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Current practices in recruitment and selection and the case of FrieslandCampina.

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Declaration of Authenticity

I hereby declare that the Master´s Thesis presented herein is my own work, or fully and specifically acknowledged wherever adapted from other sources. This work has not been published or submitted elsewhere for the requirement of a degree programme.

Amsterdam, May 14, 2018   Signature

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Topic
Best practices in recruitment and selection and whether FrieslandCampina can use these to improve their selection process.

Abstract

We are currently living in a continuously changing world. Not only is everything being digitalized but we also see major trends like big data, artificial intelligence and the sharing economy arising. This does not only influence companies commercially, but it also has an influence on their way of recruiting. Where companies used to be checking CV's and have face 2 face interviews, they currently use cultural fit tests, competence tests, games, video pitches and video interviews. This is a big change that might be easy for generation y, but generation x could be resistant. The aim of this thesis is to research the best way to recruit employees. It focuses on how recruitment processes change, what different ways of recruiting exist and what the best practices are. Thereby the candidate experience as well as the experience of the recruiters will be taken into consideration. The a focus will be on FrieslandCampina, its current recruitment process and how it might need to change its process to keep up with the current trends.

Keywords
Recruitment, recruitment and selection methods, artificial intelligence, gamification.

Introduction

Recruitment and selection is one of the oldest areas in the field of applied psychology. It still is an important domain of talent management and human resources. (Ryan & Ployhart, 2014) Recruitment and selection has taken a more central place in the organization's strategy and talent management. Talent management has a particularly important role, due to the war for talent that organizations suffer from lately. Between 2002 and 2007 the global economy has expanded dramatically. Human resource managers and business leaders worried about the intensification of the international competition for talent. In a survey conducted by Price Waterhouse Cooper in 2008, 89 percent of the CEO's surveyed put the people agenda as one of the top priorities. (PWC, 2008) The development of recruitment and selection is mostly influenced by three factors which are strategic impetus, societal pressures and technology advancements. Due to the important strategic role that recruitment and selection plays nowadays, a lot of new developments have taken place and traditional conceptualizations of recruitment and selection have expanded with insights form disciplines like economics marketing, information communication and psychology. This can be seen in the use of social media and organizational branding. Recruitment games are for instance introduced as a new kind of recruitment and testing tools. These new tools not only increase efficiency due to the simultaneous attraction and screening of applicants early in the hiring process, but it also creates more compressed hiring and socialization cycles for both the individuals and the organizations. Thereby recruitment games also create marketing intents, since they might brand the organization's image, help with public relations and help to strategically position the organization in the local job market.

Recruitment and selection is pushed forward by both societal pressures as well as technological developments. One important driver is the current demographic change. The currently migratory waves in Europe, may create an even more complex society as well as a more diverse labor market. (Artuc, Docquier, Ozden & Parsons, 2015)
Due to this globalization trend, assessments of minority groups regarding age, gender and origin will become even more important in the upcoming years. Thereby they will continue to challenge staffing models and tools that fit the Western centered human resources policies and their views on future talent. (Artuc et al., 2015)

However, one of the most important changes in recruitment and selection practices is considered to be the change in technology. From the 21st century the boost in the field of information technology has brought huge changes. These changes apply in almost all professions of mankind and due to these changes the world has become a global village. The main examples that we use when thinking about the technology era, are e-commerce, e-governance and e-banking. (Reynolds & Weiner, 2009) These are based on technologies in which computers play a dominant role. There are almost no areas in which technology does not play a role nowadays.

The past decade has also shown a change towards internet-based recruitment. This trend encourages organizations to search for innovative and efficient methods to recruit high-quality candidates. (Dhamija, 2012) Technological advancements have reshaped recruitment and selection processes in several ways. They changed it by means of multimedia tools like video resumes, mobile testing and the use of LinkedIn as one of the biggest recruitment platforms. Thereby companies make use of online applicant tracking systems which might increase efficiency of the assessment and recruitment process for both recruiters and applicants. Although tools like social media, video resumes and mobile testing are increasingly used by both applicants and practitioners, research is lagging behind, since still not that much is known about the properties and efficacy of these more technologically advanced tools, compared to more traditional recruitment methods. (Kluemper, Davison, Cao & Wu, 2013)

In this thesis the traditional methods of recruitment will be discussed. After that, new available methods will be evaluated. Questions like what the different tools are that can be used by companies nowadays, what the advantages and disadvantages are of these methods and what kinds of innovations are currently taking will be answered. After that the focus will be on FrieslandCampina. An overview of the company will be given, its current recruitment process for both regular positions as well as the traineeship will be described and evaluated and thereby it will be analyzed whether there are opportunities and needs, to digitalize and innovate FrieslandCampina's current way of recruitment.

Methodology

This research started by doing a literature research on selection and recruitment. There has been a focus on the different ways of recruitment, ranging from the challenges within recruitment to different ways of doing interviews and assessments as well as new tools within recruitment processes.

After having understood the most valid ways to recruit employees, the way in which FrieslandCampina is recruiting their employees as well as their trainees has been researched and analyzed. The main focus has been on the traineeship selection process since this will be the pilot group, if new tools will be implemented. Since the focus of the project is to ultimately implement potential tools on a global scale, regular recruitment processes have been taken into consideration too.

Qualitative data

Qualitative data is collected through semi-structured, in-depth interviews, guided by a list of open questions (a list of open questions is attached in the appendix). All interviews were conducted in either English or Dutch. When interviews were conducted in Dutch, the interviews have been translated by the author. The themes of the interviews included the current selection process at FrieslandCampina, the selection process at other companies as well as the innovations within selection.

The interviews took 30 – 60 minutes, with an average duration of approximately 45 minutes. Interviews were recorded, after which they were transcribed by the author and coded and analyzed on a computer.

Participants ranged from current FrieslandCampina trainees, to FrieslandCampina talent specialists as well as employees from assessment and recruitment companies. Thereby a FrieslandCampina selection day has been observed and evaluated. After analyzing these data a recommendation on whether and how FrieslandCampina can improve their recruitment process, including how it can innovate the process to answer to current market demands, is given.

History of HR technology tools

Due to the rapid evolution of Internet-based technologies, the practice of hiring new employees has changed dramatically since the mid-1990's.This was caused by different influences(Figure 1) In the 1990's economic expansion, especially in the US, was strong. This was characterized by strong growth in GDP, increased productivity, higher profitability, high rates of investment and low unemployment. (Landefeld & Fraumeni, 2001) At the same time the labor market became constrained, due to demographic factors like age gap, and the fact that the post- baby boomer generation was smaller than its predecessor. Thereby the skills level required steadily increased too.
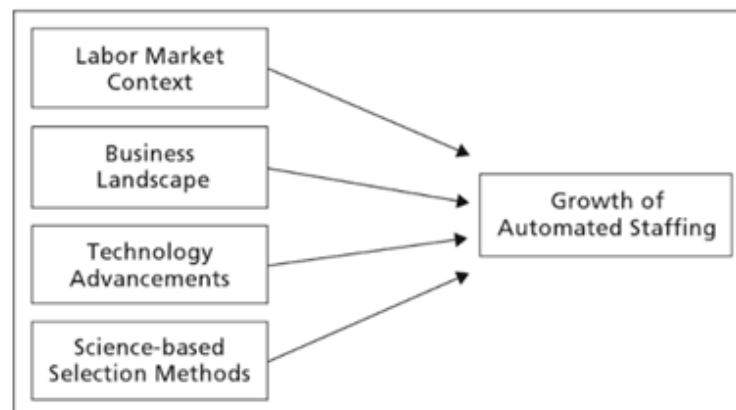
Figure 1. Source: Reynolds & Weiner, 2009

HR leaders were expected to staff for job growth and thereby the labor force would have fewer people with lower skills. Employers were forced to become increasingly competitive for new employees to attract and hire the best people for the new jobs; the war for talent was under way. (Micheals, Handfield-Jones & Axelrod, 2001) During the same period another trend arose which was the identification of activities that could be standardized, automated or pushed outside of large businesses. The pressure to reduce fixed operating costs forced many companies to eliminate jobs. Corporate resources were allocated towards aspects of the operation that produced a unique value in the market. Outsourcers aggregated the volume of work across their client base, to be able to drive further innovation and automation, which could improve operational margin.

This allowed for new companies to evolve which could specialize in the aspects of businesses that are outsourced. During this time the use of the Internet spread, as well as its application in businesses and other large organizations, for the purpose of recruiting and selection activities. By 2002 over 90% of large businesses were using the internet to recruit their candidates. Over 70% included user functions like online resume submission, search for specific openings and candidate-recruiter communications. During that time 35% of surveyed companies included an online application method as primary source of job applications, and during the evolvement of technologies, this percentage increased as well. (Stone, Lukaszewsk & Isenhour, 2005)

Due to the increased use of the Internet as a method of accepting applicants, the demand increased for assessments that could be used to sort and prioritize candidates. This was done based on their responses on a web-based application page, which allowed recruiters not to have to spend hours going through thousands of profiles that could be generated from online systems. Screening and testing tools narrowed focus of employers more quickly to job seekers with the highest probability of success on the job. (Reynolds & Weiner, 2009)

Recruitment strategies

Employee recruitment has become more important in recent years; some occupations face severe shortages while others experience surpluses. It is therefore important to recruit the right people with the right skills and attitudes for the job and thereby maintain these as well. External recruitment has become a dominant talent management strategy for many firms. (Cappelli & Keller, 2014) However this type of recruitment comes with a risk, namely the fact that employers lack complete information about various candidates and do not know about characteristics like productivity and motivation. The recruitment process is the process used to try to uncover as much information as possible about these unknown characteristics.

Agency theory is often used to investigate employer relationships. The agency theory explains that the employment relationship between an employer (principal) and an employee (agent) is characterized by asymmetric information. This information asymmetry is caused by both moral hazard and adverse selection. (Jensen & Meckling, 1976) This theory recognizes information-uncovering aspects of the recruitment process. (Shapiro, 2005)

Employers undertake several recruitment strategies to overcome job-related agency problems before they establish a job relationship. They adopt their recruitment strategy to the type of job for which they are hiring. By doing that they tempt to mitigate the agency problems that may occur for certain types of jobs. When investing in human resources, research has shown that job differentiation is a better strategy than individual differentiation. (Cappelli & Keller, 2014)

If recruitment strategies are tailored to the type of jobs however, implications for human resources management might arise.

