important limitation was found during the development of the video assessment tool. The tool was discussed and developed by three assessors. Occasionally, it happened that the assessors did not have the same opinion of the assessment of a statement. This leads us to the conclusion that using the video assessment tool is suggestive and based on one person's opinion. One can be very confident towards one assessor, but much less towards another assessor. This causes differences in the results.

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## 6. Conclusions

This research contributes to the relationships between social competence on one's intention to perform entrepreneurial behaviour. During this research we have answered several research questions to give finally a clear answer on the general research question: "What is the relationship between social competence and entrepreneurial intentions?".

To give a complete overview the research questions with the answers are shown below.

### 1. What is social competence?

The definition of social competence is the effectiveness in interaction and is expressed in a combination of concepts which are social perception, expressiveness, social adaptability, impression management and persuasiveness.

### 2. What are entrepreneurial intentions?

Entrepreneurial intention is defined as the state of mind that could lead towards entrepreneurial behaviour. The concept is operationalized as the average number found by answers of a self-assessment in which one is asked to what extent he or she wants to become a corporate, alternative or classical entrepreneur and which are assessed on a 5 point Likert-type scale. Entrepreneurial intention is perceived as a predictor for entrepreneurial behaviour.

### 3. What is entrepreneurial behaviour?

The definition of entrepreneurial behaviour is defined for this research as a set of characteristics which are innovativeness, taking risks and pro-activeness.

### 4. How can we measure social competence?

Measuring social competence can be done in different ways. The method of measuring social competence has an influence on the outcome and should be taken into account before setting the goal of the research. For this research we used a customized video assessment tool for measuring social competence among students who gave their presentations in front of the target group. With the use of predefined constructs an answer was given on multiple statements. All the answers together show the social competence of the individual. Another way to research social competence of an individual is by filling in a self-assessment questionnaire. In this way an individual shows how he or she assess their own social competence. For this research both of the described methods were

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used and the results showed that there is no correlation present. With that information we can state that an assessor, who do not have any relation with the presenting student, has a completely different view on the individual then the individual him or her selves has.

5. What are the possible influences between social competence and intentions?

Research shows that there is an influence between social competence and entrepreneurial behaviour. We expect also an influence of social competence on the link between entrepreneurial intention to entrepreneurial behaviour, which is not measured yet. Conclusive, we will focus on the influence between social competence and entrepreneurial intention.

The general research question: “What is the relationship between social competence and entrepreneurial intentions?” is a complex question. This is not only caused by the difficulties which exist because of the widespread of definitions of constructs like social competence and entrepreneurial intention, but also due to the ability to measure these two. Especially the entrepreneurial intention, because what we actually want to measure is the entrepreneurial behaviour. However, not every researcher is able to do so and therefore the entrepreneurial intention is accepted as a good predictor for entrepreneurial behaviour.

When we answer the general research question by the statement that there is a relationship present we are close. But what that relationship exactly is would be much harder to measure. According to literature which is described in the literate review we see that people with a higher level of social competence perform better in social contexts.

Taking a closer look to the outcome of the Pearson Correlation we find a positive and significant correlation between PA-1 (fit to target group) and social adaptability. With that information we can conclude that the statements of which PA-1 consist of gives a view of one’s social adaptability. Next to that, the statements of PA-1 suggest we also measure one’s social perception partly. However, therefore no significant outcome was found.

PA-2 is labelled as “advanced presentation”. With this component we found a negative and significant correlation with one’s impression management. A possible explanation is that assessing self-promotion can be perceived as negative by students. However, when there is a context in which self-promotion can be assessed (i.e. with videos) then self-promotion could be assessed in the right way. With this knowledge we can criticize all other research which used self-assessment to measure

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one's self-promotion. Our findings suggest that self-assessment does not measure the true situation, concerning self-promotion.

When we measure the Pearson Correlation between components of the intake form with the entrepreneurial intention we find a significant positive correlation between entrepreneurial intention and self-promotion, social adaptability and social perception. When we conduct the same test for the components of the video assessment tool and the entrepreneurial intention we do not find any significant nor positive correlation.

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## 7. Recommendations

With the use of the video assessment tool students can be trained better, because trainers can consult the student entrepreneurs better on which skills they can improve themselves. The trainers can consult the students another training like to improve the less developed skills. Next to that, the tool can be used by employers during job-interviews and can measure to what extent an applicant fits in the team of employees of a company.

Further, we would like to suggest recommendations for further research. As discussed before, social competence can be measured in different ways. One is with the use of an assessment tool conducted by a third person, another one is with the use of an intake form conducted by the assessed individual. The optimal one is not found yet. Maybe that is a combination of several points of views or it requires more in-depth research to the social competence of an individual.

Another recommendation we would like to make for further research is whether there are more constructs or moderating variables on which social competence has a relationship with, directly or indirectly.

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