Recruitment channels are often categorized into two groups. The first are formal recruitment channels. These include public and private employment agencies, advertisements and recruitment at schools and colleges. The second type of recruitment channels are informal channels, these include information from friends and family, acquaintances and current employees. The choice for a specific channel is mostly dependent on the costs and benefits. Factors like monetary and time costs, together with the size of the pool, their quality and the likelihood of finding proper candidates play important roles. Although formal processes provide benefits in terms of larger pools of potential candidates, they are costly. Pre and post hire costs are involved, which include posting advertisements, commissions to agents as well as the possibility of hiring poor performers. Informal methods include fewer costs and higher benefits due to the accurate information about the prospective employee. Pre-hire costs are low, but finding the right person might take long. (Richardson, 2009)

For a lot of types of jobs informal recruitment channels are used more frequently than formal ones. (Marsden & Gorman, 2001) One of the main reasons for this, is that employees predominantly use this type of networks because it provides them with more in-depth information on prospective employees. Other studies argue that informal recruitment processes might be used more often for risky occupations because the informal methods provide more information about prospective employees. By using the informal method employers can economize on costs of selection errors. (Flap & Boxman, 2001)

Informal recruitment information can be gathered through different contacts. When information is gathered through an employer's personal relations like family friends and neighbors, the likelihood of the candidate being more trustworthy and cooperative is bigger. These contacts provide more in-depth information.
The other type of contacts, are contacts developed through work-related environments like professional associations, former jobs and conferences. However, the information provided by these can be unreliable and misleading. (Buskens, Raub, & Van der veer, 2010)

Within recruitment and hiring processes the distinction between MPS, which are managerial, professional and specialist jobs and AaS, which are administrative and supporting functions, can be made. Making this distinction helps to retain consistent HR practices. Especially for attracting MPS employees, organizations should pay careful attention to their informal networks and the networking skills of the employees responsible for hiring new staff. Thereby, when hiring MPS personnel, ties with families and friends are important. Therefore, organizations with a high amount of MPS jobs, could have an advantage if they invest in relationships with their hiring staff and their non-work related networks. (Klarita & Kosters, 2015)

Internal forces impacting recruitment
Strategic drivers or key value propositions are internal forces utilized by organizations to determine their success in the market. For a recruiter it is important to know the organization's strategic drivers, since this enables them to integrate the HR practices with the corporate strategy. (Al-Bahiri, 2015) The position of the recruiter is to find employees possessing the right abilities and skills that support the strategic objectives of the organization. (Ghinea & Moroianu, 2016) Recruiters are guided by strategic drivers to find talent which complement and support critical success factors. HR systems that are used like selection and trainings should be matched to the company's growth objectives. (Al-Bahari, 2015) It is crucial for recruiters to understand the business goals of the organization to be able to attract talents who respond to the needs of the company. Candidate engagement experience is a strategic driver that can be utilized by recruiters to match people to the right jobs. (Jeffery & McKee, 2011)To leave positive impressions, strategic recruiters build candidate relationships, which will make candidates want to work for the organization. But they should not only see them as potential talent but also as consumers, or ambassadors to the company's products and services.
'It is the sharing and exchange of information within the network that sustains longevity.' (Allden & Harris, 2013)

On-line talent community forums can be used by potential candidates to engage with the recruiter and to learn more about the organization as well as the job and the hiring process. When candidates experience this positively, they are more likely to refer friends or other colleagues. (Russel & Havel, 2010) 47 percent of candidates wait to hear back from recruiters more than two months after they applied for a position. 20 percent of candidates receive an email telling them they are no longer considered for the position, and just 8% of job applicants receive a phone call telling them they are no longer considered for the job. (Talent Board, 2016) When using the candidate engagement as a competitive advantage over competitors who overlook these relationships, recruiters have a better chance to find and match the right people to the right job. (Kajanová, Sedlaecek & Soosova 2017)

Organizational structure is another important driver which can be utilized by recruiters to gain a competitive advantage when matching people to jobs. The efficiency and effectiveness of corporate performance is influenced by the method in which organizations receive and process information within the hierarchy. To enable candidates to perform well within the hierarchy, they should be matched to the organizational structure. A matrix organizational structure for instance, consists of a dual authority between functional and divisional hierarchies. (Harris & Raviv, 2002) When recruiting a candidate to fill a position within a matrix organization, the recruiter should look for candidates who are qualified and know how to perform in a matrix, dual authority environment. Questions about the candidates' skills and qualifications in working in matrix hierarchy or questions assessing the candidates' ability to serve in a matrix organization, should be asked.

Using strategic foresight enables recruiters to determine the skills the candidates will need, based on both internal and external factors to perform in a specific organization structure. Thereby strategic foresight should be used to understand how the candidate's inability to perform in a specific organization design can interfere with the on the job performance. (Griffin, 2018)

External forces impacting recruitment
External forces are conditions trends and changes which are not under control of the organization, but the organization should prepare for them. Technological change, political and economic conditions and competitive behavior are some examples of external factors which influence a recruiter's approach towards matching people to jobs. (Al-Bahiri, 2015) Other factors include an aging population and decreasing pools of qualified candidates. Due to all these competing forces, recruiters must be analytical and adaptive.

Businesses need to become 'adaptive systems, working organically to find, capture interpret and act on cues from an ever-changing environment.' (Ralston & Wilson, 2006) Organizations which are able to change practices processes and methods rapidly to adapt to market turbulence, are in a better position to anticipate threat and turn them into opportunities. Imperative recruiters are able to anticipate threats by scanning their environments for ideas, trends and data that can impede the way they in which they find good candidates. (Hughes, Beatty & Dinwoodie, 2014) When scanning the marketplace, early signs of change needed to make better and more informed decisions in finding talent, can be collected. Some recruiters are able to do this, whereas others are more reactive causing that they respond to market turbulence after it has impacted the organization. Some companies blindly fill open positions, not even considering external factors, this approach leaks strategic foresight. (Hirsch, Burggraf & Daheim, 2013)

To be able to think strategically, recruiters need to have three strategic foresight competencies, which help them to strategically match people to jobs which can be seen in figure 2. Firstly, they need to use their analytical and creative skills. Secondly, they need to scan internal and external environments for trends and changes. Lastly, they should use strategic drivers as well as unpredictability.
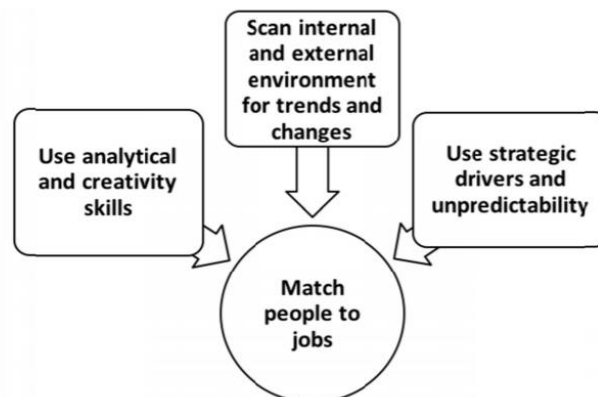

Figure 2. Source: Griffin, 2018

Analytical and creativity skills are the ability of the recruiter to be creative and analytical. Organizations can no longer rely on past methods. Traditional recruitment methods like linking candidates to jobs based on years of experience, can no longer be used. Research even supports that the number of years of work experience, does not predict performance. (Griffin, 2017) Despite this evidence, some recruiters continue to use experience as sole indicator for future performance. (Griffin, 2018) To be able to think strategically, a recruiter needs to be receptive to new ideas and different ways of doing things. Being strategic also means hiring people who can help to move the business forward in the future direction. Recruiters need to focus on candidates who do not only provide skills needed today, but also offer skills and competencies needed to meet future requirements, outside of the current job requirements. Therefore, a strategic process that is supported by analytical skills, creativity as well as innovation is required to match the right people to the right jobs. (Griffin, 2018)

The second competency for recruiters in this framework is the analytical skills. This is the ability to scan for changes and trends in the internal and external environment, which could influence or impact how they recruit and match people to jobs. (Ismail & Karkoulian, 2013) Sources like regulations, consumer behavior, public opinion, politics and science and technology should be used to anticipate what changes are coming and how these changes will impact recruiting efforts. The ability to scan environments for trends and changes is required to be able to match the right people to jobs.

The last competency is the ability of recruiters to use organizational strategic drivers and market turbulence as a competitive advantage. Differentiation from competitors should be utilized to stand out from competitors. This can vary from differentiation in products, services or a philosophy in the way they do things. One way in which recruiters can differentiate themselves is by seeking passive candidates and matching them to jobs. A passive candidate is a qualified person who is not actively seeking employment. (Talent Board, 2016) A survey performed in 2011, reported that only 10% of relevant experienced talent is looking for a role at any given moment in time. This means that 90% of candidates who are relevant for a role, are not looking for a job, and most of the times the best candidates are amongst these 90%. (Jeffery & Mckee, 2011) The focus of recruiters should be shifted to seeking passive candidates. This will cause recruiters to have more control to choose and target candidates whose qualifications and background align with the organization's strategic drivers. (Jeffery & McKee, 2011)

Recruiters need a strategic approach to match the right people to the job, since this is needed to position a company as well as to reach organizational goals. When you do not recruit the right people, a company's strategy to compete in the market fails. Thereby a strategic approach helps to decrease the chances of hiring people who do not fit the job. This helps the organization to save thousands of dollars in lost productivity as well as employee turnover and resources. Research has identified that 80 percent of turnover is caused by bad hiring decisions. (Choudbury, 2012)

Costs like advertisements, staff time, trainings and litigation expenses are amongst the costs incurred by employers when they have to replace a bad hire. When analytical and creativity skills are used to scan the environment and the company's strategic drivers and unpredictability are used to asses and find talent, sources can be invested to recruit people who match the company's performance potential. (Griffin, 2018)

Challenges in recruitment and selection

Research has been done on the tensions that exist in recruitment and selection. Identified tensions are innovation and efficiency, customization and consistency, transparency and effectiveness, wide reach, coherence and diversity and standardization. (Ryan & Derous, 2016)

Firstly, one identified tension in recruitment and selection is the desire for efficiency. Trying to innovate, while meeting organizational concerns is a general challenge. While looking at the innovations that have been made in recruitment and selection processes, most innovations are related to efficiency. However, the acceptability of applicants needs to be taken into consideration here. Some companies might want to screen individuals with just 10 questions in 5 minutes, but applicants might get the feeling that not enough thought is put into the hiring process, which is problematic as well. (Kruyen, 2015) When a longer process is explained carefully and this process is engaging and relevant to the job it might be acceptable for the candidate. Informal sources like worth of mouth might be less efficient if applicants find out about them. This is the case with employee referral bonus systems or spread information about dimensions tested in assessment center exercises.

The second problem is the desire for customization. In recruitment, technological capabilities allow visitors to career pages, to choose what information to examine and to explore content tailored to them personally, which is all customized. But what images should organizations show to attract what kind of people? And what are the advantages of customization? Little research has been done to answer this question. (Ryan & Derous, 2016)

The third problem is meeting the desire for transparency. When test criteria are transparent to applicants, the overall effectiveness of the test can be jeopardized due to job applicant's response tendencies. Self-ratings are subject to a variety of ego-enhancing biases and researchers in human resource management and organizational behavior started to turn attention to more implicit measures. The difference between implicit and explicit measures is that applicants are not aware of the constructs that are being measured. By using implicit measures behaviors can be triggered through implicit processing, outside of the applicant's conscious awareness. (Ryan & Derous, 2016)

The fourth problem is the tension for the desire for wide-reach and the desire for coherence. Companies want to make all their employees recruitment ambassadors, but there is also a desire to maintain coherence in recruitment at the same time.

Organizations have recognized that employee social media presence and social networks are important in recruitment, but there is a need to research how to effectively maintain coherence in message and strategies used by all these employees. There is a wide range of information available for both job seekers and organizations, however this information can be easily filtered and edited. Job seekers are more concerned about their social presence and online images and companies can hire others to monitor their online presence and cultivate to a certain social presence. The use of social media is viewed as important for both job seekers and organizations. (Ryan & Derous, 2016)

Desire for both diversity and standardization is the fifth problem. Desire for standardization is a basic element and is often advised to create legality as well as ease of administration and validity, but it is not universal in practice and it does not encourage diversity when focusing on standard competencies and using standard methods for selection. (Ryan & Derous, 2016)

E-recruitment

The traditional method of recruitment has been revolutionized by the influence of the internet. E-recruitment is the online recruitment of suitable candidates for the vacant jobs with help of recruitment websites. Different web-based resources are used to search, match, check review, interview and hire new applicants. The effective use of e-recruitment might require far reaching changes to the recruitment process as a whole. The web itself can be seen as a network, a group of interconnected nodes which comprise a complex system of people exchanging information for both social and professional reasons. (Allden & Harris, 2013) Resources can be saved by reaching larger pools of potential candidates and by facilitating the recruitment process with assessment tools incorporated in the recruitment software used. E-recruitment makes the process more effective and efficient and less expensive. (Malhotra & Sharma, 2016)

Advantages
E-recruitment has several advantages compared to traditional recruitment.
Firstly, it is cost-effective. Using the Internet for job advertisements is a lot cheaper than placing these in newspapers or magazines. The use of social media like Facebook can even make this step for free.
Secondly the communication is clear. When using press insertions, the company is limited to word and space limits which can lead to unclear messages. The Internet does not have a word limit and therefore details can be expressed. Thereby when using an automated application process, candidates can immediately receive feedback when they are underqualified or not suitable for the position.
Thirdly when using the internet, companies have a broader reach, which increases the chances of finding the right candidate for the job. Candidates can permit companies to keep their CV online and update the CV.

Fourthly it encourages standardization and compliance. Candidates have to provide information in a standard uniform format, which makes comparison way easier. This also encourages objective adjudication of candidates

Fifthly the appointed time is faster. When the recruitment administration is being automated, posting a job only takes a few minutes. Delivery as well as response time are immediate. Sixthly using e-recruitment is a green solution, since all the compilation and filing is done electronically. (Malhotra & Sharma, 2016)

Assessment

Well-developed assessment instruments can have a direct and positive impact upon organizations, by helping to guide staffing decisions. It increases productive, learning, job satisfaction and customer service and it decreases turnover, absenteeism, theft and disruptive behavior. Depending on the goals and objectives of the organization, assessments may be used for a variety of purposes. Applications of assessment instruments in talent acquisition include screening, selection, fit appraisal, on-boarding, development and success planning. The role that the assessment information plays is impacted by the size of the examinee pool and the complexity and impact of the job. (Reynolds & Weiner, 2009)

Assessment programs are most beneficial when they are aligned with an organization's goals and needs. When establishing the assessment program, it is important to start by asking questions like; What are the workforce concerns that the program wants to address? What are features and requirements of the program? What are indicators which determine whether the program is helpful? (Reynolds & Weiner, 2009)

Assessment tools should possess two essential qualities. These are validity and reliability. When developing and using assessment instruments, validity is the most important consideration. Validity can be defined as 'the degree to which evidence supports the interpretation and use of assessment scores.'(American education research association, 1999) A test is not valid per se, but it is rather the interpretation and use of the test score that has validity for a specific purpose. Validity evidence may support the use of scores on a personality test, to predict successful performance in certain managerial competence areas. But it may be of limited use to predict the ability of a candidate to learn in a new hire training program as for example a call center representatives. Validity can be established by using several methods, there are two main approaches which are widely used and accepted to test validity. These are content-based validation and criterion-related validation. (Reynolds & Weiner, 2009)

Content validity can be established by demonstrating that the assessment instrument represents important elements of the job, these include knowledge, skills, tasks and work behavior. The degree of match between the test and the job content, is an important part of establishing content validity.

Ideally the content approach to validation is suited to situations in which the assessment technique closely mirrors the activities and knowledge required by the job. Examples of assessments which are often content valid are job simulations (role play), skills tests (math, office software) and knowledge tests (sales techniques). (Reynolds & Weiner, 2009)

Describing the job content domain in well-defined elements of knowledge, skills or behavior is an important step in content validation. The involvement of subject matter experts like managers or trainers of job incumbents here is important. They develop and review test questions, to ensure that they are accurate, appropriately difficult as well as representative for the particular job. Via the review process, content validity is established, which creates linkages between the content of the job and the content of the assessment. (Reynolds & Weiner, 2009)

Criterion related validation is established by studying the relationship between test-scores (predictors) and measures of job success (criteria). Criteria may include ratings of job performance, productivity indices, sales results and sales results. This validation approach is widely used for assessments which are designed to produce performance potential, like cognitive ability and situational judgement tests. These types of tests will be discussed later on.

Reliability is a second important asset that assessment instruments measure in order to be effective and useful. Reliability is the degree of stability, precision and consistency in measurement. The more reliable the measure, the more stable, consistent and precise the scores will be. Assessment tools are used to measure certain characteristics of people, therefore the degree of reliability we can expect should be known. (Reynolds & Weiner, 2009)

Measurement errors
When using assessment instruments and procedures, there are a couple of potential sources of measurement error that are of concern;
Instability: People are not always consistent, this causes that changes in the characteristics that are being measured can affect scores obtained from one time to the next. Changes in a person's motivation can cause differentiation in how he/she performs in certain tests. These changes can cause the reliability of tests to be low. (Reynolds & Weiner, 2009)

Content sampling: Shortfalls in the way the test samples from relevant skills, behaviors and characteristics may affect scores. A knowledge test for example may not cover specific subjects well enough, when an alternate version of the test is given candidates may tend to score differently. This limits the ability to test the examinee's subject matter expertise.

Administration: Inadequate instructions towards candidates can cause some candidates to perform poorly, while under supervised Internet-based testing might cause candidates' scores to fluctuate as well. This problem will be discussed in more detail later.

Scoring: Biases in observing or scoring responses may affect scores. This is especially a concern for assessments which involve evaluators and scoring processes which are based on judgements, like interviews or simulations. (Reynolds & Weiner, 2009)

Recruitment tools

It is hard to judge when assessment programs are affective and add value. To be able to do this you need to understand the essential elements of effective measurement. Assessment focuses on knowledge, skills, abilities and other personal characteristics (KSAO's) which are required to successfully perform job tasks and to demonstrate required competencies. Knowledge is job knowledge needed to perform the work on the job. Skills include the level of proficiency on a specific task or group of tasks. Ability is the domain of cognitive, perceptual and psychomotor or physical functioning. Personal characteristics are traits, attitudes or dispositions which describe the individual. Lastly competencies are related behavior which may require any combination of enabling KSAO's. (Reynolds & Weiner, 2009)

These KSAO's can be pictured as an iceberg, using the iceberg model of human characteristics. Above the surface, the visible part, you see behavior and outcomes like competencies skills and knowledge. Below this surface lie underlying capabilities and attributes like abilities, traits motivation and interest. (Reynolds & Weiner, 2009)

To get to know the current state of a candidate's proficiency in a subject or set of tasks, knowledge and skills assessments are useful.
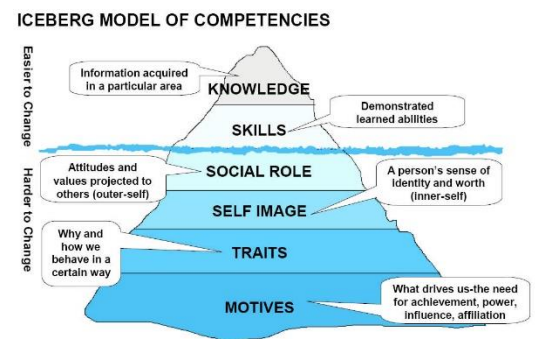
Figure 3. (Reynolds & Weiner, 2009)

Depending on the nature and complexity of the job, skills and knowledge are a requirement and important to assess before hiring a candidate, or can be learned during initial on the job training. To measure a candidates' future potential assessment of abilities, personality traits and attitudes are useful. Professionally developed instruments, which will be discussed later, can help to measure and assess candidate potential, since it is difficult to know these by talking to candidates or by reviewing their resume. Personal characteristics as well as abilities are both general and enduring. General since they underlie the development of various competencies and enable the performance of a wide range of tasks in different contexts. On the other hand, they are enduring since they are a combination of long-term developments taking place during the formative years of development and they are inherited as well. They do not quickly change once they are developed and therefore are not amenable to train in the short term. (Reynolds & Weiner, 2009)

To measure these KSAO's, different types of assessment tools can be used. A lot of meta research has been done on the predictive factor of different ways of recruitment. (Bloemers, 2014) These range from interviews to psychological tests, years of education and GMA tests.

GMA tests included verbal and numerical reasoning as well as abstract tests. While doing meta research, several different researches are brought together to make sure situational circumstances have a small influence on the result.

The following table gives an overview of the predictive ability of different factors being tested in selections:

Predictive Validity for Overall Job Performance of General Mental Ability (GMA) Scores Combined with a Second Predictor.

Personnel Measure	Validity (r)	Multiple R	Additional validity from adding a second predictor	% Increase in validity
GMA tests	.51			
Interview (structured)	.51	.63	.12	24%
Job knowledge tests	.48	.58	.07	14%
Integrity tests	.41	.65	.14	27%
Interview (unstructured)	.38	.55	.04	8%
Assessment centres	.37	.53	.02	4%
Biographical data	.35	.52	.01	2%
Conscientiousness tests	.31	.60	.09	18%
Reference checks	.26	.57	.06	12%
Job experience (years)	.18	.54	.03	6%
Years of education	.10	.52	.01	2%
Interests	.10	.52	.01	2%
Graphology	.02	.51	0	0%
Age	-.01	.51	0	0%

Source: Adapted from Schmidt and Hunter (1998, p.265)

Figure 4. (Schmidt & Hunter, 1998)

GMA tests
GMA tests or intelligence tests are used as basic ingredient or rock bottom of the assessment. This is because intelligence tests predict best what someone will be able to do in his/her function and it is compared to other methods relatively cheap. GMA tests cost around 40/50 euros per candidate including an automatically generated report. Intelligence tests are often used in mid and top range functions. Most tests assess a combination of reasoning, verbal and quantitative skills or discipline-specific knowledge. These tests are correlated, which means that those who do well on a test with content like mathematics will tend to do well on tests including verbal skills. Test scores reflect developed abilities, and are a function of talent, learned knowledge and skills, but also include environmental factors. Scores on cognitive ability tests are strongly related to success in jobs. They predict outcomes in all jobs including overall job performance, objective leadership effectiveness and assessments of creativity. When training and jobs are cognitively complex, the strength of the relationship between test scores and performance increases. (Ones, Viswesvaran & Dilchert, 2005)

Situational judgment test
Situational judgment tests present respondents with work-related situations and ask them how they would handle that situation. They have become popular among industrial and organizational psychologists in the past 20 years. (Ployhart, MacKenzie, 2011)

This is because situational judgment tests exhibit strong criterion-related validities, but tend to exhibit smaller racial and sex subgroup differences and are more face valid. They measure several different types of construct, and are multidimensional measurement methods. Situational judgment tests are context-bound. These contexts may be fairly generical to be able to be applied to different firms. They are similar to computer-based simulations. Situations can be either described or presented in a video-based format. When the instructions ask what someone should do in a situation, the test functions like a maximum-performance test since it focuses on the ability and knowledge. When questions are asked about what someone would do the test is more like a typical performance test. Situational judgment tests are often used by firms who want to make a systematic change in terms of values and knowledge, skills and abilities. It may also simply be a device that reinforces the status quo by selecting applicants with values and perspectives similar to incumbents. It might for example function as a form of realistic job previews, which might potentially turn away applicants whose values might not fit the company. Some companies might perceive this as desirable whereas others who want a more heterogeneous culture might perceive it as undesirable. (Ployhart, MacKenzie, 2011)

Situational judgment tests are moderately strong predictors of supervisory ratings of job performance, but little is known about the factors that may affect criterion-related validity. It is not known whether these tests are predictive of criteria like organizational citizenship behavior, objective criteria or counterproductive work behavior. Thereby it is unknown whether the tests will maintain validity in the long-term and compared to other instruments the test does score low on validity. (Figure 1 appendix)

Thereby there are small to moderate racial and sex subgroup differences. The cause of these differences could be due to lower internal consistency reliability, cognitive loadings or other factors. Racial subgroup differences could be reduced by lowering reading requirements. It is however unknown why the differences exist and understanding the cause of the differences is likely to be complex due to the multidimensional nature of the test.
It is likely that appropriate responses to a situation are culturally bound. People in collectivistic cultures might endorse options that favor group harmony, whereas people from individualistic cultures might endorse options that favor personal achievements. (Bloemers,2014)

Moral reasoning tests
Moral reasoning is the process involved in making decisions which involve morally doubtful situations. Tests including ethical or moral dimensions often do not make part of the standard selection processes. This is interesting to see, considering the fact that an unethical person can cause a lot of trouble to an organization. Thereby moral reasoning tests have an advantage over personality tests since they minimize the effect of bias. (Proroković, Nikolic & Simic, 2016)

Personality tests
After discovery of the Big Five, a lot of personality tests have been developed. (Reynolds & Weiner, 2009)
The big 5 consists of the following 5 behavioral dimensions (Boudreaux & Ozer, 2015)

1. Openness: People scoring high on openness are open for new experiences, are always discovering new things, and have their own opinion about subjects. Their opposites enjoy well known situations and are more practically oriented.

2. Conscientiousness: People who score high on conscientiousness apply with the rules and like to plan. People who score low on this dimension will procrastinate, are chaotic and will not stick to the rules.

3. Extraversion: People scoring high on this dimension are open, enjoy company, are easygoing and can easily connect with other people. Introverts prefer to be on their own and stay on the background.

4. Agreeableness: People scoring high on this dimension like to help others, are empathetic and trust others. Opposites are unfriendly and focus on themselves.

5. Neuroticism: People who score high on this dimension stay calm under pressure, and can deal with tensions and criticism, they are emotionally stable. Emotionally unstable people are tense, change moods and panic easily.

Personality is quite a stable factor, which is not easy to change. You cannot just swop your personality according to the circumstances. To be able to get to a solution in a simulation, openness and agreeableness are important factors next to intelligence. However, these skills are hard to learn. Experience and knowledge can be gained through work experience which gives candidates with more experience an advantage over fresh graduates. Assessors need to take this into consideration. (Bloemers, 2014)

Most of the personality questionnaires are based on either the Big five or the big six. The predictive value of these tests is limited, especially compared to intelligence tests. An exception are questionnaires about integrity, which have a relatively high predictive factor. The relatively low value of personality questionnaires, is caused because the situation plays a big role as well. Personality is not just the total picture of the behavior a person will show, since this is also highly influenced and dependent on the situation. The most important limiting factor in personality questionnaires is the fact that most questions are about behavioral aspects and self-judgement. These tests are developed to gather scores which are valid predictors of relevant criteria across large samples, but it is not uncommon for individual's scale scores to be invalid due to faking. (Lambert, Arbuckle & Holden, 2016). Faking is defined as 'intentional misrepresentation in self-report.' (Holden & Book, 2012)

This can be solved by asking a partner or colleague to fill out the questionnaire and compare them or use information which can be found online. An issue here is that withour your permission a profile is being created about what can be found about you online. This is a tendency that will increase in the future, and might make the use of personality tests unnecessary. However, it is unsure whether this will solve the problem, since people can influence their online profile as well. (Bloemers, 2014)

It is not uncommon for an individual's scale score on a personality test to be invalid, due to socially desirable response. Socially desirable response is answering in a way that you expect to be viewed favorable. It is a two-dimensional construct, comprised of self-deception and impression management. Self-deception can be defined as a covert manipulation of how one perceives themselves, whereas impression management in this context refers to one of two types of response bias; this can be either a response style akin to a stable personality trait and not to a collection of physical behaviors or a response set based upon testing conditions or internal motivation. (Miller & Ruggs, 2014)

To detect socially desirable responses various indices can be used. The Marlowe-Crowne Social Desirability scale used to be the most popular method, however currently the Balanced Inventory of Desirable Responding is considered to be the gold standard. The MCSDS contains 33 true false items concerning everyday behaviors. Out of these items 18 are considered attribution items. The 'true' response awards a respondent one point, which indicates a stronger tendency to respond in socially desirable ways than someone who would have responded false to that question. An example of these attribution items includes 'before voting I thoroughly investigate the qualification of all the candidates.' These items refer to socially approved but uncommon behaviors. (Vésteinsdóttir, Reips, Joinson & Thorsdottir, 2015) When people score high on these dimensions, it indicates that the respondent is presenting him/herself in an unrealistically favorable way.

This method is viewed as more sensitive, since during its development newer theoretical and empirical understanding of SDR and more sophisticated multivariate techniques have been incorporated. The efficacy of both the MCSDS and the BIDR have been compared, and research has indicated that MCSDS should be retained.

Although the MCSDS is commonly considered to be outdated, since it is more than 50 years old and since its development, its item selection procedures have changed overtime, which might make them less applicable today than originally, the MCSDS is still preferred. The reason for this is that it captures elements of faking more effectively than the BIDR scale. It better distinguished individuals faking good and those faking bad from individuals following the standard instructions. (Vésteinsdóttir et al., 2015)

Person-Organization fit tests
Person-organization fit tests assesse the compatibility between an individual and an organization or culture in which he or she works. Chatman (1989) operationalized P-O fit as the congruence between employee and organizational values. Chatman and colleagues developed the Organizational Culture Profile (OCP). This is a value based instrument which can be used in the selection process. This instrument checks whether applicants' values are compatible with organizational values. When a company selects for innovation for instance, the OCP can be used to assess whether values of creativity and innovation are for similar importance to the candidate as they are to the rest of the organization. A significant relationship between person-organization fit with job satisfaction and organizational commitment has been found. Research has identified that the more closely aligned a candidate is to the innovative culture, the more satisfied and committed he or she will be to the organization.
When an individual is perceived as a poor fit, psychological, physiological and behavioral strain can be experienced. Strain is the individuals psychological, physical and behavioral response to stressors. If a culture does not allow for innovation and creativity where the candidates goal is to be creative and innovative in the workplace, it is likely that the candidate exhibits some source of strain on the job. (McEntire & Greene-Shortridge, 2011)

Integrity questionnaires
Integrity, or a lack of integrity seems to be a rising problem in our current society. Due to all personnel fraud, people estimate that companies have fees of 2 to 4 billion on a yearly basis. (Bloemers, 2014) This causes that assessment companies as well as test organizations currently develop integrity questionnaires. These questionnaires focus on contra productive behavior. The focus on integrity is important to prevent that people in the organization show behavior that is harmful for the organization, for the productivity and for the society. The predictive factor of integrity questionnaires is high and next to the intelligence test it scores high on predictability of behavior. According to a research done by Dirks and Ferrin, the trust in your direct manager is more important than the trust in the general management, which shows how important integrity is within an organization. (Bloemers, 2014)

Role plays

Tests like personality as well as intelligence tests have always been an indirect measure to predict behavior. However, when using a roleplay or assignment, people can see the actual behavior of the candidate. Thereby you can get an impression of the interpersonal skills of the candidate. Interpersonal skills, form next to intelligence an important element of the employability. Within roleplays or simulations, the candidate needs to individually or within a group, make some practices or simulations. This can be together with other candidates, in a face to face conversation with a professional psychologist or with an actor. Different assessors will criticize the candidate while doing this. These use a list of competences or dimensions on which you can score points, for instance going from 1-10. (Bloemers, 2014)

Personal interviews

One of the most widely used selection methods in the past years is still the regular employment interview. It is rare or even unthinkable for someone to be hired without some type of interview. (Huffcutt & Culbertson, 2010) The interview is a selection procedure, designed to predict future job performance, based on applicants 'oral responses to oral inquiries. Managers and personnel officials tend to believe that the interview is valid for predicting future job performance.
An employment interview can be defined in different ways. It has been defined as a 'face-to-face interaction, which is conducted to determine the qualifications of a given individual for a particular open position. (Huffcutt & Youngcourt, 2007) But also as a personally interactive process, of one or more people asking questions orally to another person, and evaluating the answers for determining the qualifications of that person to make the employment decisions. (Levashina, Hartwell, Morgeson & Campon, 2014) However nowadays the interview is not just limited to face to face interactions, since it has been expanded to other types of media like telephone, computer mediated and video chat interviews. Interpersonal interaction can be both immediate (or synchronous) or delayed (asynchronous) interaction. When the interaction is synchronous, both the interviewee and the interviewer participate in the interview in a fixed time. In asynchronous interaction, they both participate in their own schedule. This happens when the interview is recorded and the decision maker watches the video to evaluate the applicant in order to make a final decision. (Huffcutt & Youngcourt, 2007)

The personnel interview serves several purposes. It can be seen as a social process. Here the social nature of the job interview, allows the interviewer to communicate the benefits of the organization to the interviewee and assess how the applicant would fit into the culture of the organization. This social nature can also be useful in selecting candidates. Things like verbal abilities, and personality traits, which quite often predict the job performance, can be assessed during a free exchange of information. Although on the other hand this social interaction can result in stereotypes and biases that influence the effectiveness of the personnel interview. In one to one interpersonal interactions, people assume that the other is judging him or her based on salient stereotypes.

Within the job interview, both verbal and non-verbal communication can induce perceptions of bias and discrimination based on past experiences. This can influence the performance of the applicant and the organizational decision making.

From the candidates point of view, the personnel interview plays an important role in forming an opinion about the organization. Per the signaling theory, in the absence of more information, candidates will look to whatever information is available when forming their opinion about the organization. Signaling theory is the theory in which one party, the sender, chooses whether and how to communicate information to another party, which is the receiver, who chooses how to interpret the signal. Applicants will assume that biases communicated by interviewers, may hold true for the whole organization. Therefore, what happens in the interview is likely to influence the way applicants feel about the organization and their anxiety and trust about the recruitment process. The perception about the interviews taking place later in the recruitment process, may affect candidates job choice decisions and initial work experience. Perceptions from interviews earlier in the process, will on the other hand affect candidates' performance on any other selection activity. (Bragger, Kutcher, Schettino, Muzyczyn, Farago & Fritzky, 2016)

Three main types of interviews exist, depending on both content and degree of structure. The most used personal interview is the conventional unstructured interview. This is an informal conversation between a candidate and an interviewer. The interview formulates different questions and does not follow any scripts. Structured conventional interviews are interviews in which the interviewer uses a script or guidelines for the interview, and it mostly includes questions about technical skills, self-evaluations, credentials and experience. The last types are structured behavioral interviews, in which the interviewer focuses on past behavior. (Alonso & Moscoso, 2017)

Behaviorally based interviews
Assessing past performance through behaviorally based structured interviews is a successful approach to predict the future performance of a candidate. (Pulakos & Schmitt, 1995) Recruiters can customize these interviews to specific organizations and jobs, and candidates perceive them as one of the fairest selection procedures. (Moscoso, 2000) By using behaviorally based interviews, the performance of the candidate's employment situations in the past can be discovered. Every question can be tailored to a competency specific for the job. Both leadership and competency models are used by a lot of organizations in selection, training and development contexts. Competences should be mapped to behaviorally based interview questions, appropriate for the job level. When the interview targets a mid-level candidate, recruiters should focus on questions assessing previous experience on a project or area. When interviewing higher level or executive leadership, the focus should be on things like organizational vision as well as strategy.

The questions lead the interviewee to answer the questions by explaining situation or contexts in which the competency has been demonstrated by explain actions taken and the results of these actions. These answers should preferably be given by using the 'STAR' method, which will be discussed later. These types of interviews are ideally conducted in a panel form, with about 2-4 interviews who are able to evaluate the candidate on each competency. (Moscoso, 2000)

Structured interviews
Structure can be defined in many ways. Structure can be defined as any enhancement of the interview that is intended to increase psychometric properties by increasing standardization or otherwise assisting the interviewer in determining what questions to ask or how to evaluate responses. (Campion, Palmer & Campion, 1997) Structure can also be seen as the degree of discretion that an interviewer is allowed to use in conducting the interview. Two dimensions exist here which are standardization of interview questions and standardization of response scoring (Huffcutt & Culbertson, 2010)

Structure can be used as a solution to bias in the job interview. More highly structured interviews provide more systematic procedures for getting job-related information from the candidate and for evaluating the candidates' performance and making the decisions. The reliability of structured interviews, is consistently reported as higher than that of unstructured interviews. For an interview to be highly structured several steps need to be taken. (Campion, Pursell, Brown, 1988)

Firstly, highly structured interviews include the development of questions based on a job analysis. All questions in an interview must be clearly job related. Any method of job analysis can be used within the interview, as long as it includes a determination of knowledge, skills, abilities and other requirements upon which to base the interview questions. (Campion, Palmer & Campion, 1997)

Secondly, questions should not be focused on higher level jobs or on jobs or skills that the candidate will learn through development and training within the job. A variety of questions including questions on the job knowledge, job samples and simulation questions can be used. Samples and simulations enhance both face validity as well as criterion related validity and avoid bias. Face validity is the extend to whether the test 'looks valid' to the examinees who take it, the administrative personnel who decide on its use and other technically untrained observers. (Bornstein, 1996) Questions on background (like experience and education), willingness questions (willingness to relocate) are often used in interviews as well. They are used as warm-up questions as well as realistic job previews. (Campion, Palmer & Campion, 1997)

Thirdly, the same questions should be used for each candidate, this means that there is no prompting or follow up question, unless the questions are being repeated. (Campion, Palmer & Campion, 1997)

Fourthly, anchoring of the rating scales for scoring answers with examples and illustrations is being used. A scoring system for each question is being developed by generating examples or definitions for good, marginal and poor answers. This could be done by brainstorming potential answers or asking job experts for example answers they have heard that distinguished different levels of performers. (Campion, Palmer & Campion, 1997)

Fifthly, it is good to have an interview panel recording and rating answers. Using an interview panel reduces the impact of idiosyncratic biases that single interviewers might introduce. Preferred is to include job experts that helped designing the interview questions. Three members are ideally used, including supervisors of the job that needs to be filled and a personnel representative. It is most fair to use the same representatives for all questions. (Campion, Palmer & Campion, 1997)

Sixthly it is important to consistently administer the process to all candidates. The same panel members should conduct all the interviews. Questions, answers and the candidates themselves should not be discussed in between. When all interviews for the same job are complete, large discrepancies between ratings should be discussed. By extensive note taking of panel candidates, memory decay for candidate answers can be avoided. To ensure equal weighting, the ratings and items are averaged. It is important to do the interview in a comfortable interview setting, and make every attempt to conduct interviews as non-stressful as possible. (Campion, Palmer & Campion, 1997)

Finally, special attention is given to job relatedness, fairness and documentation in accordance with testing guidelines. Components of the interview that need documentation are the job analysis and the interview development procedure, the candidate responses and their scores, the evidence for content or criterion-related validity and the adverse impact analyses. (Campion, Palmer & Campion, 1997)

Although structured interviews may result in better selection decisions, and consequently in better employee performance and therefore higher organizational profitability, structured interviews are infrequently used in practice. (Dipboye, 1997) There are several reasons that explain the underutilization of structured interviews within the recruitment process. (Van der Zee, Bakker & Bakker, 2002)

Firstly practitioners might not know about the literature that exists, supporting the use of structured interviews. And even if they know about it they might question the relevance, credibility and practical use of this literature. (Van der Zee, Bakker & Bakker, 2002)

Secondly it has been argued that important interviewer needs are frustrated within structured interviews. This can be for example the need for autonomy and the need for power. While using a highly-standardized procedure, interviewers can view their work as a boring monotonous exercise, whereas unstructured interviews are more challenging. (Van der Zee, Bakker & Bakker, 2002)

Thirdly the ability to recruit applicants might be harmed when using structured interviews. Interviewers who are more attentive, warm and socially perceptive are favored by candidates compared to interviewers who are not. Unstructured interviews allow the communication of these qualities better than structured interviews. (Van der Zee, Bakker & Bakker, 2002)

Concerning this point some more specific research has been done on the questions what the candidates prefer. There is some empirical evidence showing that candidates evaluate unstructured interviews more positively than structured interviews. (Latham & Finnegan, 1993)

Fourthly the limited use of structured interviews might be caused by social pressures. Using structured staffing practices might be perceived as incongruent with or counter to the philosophy or objectives of the organization. Therefore, use of structured interviews might be disapproved of by the organization. (Van der Zee, Bakker & Bakker, 2002)

Lastly budgetary or time constraint reasons might prevent the adoption of structured methods. Structured methods costs both more time and money than unstructured ones. HR managers or executives may be unaware or might not believe in the potential payoffs of using structured method and they might lack a background or knowledge of human resources management, and may therefore lack the skills and expertise needed to implement structuredinterviews. (Van der Zee, Bakker & Bakker, 2002)

In structured interviews, the purpose of structure in increasing fairness and job relatedness is often not explained to the applicants. An explanation about the job relatedness of interview structure results in more positive evaluations of the structured interview. In non-structured interviews the reason behind the questions that are being asked is often not explained to the applicants, but they understand that they must present their best impression to the interviewer. Applicants may hold the same general understanding for structured interviews, but it is not common knowledge that the job interview is structured to increase predictive validity and decrease bias. When interviewers do not explain the purpose of the structured interview, the methods that are being used, like the note-taking, the form-completing, and the complex questions, make the experience feel difficult and evaluative. However, when interviewers explain the purpose of the structure, the applicant's sense of control can be maintained. Explaining the candidate that steps are being taken to reduce non-job related evaluation and improve fairness, could increase efficacy about performance during the interview.

Thereby it assures the candidate that he or she will indeed be evaluated bases on job qualifications rather than historical stereotypes about ethnicity or sex. (Tsai, Chen, Cheng & Tseng, 2016)

Highly structured interview norms within organizations are hard to form. In the early 2000's most interviewers and organizations were still using low structured interviews, and there is no evidence to suggest that this has changed overtime. Interviewer preferences, in addition to external environmental factors, affect the interviewer's actual interview behaviors.

It is therefore important to identify personal factors that affect interviewer's intentions to use high structured interviews and when these effects are strengthened or weakened. Personal contact and ease of preparation of the interview, can influence the intention of the interviewer to use low or high structured interviews. (Tsai et al., 2016)

Interview length
Often first impressions are seen as a biasing factor. They are seen as prevention for an interviewer to form a comprehensive assessment of the applicant. Pre-interview impressions which are based on test-scores and application forms, may cause assessors to try to confirm the initial impression. During the rapport-building phase of the interview, initial impressions can be formed, even in the absence of pre-interview information. The initial impressions might provide some benefit. Research indicated that the interviewers' initial evaluation of competence from the rapport-building phase, could predict the overall interview score of candidates, after controlling for candidate GPA, the initial evaluation of liking as well as similarity, and it could predict the number of internship offers. This shows that through the rapport building phase, interviewers acquire useful information which indicates that there is a value in initial impressions. (Barrick, Swider & Stewart, 2010)

When interviewing candidates, three sources of error can be found, these are random response error, transient error and conspect error. (Huffcutt, Culbertson & Weyhrauch, 2013) Random response error is the variability in responses to similar questions in the same interview. Transient error is the variability in responses to similar questions in different interviews. Conspect error is variability across interviewers in how they interpret and evaluate candidates' answers. Thereby inter-rater reliabilities in the employment interview exist. This can be based on different interviewers observing the same behavior which is for instance the case in panel interviews, or different interviewers observing different behavior, which can be the case in separate interviews. These both account for interviewer differences and only the latter accounts for inconsistency in the performance of the applicant. Panel interviews scored much higher on inter-rater reliability than separate interviews. Thereby structuring the interview was positively related to inter-rater reliability for both panel as well as separate interviews.

Cognitive ability as well as personality traits are likely to be assessed during an employment interview. These conducts are strongly related to job performance. Whether the length of an interview affects the validity depends on the ability to accurately assess personality traits and cognitive ability with increasing exposure. The ability of interviewers to assess personality in a 30-min employment interview, was examined. Comparisons have been made between personality ratings based on a 30-minute interview to ratings made by interviewers after observing a 15-second video clip and to ratings made by close friends. The interviewers' ratings after the 30-minute video correlated with self-ratings for three of the five personality traits, which were extraversion, agreeableness and openness to experience. Strangers ratings based on the 15-second video did not correlate significantly with any of the Big Five traits.

This shows that some personality traits like extraversion can be assessed accurately in a 30-minute video whereas other traits like conscientiousness are harder to assess. Increasing the length of the interview might not be enough to yield disclosure of high-quality information needed to increase self-other agreement. (Barrick et al., 2006)

Research by Thorsteinson identified there is little to no relationship between interview length and reliability or validity of the interview. (Thorsteinson, 2017) This causes that organizations might be tempted to reduce the length of the interview to reduce costs. However other factors could be negatively affected when decreasing the lengths of the interview. Applicants can react negative since they might feel they are not get a sufficient opportunity to show themselves and their skills and abilities. Thereby there might not be sufficient time to answer candidates' questions about the job and the company.

Assessment centers

The term assessment center refers to both, the program in which candidates are being tested on their skills for a position, as well as the method that is being used to test these skills. Assessment centers can use different techniques ranging from online-discussions, interviews, social media interactions, peer evaluations and performance and educational tests. Candidates are responding to certain stimuli, make decisions and are engaged in activities designed to test certain types of behavior, assessors observe them in on-line and co-located spaces. (Tansley, Hafermalz & Dery, 2016) Assessment is a standardized evaluation of the behavior of candidates, based on multiple inputs. Trained observers and techniques are used and judgements are made about behavior mostly from developed assessment simulations. Throughout the assessments, some rules are clear and others are hidden which results in the candidate mostly playing blind. Judgements are discussed in a meeting among the assessors or by statistical integration processes. The evaluation of the dimensions is being agreed upon by the assessors. Combination methods should be validated in accordance with professionally accepted standards. (Guidelines and ethical consideration for assessment center operations, 1989) Therefore these types of talent assessment centers are inherently related to gamified processes.

Candidates are required to occupy a state of liminality in a liminal space, they are neither outside nor incorporated into the organization, but they are being tested on how well they learn and adapt to an unknown environment. The idea behind the assessment center is that the way in which participants adapt to changes, is the way in which they will adapt to changes in the organizational and industrial context. (Tansley, Hafermalz & Dery, 2016)

Assessment centers are regularly used by companies, however they are expensive. The question arises whether the costs weigh up against the benefits of doing an assessment compared to a regular selection interview. In an American study done in 1986, the added value of assessment centers was being researched within several governmental institutions.

Performances of different employees were measured based on work-samples and their superiors gave an evaluation about the overall performance. On average employees that had been assessed in an assessment center could handle almost 10% more work, which was according to the researchers caused by a better election. (Schmidt, Hunter & Outerbridge,1986)

Consideration for different types of assessments
When planning assessments, a number of key factors need to be considered. These include the size of the program, the job type and level, the purpose of the assessment, the validation requirement and the legal defensibility. (Reynolds & Weiner 2009)

The volume of candidates constrains the types of assessment that are feasible. High volume staffing programs require optimum efficiency in delivery, scoring and application of decision criteria, to be able to accommodate the need for speed and high capacity processing of candidates.

Thereby the job type is important to take into consideration when choosing the assessment type. The higher the level of the job. The more in-depth the assessment will be, and the less likely it is that the information will be used for purely mechanical decision-making. The trends are driven by two factors which are practical constraints and the impact that the job has on the organization.

Lastly it is important to make sure that the testing program used is effective in identifying suitable candidates and the use of an assessment tool should be legally defensible, which means being able to show that the assessment tools you use are valid and being able to defend why you use them. (Reynolds & Weiner 2009)

Online forms of recruitment techniques
One of the results of the recent technological developments and the increased use of internet based applications is the emergence of video resumes. A video resume is a short video-taped message in which applicants present themselves to potential employees on requested knowledge, skills, abilities and other characteristics like motivation and career objectives (Hiemstra, Oostrom, Derous, Serlie & Born, 2012)

Video resumes and job interviews share some characteristics, but they are not exchangeable. Firstly, they are both denominators for tools that vary in their goal and content, this is to present personal information to employers. This typically includes important educational and professional background information like academic background, work experience and extracurricular activities, which is comparable to a paper resume. Software skills and other relevant skills can be presented as well as someone's motivation to apply. These skills can be tailored to the skill that the company is looking for. (Hiemstra et al., 2012)

Video resumes vary widely in format characteristics, due to the new opportunities that arise with the use of multimedia. This can range from a predefined set of questions which need to be answered, a presentation of relevant work examples that present the relevant job skills or a verbal description of skills and accomplishments. There is no standard for the perfect length of a video resume, but they are mostly short.

The degree of standardization used differs considerably. Employers can offer candidates the choice to use a video resume but they can also oblige them to create one. Thereby there can be a structured approach, so the video will be structured depending on whether applicants have to present the same type of information to potential employers. It also depends on the tools used to evaluate the video resumes. When there are no content requirements, the nature of the videos may vary a lot. The structure will be unique for each candidate, however when job related skills are required they might be more similar. (Hiemstra et al., 2012)
Interviews are either face-to-face, via phone or digital, whereas video resumes are only web-based. Therefore, the interactivity of video resumes is limited. It is difficult to give feedback and the feedback that is being given is afterwards, since communication is just one way. (Hiemstra et al., 2012)

However, there are also two facets that make video-resumes resemble the traditional interview. Video interviews allow candidates to transmit more dynamic information about themselves, including both visual/ non-verbal and auditory/verbal information. (Potosky, 2008) Thereby video resumes allow the participant to tell about their knowledge, skills and abilities instead of just showing it on paper. It can be said that the information that is exchanged through video resumes resembles that of a traditional interview, although it is just one way. Applicants get to show their motivation and present relevant knowledge and skills, just like a traditional interview.

Candidate experience with video resumes
A couple of years ago, there was resistance for video interviews. Not only because a lot of candidates did not have a webcam, but also due to internet issues. Today the webcam is almost obsolete because people start to use laptops and mobile devices with built-in cameras. Although it becomes easier to make a video resume, not all candidates feel comfortable on camera and some prefer a more personal experience. However, it is nowadays widely accepted that the video interview takes place, to showcase soft skills. (Sellers, 2014)

Several studies among applicants have been done to research their view on video interviews. Although discriminatory concerns existed, fairness of video resumes was perceived equally or more positively by ethnic minority applicants compared to ethnic majority applicants, when compared to paper resumes. Applicants with a relatively weak labor market position, may prefer a more personalized way of applying. Therefore, they might prefer video resumes over less personalized ways like paper resumes.

On the other hand, highly educated traineeship applicants prefer paper over video resumes, in terms of fairness and procedural justice. (Hiemstra et al., 2012) The type of personality played an important role in this finding, showing that extraverted applicants perceived better opportunities to perform when using video resumes compared to introverted applicants.

A study performed studied the effect of resume format on candidate evaluation and resume outcomes. (Waung, Beatty, Hymes & Mcauslan, 2010) This study was performed among a group of MBA students. When the applicants were evaluated based on their video resumes, they were rated as less open, extraverted, attractive, socially skilled and mentally capable and were viewed as more neurotic, compared to their evaluation on their paper resumes.

Cost effectiveness of video resumes
Screening video resumes may be time consuming, especially compared to screening paper resumes. However, if video resumes allow more effective selection in the first round, using it may be more cost effective in terms of second round interview time. Research found that 43% of participants thought that the use of video resumes could speed up the selection process. (Hiemstra, 2013) Video resumes for example are easy to use and allow to easily asses the representativeness of the applicant before inviting him or her to the job interview. Thereby one HR manager mentioned that he preferred to spend a few more minutes on screening video resumes to prevent inviting false positives to the interview, which happened with screening paper resumes only. (Hiemstra & Derous, 2015)

The effectiveness also depends on the size of the applicant pool and the selection ratio. When the applicant pool is small and the selection ratio is high, most applicants will be invited for an interview. The added value of video resumes will therefore be limited. The use of video resumes is more beneficial when the number of applicants is high and the selection ratio is low. When thousands of applicants apply for a job, automated paper screening might be beneficial at the start of the process. When the applicants with suitable paper resumes are selected automatically, the video resumes of the selected participants can be viewed. Thereby video resumes might be more cost effective in global recruitment, since opportunities for face to face interaction are limited due to time and distance. (Hiemstra & Derous, 2015)

In this part the use of video screening compared to paper resumes is discussed, however the practice of resume screening is still debatable, since other instruments like cognitive ability and situational judgement tests can be used as well. (Hiemstra & Derous, 2015)

Cheating, reactions and performance in online testing

Cheating has always been a problem with high-stake assessment programs. Due to several developments, the attractiveness and practicality of using the internet for employment testing has increased. Internet based testing is more scalable and efficient than pencil and paper tests.

Costs associated with printing, distributing and scoring additional tests when more applicants receive them are not incurred. Thereby a wide range of applicants may be reached more efficiently since tests can be taken at the applicants' time and location of choice.
However, organizations may lose degree of control in online environments. (Karim, Kaminsky & Behrend, 2014)

- It is difficult to authenticate the candidate; Who is taking the test? Stand-ins can be used to complete the test or other people might be involved during the test to be able to get assistance.
- Use of aids like spell-checkers, reference books and calculators cannot be checked.
- Taking pictures or copying the test may help the candidate to improve their score and could lead to exposure of the test to other people.
- Candidates can practice by stopping and restarting the test or using a different login name to practice before the start of the real test. (Karim, Kaminsky & Behrend, 2014)

A growing industry has started to develop tools to provide organizations with greater control over online testing environments. Some companies have described capabilities of online authentication systems which allow organizations to verify test-taker identity through the creation of remotely proctored tests. Thereby applications have been build that verify applicant's identities and decrease cheating by observing and recording on and off-screen behaviors. However, these types of remote technologies might be perceived negatively by participants. They might create greater levels of performance inhibiting stress as well. Literature about electronic performance monitoring has demonstrated that computer-based surveillance can increase employees' anxiety, which may cause a decrease in the perception of organizational justice. This may have negative effects on organizational attraction and willingness to recommend the organization to others. (Karim, Kaminsky & Behrend, 2014) Research is currently being done on detecting cheating and the appropriateness of unproctored internet-based tests. Whereas tests themselves have not changed over time the conditions in which they are being administered have. The role of a test proctor has been eliminated and this raises concerns about the security of the test measures. (Reynolds & Weiner, 2009) The two main concerns are test performance and test security.

A lot of research has focused on the differences in performance between internet based testing and other forms of testing. The relationship between these two forms of cognitive ability tests, may be affected by individual differences like computer familiarity as well as testing characteristics like time limits. However other research has suggested that performance on internet-based and paper and pencil based tests is comparable when measuring non-cognitive predictors. Differences that are technology related like computer anxiety may affect applicant reactions. (Reynolds & Weiner, 2009)

Although the performance of both internet based and paper and pencil tests might be equally predictive, there are still concerns regarding cheating and applicant verification. Due to online unproctored internet-based tests, the organization's ability to control test security decreases. Therefore, test security may limit a lot of benefits of online testing. Organizations are less able to collect verifiable measures of identification. The majority of test methods still rely on indirect methods of identification like username and password or identifiable URLs. These methods however do not address the issues of test distribution, since password and URLs may be provided to outside helpers. (Karim, Kaminsky & Behrend, 2014)

Screen captures might be used by applicants to distribute test questions to other applicants. Delivery systems may be able to limit this but other technologies like cell phones can be used to cope and distribute the test. Candidates that have the test beforehand will have an advantage over those who do not. Methods like honor codes and decrease of the high-stakes nature of tests by using in-person test score verification, do not address issues of cheating and verification of applicant identity. Thereby multi-hurdle approaches including in-person testing may negate cost efficiency of internet-based tests. Technological solutions like locking browsers to prevent candidates from visiting other URLs, currently suffer a lack of research. Remote proctoring technologies like programs that combine biometric identification and screen capture software are being created. Although a perfectly secure environment is not guaranteed, cheating options are decreased. Remote proctoring technology is used to create potential technological methods that recreate the proctored environment. These are methods like real time proctoring and webcam monitoring and real-time screen sharing. Software that uses algorithms to detect changes in voice intonation for verbal tests or typing patterns for written tests may be used as well. (Karim, Kaminsky & Behrend, 2014)

Research has been done on whether proctoring caused individual differences but this was not the case. Therefore, remote proctoring can be used as a good tool to increase test security and decrease cheating. However online testing comes with other issues like withdrawal and data storage. Thereby distinctions can be made between synchronicity, frequency and target of remote proctoring technology. Some organizations provide real time proctoring. Here the proctor can intervene and address issues or suspicious situations when they occur. This however can be more time and resource intensive since applicants have to schedule a time and proctors must be hired.

Archival proctoring allows the organization to create algorithms that detect patterns of behavior which might be consistent with cheating and which can examine only flagged videos. (Karim, Kaminsky & Behrend, 2014)

The frequency of proctoring should be determined by the purpose of it. Through snapshot proctoring and one-time monitoring, applicant verification and identification can be achieved. Applicants' identity can be validated by using verification systems that have stored templates. This verifies that the person is who he/she claims to be. Identification systems search databases for personal matches, like matching driver's license to a national database.
Biometric data like fingerprints or voiceprints may be used in these systems, and they may be increasingly accessible for organizations. Snapshots can occur prior to testing, however this tool only identifies the test takes prior to the test. It does not prevent verification cheating or efforts to distribute the test. Thereby these tools use personal information and advanced technologies, which might cause applicants to be less willing to complete the tests. (Karim, Kaminsky & Behrend, 2014)

Proctoring systems can be either person or computer focused. Person focused proctoring tracks applicant behavior, and computer focused proctoring focuses on the onscreen activities. The applicants might be watched through the webcam or might be analyzed by his or her typing pattern. The computer focused method looks at the onscreen behavior to make sure candidates are not relying on external resources. In order to gain the most amount of information both methods may be used together. (Karim, Kaminsky & Behrend, 2014)

Social media in employee selection

The use of multimedia in selection has increased in the past years. Research found that 45% of 2,600 hiring managers in the US search for information on applicants on social networking sites. (Stamper, 2010) Social media assessment is used to represent the review of online information from websites and platforms like LinkedIn and Facebook, for use in employment decisions. (Roth, Bobko, Iddekinge & Thatcher, 2013) Use of social media platforms offers new and unique ways to hire job applicants. Searches of SM websites, do not necessarily elicit job-related information. The use of personality tests, cognitive ability tests, or interviews target relevant job-related knowledge, skills and abilities. There is no evidence that social media assessments explicitly assess these. Thereby a mismatch might exist between the purpose of social media, and the way organizations make use of social media information. Social technologies like Facebook are used to facilitate interaction between friends, whereas organizations use these to assess job related KSA's (knowledge skills and abilities). (Roth et al., 2013)

Employers argue that the information they find on social media enables them to check the validity of information. (Brown & Vaughn, 2011) They also expect that hidden information might be disclosed (Thomas, Rothschild & Donegan, 2014) Arguing like this assumes that social media profiles present the truth, and do not mislead, which is not always the case.

Individuals may provide perfect profiles to impress employers and to be able to conform to expectations (Klemper & Rosen, 2009) Thereby it is possible that individuals create several accounts. The information available on social media might be only indirectly related to these job skills.

Thereby using social media might cause an unintended consequence in that it could be related to factors like gender, race, marital status and pregnancy. Making decisions based on these kinds of information is often prohibited, but it is questionable to what extent HR managers can forget and disregard the information they find about applicants online. It also unethical for a manager to seek information about employee's lifestyle choices, when these have no impact on the employee's work. (Klemper & Rosen, 2009)

The digital divides
Applicants may find it more convenient to use a video based application and create perfect social media platforms. However, this way of selection may cause an increased digital divide, due to less internet access for Blacks and Hispanics (Roth et al., 2013) as well as the lack of use of social media by older potential applicants. This may cause differences between groups, due to the lack of possibility and ability to create and send applications. Thereby the use of internet is also different amongst different age groups. Research done showed that individuals in the range of 34 to 39 have half the odds of internet access compared to people in the age of 18 to 34. Individuals from 18 to 24 had a 76% social media use, 25 to 34 was 57% and 45 to 54 was 22% and 55 to 64 was 13%. (Chou, Hun, Beckjord, Moser & Hesse, 2009) Less use of social media by individuals can interact with age-related stereotypes, examples are the assumption that older workers are perceived to be less economically beneficial to organizations. This can cause double disadvantage for older job applicants. The effect of these findings depends highly on the way in which organizations deal with the use of social media websites. Violent use of social media may cause candidates not to be invited whereas candidates not using any social media will be invited to the next step of the selection process.

How do applicants want to be treated?
The social process perspective in applicant experience, contrasts the traditional perspective on selection which focuses primarily on psychometric properties of tests. These traditional models neglect the fact that applicants are decision makers in the recruitment and selection process. The social process perspective views personnel selection as a two-way communication process. In this process the voice of the applicant is as important as the demands and wants of the organization. The effective selection decision depends both on the test-technical quality of selection decisions as well as the degree to which the decision is accepted by the applicant. (Derous, Born & De witte, 2004)

Just like clients are treated by their therapists, so are applicants treated by the selectors. 'Selection treatment' are the actions customarily applied during the selection encounter. So, this is the way in which the selectors organize the selection procedure to be able to explore applicant's strengths and weaknesses, expectations and demands. (Derous, Born & De witte, 2004)

Selection treatment beliefs like expectations and values, may enhance the understanding of applicants' post-process reactions like retention, evaluation and satisfaction. (Derous, Born & De witte, 2004) Applicants overall prefer a tailor-made treatment with a lot of transparency, feedback and participation. The selectors on the other hand prefer a more objective approach, while providing a lot of information about the job opening.

Overall the candidate impression formation has been researched less extensively than recruiter impression formation. This concern is addressed by the socialization impact theory. This theory addresses several stages in candidate impression formation and argues that applicants attitude will depend on both information provision as well as applicant's preferences and expectations. Test taking attitudes depend upon applicants' general selection treatment preferences, treatment expectations and selection experiences. (Derous, Born & De witte, 2004)

Service Design Thinking in recruitment

Organizations are getting creative in the way they engage with talent. Increasing realization exists that innovation in sourcing and recruitment can give companies a sustainable competitive advantage by enabling to hire more of the right people who drive innovation throughout the whole organization. Businesses cannot grow without the right talent, and they cannot reach the right talent without making a strategic effort to do so. (Stickdorn & Schneider, 2011)
Service design focuses on creating well thought through experiences, using a combination of both tangible and intangible mediums. When applying it to sectors like banking or transportation it provides numerous benefits to the end users.

User design thinking consists of 5 principles
1. User centered means that services should be experienced through the customer's eyes.
2. Co-creativity means that all stakeholders should be included in the service design process.
3. Sequencing means that the service should be visualized as a sequence of interrelated actions.
4. Evidencing meaning that intangible services should be visualized in terms of physical artefacts.
5. Holistic meaning that the entire environment of a service should be considered.

These principles can be related to talent acquisition strategies.
User-centered
Customers and markets do not care about companies and barely about the products that companies sell. Products and services are only important for customers if they improve their lives. This means solving the problem that prompts customers to seek products and services in the first place. A Dallas based specialty retailer company of home and storage solutions shows the value of talent through the investment they make in new sales employee education.

235 hours are delivered to new full-time employees during their first year. The norm for the retail industry on the other hand is about 7 hours per year. This shows how the desired customer values, were translated into employee performance requirements. Employers are not looking for employees but the correct mix of talent and who can supply products or services that are valued immediately by the customers. (Stickdorn & Schneider, 2011)

Co-creative
Co-creativity in connection to talent acquisition, is to underscore the importance of the integration of talent acquisition and talent management in organizations, as the need for and the scarcity of specialized talents becomes more critical. In a lot of organizations, a wall exists between talent acquisition and talent management. Advances in technology and economic pressures all drive the need for a closer integration of these functions This requires collaboration among all constituents in the HR value chain to deliver more sustainable values for the employees.

Sequencing
The purpose of recruitment is predicting which person will be most successful in a given role. Sequencing is applying the 'Science' to people decisions. For the hiring managers, this ensures a more consistent and predictable quality of the hire outcome.
The science of fit research is a process which examines the various roles at work within an organization. It diagnoses the knowledge, the experience and the personality traits that someone needs to be successful in the role.
Firstly, a job analysis is undertaken and workers and managers are being asked what they perceive to be the characteristics of the high performers.
Secondly high performers are being studied and compared against the average, which creates a high-performer analysis.

Evidencing
When things are being measured, they get improved. An organization misses the opportunity to learn from its own processes when it does not measure what it is doing well and what it is not doing well. Big data gives recruitment an opportunity to become more data driven, analytical and strategic in the way it acquires talent. Data and metrics can be reviewed to determine cost-effective sources and best candidate flows leading to the best hires. Thereby the number of candidates received from the job board advertising can be compared to the fully completed applications received, to determine the candidate drop- out rate.
Checking other components of big data like web traffic data and social media data can lift talent acquisition strategies to a new level of success.

Holistic
Successful recruiting depends on people. Relationships between candidates, recruiters and human resource business partners and the improvement of the experience of all the constituents during all the touch points drives the success of the staffing function. Building an existing customer relationship is 5 to 10 times more profitable than creating a new one when a customer leaves. The same counts for talent acquisition. Although there have been a lot of shifts in recruiting tactics due to e-recruiting, the key to the development of a predictable talent flow is having a pre-existing and enduring relationship which can be converted into a work relationship.

Some companies move towards a talent flow approach which mirrors the rationale of the programs used for customer relationship management. TRM (talent relationship management) involves relationships with people who are more like customers than they are not like them. Relationship building needs time and focus. Electronic Arts Inc, a large video game company has a pipeline of over 30.000 individual relationships by using a web-based applicant tracking system, storing custom talent profiles instead of resumes. This site captures information about contact details, backgrounds, career aspirations and geographic preferences. When suitable job openings occur, the system notifies the hiring manager and encourages the candidate to apply. (Stickdorn & Schneider, 2011)

Processes like these force managers to develop a more outward looking view, to stay on top of cutting edge trends and to build the company's image while staying up to date with customer expectations. This is the essence of the design thinking methodology. You have to take insights from people at different stages, and create touch points in this process, to build from the outside-in rather than from the inside-out.

In-house and outsourced recruitment

In the 5 years to 2015, recruitment process outsourcing more than doubled. Most of this is caused by the extensive presence of outsourcing throughout North-America and Europe. (Taylor, 2010) Outsourcing is the transfer of internal organizational provisions to an outside independent provider. This can vary from simple subcontracting to joint-venture partnerships which can be created. Reduction in costs is an important factor in deciding whether to outsource or not, followed by increased quality of service and the ability to prioritize activities which are core to the organization. Thereby organizations can benefit from bigger talent pools, and free up valuable time. Arguments against recruitment are the loss of capabilities currently residing in the firm, lengthy contracts which make it expensive to switch providers, providers might want to exploit contracts instead of acting in the best interests of the firm, and providers might offer standardized HR practices instead of personalizing these. A common area of HR outsourcing is recruitment. (Taylor, 2010) It has been argued that outsourcing should be limited to only certain parts of the process, where key activities like candidate interviews should be done in-house. (Heikkonen, 2012). In many situations recruitment process outsourcing involves part outsourcing. The part of the organization viewed as being relatively less value and more transactional are in these cases outsourced.

The image of the potential employer and the image of the service provider might influence the reaction of the applicants towards the recruitment process. The employer image is an important asset for companies since it allows them to attract more potential candidates. Employer image can be defined as the image of the potential employer as a place to work from the applicants' perspective. (Lemmink, Schuijf & Streukens, 2003) When outsourcing services, it is interesting to look at the employer image in combination with the image of the service provider, since they might have separate effects on applicant reactions towards the recruitment and selection process at certain stages. The use of outsourcing arrangements can negatively influence company attractiveness if organizations tell that they hire independent contractors or outsourcing agencies for tasks related to jobs that are being advertised. When potential employees notice that only routine tasks are conducted in-house, they might think that only a limited variety of work as well as promotions are available.

Thereby an increased us of recruitment process outsourcing, diminishes applicant's satisfaction with the recruitment process, since applicants do not feel a real interest of the employer during the first critical contact outsourcing signals impersonal behavior.

When the employer already has a strong brand image, applicants will accept recruitment process outsourcing. On the other hand, if the company is not known that well amongst potential applicants, a strong service provider image could enhance the perceived professionalism of the recruitment process and therefore improve the applicant's perception of the employer. (Wehner, Giardini & Kabst, 2014)

A positive employer and service provider image can partially compensate for negative effects of recruitment process outsourcing. Recruitment process outsourcing still negatively influences applicant's satisfaction in the recruitment process, service provider image has a direct positive effect on applicants' satisfaction. When assigning activities like advertisement, confirmation of receipt and preselection, companies can positively influence applicant's evaluation of the recruitment process. (Wehner, Giardini & Kabst, 2014)

However, in higher levels of the recruitment process, which can vary from telephone interviews to in person job interviews, applicants react negatively towards outsourcing, regardless of the image of the employer or service provider. The impressions that are made during the first contact with a potential employer, are evaluated by the candidate to get an opinion about the employer. If several parts of the recruitment process are assigned to a third party, applicants expectations will no longer be met for an ideal recruitment process. These consequences cannot be limited if the service provider has a strong image or if the organization has a strong employer image itself.

Artificial intelligence in recruitment

Artificial intelligence is moving from experimentation to mainstream use in the world of talent acquisition. The term artificial intelligence can be broadly defined as so-called smart software, which is technology with the ability to learn and grow effectively. The level of maturity of artificial intelligence in recruitment is bigger than in any other area of HR. The future of recruitment will look much different than it is today, but currently the technology is solely used to reduce the easy work in recruiters' jobs, like administrative tasks. 76% of 9000 recruiters who were surveyed during a research on the future of artificial intelligence in recruitment, say that AI's impact on recruiting will be at least somewhat significant. (Spar & Pletenyuk, 2018) Figure 5 shows where AI will be most helpful in recruitment and selection.

Figure 5. (Spar & Pletenyuk, 2018)

Artificial assistants
The most evolved AI tool in HR is the use of the artificial assistant. This assistant can improve the job seeker's experience. (Zielinski, 2017) A tool like this is Julia used by Moongro. This tool automates a lot of the communication with candidates during the application phase. Julia was created by Joboti. Joboti uses natural language technology to be able to ask questions to candidates based on job requirements and answer applicant's questions about companies, employers and keep them up to date about their applications status. Thereby it is possible that Julia answers questions about benefits, company policies and the company culture. It saves recruiters a lot of time not having to answer these standard questions. When Julia is unable to give an answer, a human recruiter will be contacted and takes over the chat. This helps to improve the candidate experience, and gives the advantage that candidates can ask questions and apply for jobs day and night. (Lecture Joboti, Amsterdam 2018)

Artificial intelligence is least likely to be used in the following tasks:

1. Building relationships with candidates
2. Seeing candidate potential beyond credentials
3. Judging culture add or culture fit
4. Gauging candidate interpersonal skills
5. Convincing candidates to accept offers

VP of talent acquisition Nick Malley sees three main benefits in Artificial Intelligence which are higher quality talent, a faster process and an improved candidate experience. By using an AI-powered LinkedIn recruiter, talent pools can be narrowed down to those most likely to engage or identify top talent that has not been considered before. (Spar & Pletenyuk, 2018)

Vodafone uses Artificial intelligence by using robots to screen application videos. The robot can assess candidate suitability across 15.000 different dimensions which range from body language, to facial cues, speeds intonation as well as speech cadence. The robots work with role requirements, comparisons with top performers at Vodafone as well as other candidates. This reduces the time to hire, creates a bigger talent pool since video is limited and not bound to geographical constraints and there is a better ability to assess soft skills. (Spar & Pletenyuk, 2018) The robot will be discussed more detailed later.

Although artificial intelligence has a big impact on recruitment, it will not replace the human touch. People need to understand candidates and can negotiate with them.
Looking at figure 1 (Figure 2 appendix) it is shown where artificial intelligence is expected to have its biggest influence which is expected to be low in sales and negotiation parts of the recruitment process.

Looking at figure 2 (Figure 3 appendix), on average globally 35% of respondents say that AI is the top trend affecting how they hire. In China AI has the biggest influence on hiring processes, whereas it is lowest in France.

Gamification in recruitment

Plato already recommended games for the education of children in the Republic. Gamification is defined by Huotari and Hamari as a process of enhancing a service with affordance for gamified experiences in order to support user's overall value creation. (Huotari & Hamari, 2012) Others take the view that gamification refers to the integration of game elements in contexts that used to be non-game related, the depth of this integration as well as its success relates to a subjective understanding of the quality of the gamification initiative. This quality can be judged against user experience and by the degree to which the outcome of the process, which can range from socialization, behavior change as well as data generation, match the intended goals. (Tansley, Hafermalz & Dery, 2016)

It has been argued that games, especially computer games, are fun, therefore introducing game-like features into otherwise activities which might be viewed as dull, makes them more attractive. (McGonigal, 2011)Due to the increased use of talent programs, which consists of attracting, identifying, developing and deploying high potential individuals, talent management has to learn how to identify engineer and create a sophisticated talent selection process. (Sparrow, Otaye & Markam, 2014)

Although there has been increased media coverage on gamification over recent years, the computer game America's Army was one of the first examples of gamification within recruitment. It was designed to interest students in a career in the US army and had over 9 million downloads. It allowed players to virtually explore the army, and helped to explore whether soldiering matched their needs, interests and abilities. This game is still used by America's Army, but the to the competition for top-tier talent, gamification has returned to the top of the talent acquisition agenda globally. Games are used to evaluate candidates' risk tolerance, skills and abilities for jobs are being tested. However, it is difficult to determine at what levels of recruitment gamification is appropriate and adds value. Many global businesses gamify processes on a market by market basis, taking into consideration cultural and geographic differences. (Perinot, 2015)

L'Oréal India used its reveal game in 2010, this game drove their graduate recruitment strategy and performed the function of a development and selection tool as well, by guiding students through a virtual simulation of career opportunities and challenges in cosmetics. Reveal, the game they used, allowed players to experience working in a global firm, to interact with avatars that were presenting employees and to get a sense of which department they would like to work in and would be suitable for. This game helps to screen the applicant's analytical skills, which is not always possible when using traditional hiring means. L'Oréal India attempts to recruit 20% of the company's managerial cadre through gaming channels. (Perinot, 2015)

Also, PwC Hungary started to use gamification since candidates were only spending less than 15 minutes on their career website. They sought for a more effective way to recruit college students and therefore they developed an online simulation game called Multipoly. This was a 12-day game, inviting students to experience a virtual version of what is it like to work at PwC. They had to meet quarterly goals, and accomplish tasks based on PwC competencies, while receiving feedback from company coaches. Initially they designed the game to boost employer branding. However, they started to use the game as recruitment tool, allowing to improve the selection practices for both the company as well as prospective hires. According to Noemi Biro, PwC's recruitment leader, it is compatible with younger generations need for social media, networking and development through the intern. She also noticed that candidates who had played the game were better prepared for the face to face interview, since the game also pre-educated candidates about PwC, its vision as well as the skills needed to be able to be successful in the company. Thereby the new hires experienced advantages in the on-boarding period since the experienced the company culture in the game. The number of applicants was increased by 190% and 78% of the people completing the game were interested in joining PwC. (Zielinski, 2015)

The use of games in recruitment, can attract people's interest in job openings, show an innovative image of an employer and can deliver accurate previews of applicant's future job performance. Game-type scenarios are also used to gauge prospective employees' aptitude for specific positions. Organizations that rely heavily on the development of computer code, conduct code challenges to identify suitable candidates. When programmers figure out the codes, the game challenges them and keeps taking them to more difficult problems. However, companies need to be careful when using games in recruitment and hiring decisions, since challenges used in the games must highlight skills needed for the job. The games objectives and functions need to be closely aligned with the duties of the position.
It is also possible that recruiting games lead candidates to careers that they may otherwise not have considered. Game simulations reflecting what the actual job will look like, can be effective, since they allow candidates to experience what kind of job they really want. (Zielinski, 2015)

Marriott International uses a recruitment game to attract millennial employees. The game is delivered to candidates on Facebook and it allows candidates to experience what it is like to manage a hotel restaurant kitchen, afterwards they more to other areas of hotel operations. Here players create their own virtual restaurant, where they can hire employees, buy equipment and ingredients and serve guests. (Zielinski, 2015)

Costs of gamification can vary widely. It can start with prices from $25 per month per user, but it can range up to thousands of dollars a month, based on the level of customizations as well as the volume of data flowing through the system. (Zielinksi, 2015)

There is a huge potential for gamification, however little is known about the psychology of gamification and the underlying mechanisms by which it can influence individual behavior.

Gamification in recruiting is a way to change an applicant's attitude by engaging them more deeply in the recruitment process.

This can be seen in the Marriott example given above. The purpose of this game for Marriot hotels was to change the attitude of potential candidates towards the hotel industry and Marriot. There are several reasons that explain why gamification does work. (Zielinksi, 2015) Gamification taps into motivational drivers of human behavior in two connected ways, which are reinforcement and emotions. Positive as well as negative reinforcements encourage repetition of behaviors. The table below gives an overview of companies which introduced games in their recruitment process.

The Games Candidates Play

System	URL	Customers	Features
Badgeville	https://badgeville.com	Wells Fargo, Wal-Mart, Medtronic	▪ Points, badges and leaderboards ▪ Tracks social systems and provides real-time feedback ▪ Includes analytics to enable customers to track and characterize users
Bunchball	www.bunchball.com	SAP, Sun Life Financial, T-Mobile	▪ Scalable cloud platform ▪ Used to motivate employees, test candidate skills and engage customers
Captain Up	https://captainup.com	Dell, Hewlett-Packard, McAfee	▪ Social and gaming tools with badges, levels, activity feeds, leaderboards and other rewards ▪ Customers can add interactive leaderboards to any website or app ▪ Application programming interface adds social layers and competitive elements
Games for Business	www.gamesforbusiness.eu	PwC, HBO Europe, Huawei	▪ Online simulation models the structure and procedures specified by the customer in a 3-D environment ▪ Users follow a work routine: going to meetings, accomplishing tasks, and facing unexpected situations and ethical decisions ▪ Measures players based on preset variables
HackerRank	www.hackerrank.com	Booking.com, Sabre, VMware	▪ Ranks programmers based on coding skills ▪ Programmers compete in challenges and code sprints ▪ Recruiters move winners through the selection process
mLevel	www.mlevel.com	US Foods, D4, International Hotels Group	▪ Interactive learning missions accessible via mobile app or Web ▪ Individual and team competitions ▪ Scenarios uncover what users know about critical topics and require that they react in real time to responses
Pymetrics	https://pymetrics.com	Anheuser-Busch	▪ Search platform uses "big data" and machine learning ▪ Recommends career paths to job seekers ▪ Assesses more than 50 cognitive and personality traits using neuroscience games

Figure 6. Source: Zielinski, 2015.

Game mechanics and game thinking assist in talent management, by engaging recruits and can be designed to recruit the right type of candidate. There is growing concern whether gamified processes are appropriate for organizational activities like selection. Thereby it needs to be taking into consideration that playing a game is not equivalent to taking part in an assessment center. Games can encompass tasks or events which are critical for the job, however applicants' behavior in the game does not necessarily represent his or her behavior in everyday life. (Wozniak, 2015) Gamers often apply a game logic, rather than an everyday logic and therefore realize goals which they would normally not choose. Therefore, behavior shown whilst playing games, may be unreliable. Not carrying out a task in the game, does not mean that it will not be carried out in real life, since motivation and thoroughness in real life may be higher.

FrieslandCampina

Methodology

The focus of this research is on FrieslandCampina. Therefore, data have been gathered to see how FrieslandCampina currently tackles their selection process and how this potentially could be improved. The focus will be on the traineeship selection process, since this will be the pilot if something is implemented in the future.

To be able to understand the current processes, documents provided by FrieslandCampina explaining how the company currently interviews and selects, have been analyzed. Talent specialists in the field of supply chain, marketing and sales are interviewed to understand how they view the current process and what they think that currently can be improved. Nine current FrieslandCampina trainees, working in different disciplines, including supply chain, commercial and finance, are interviewed as well. Questions about the current trainee selection at FrieslandCampina and experiences with other companies that they applied for have been answered.

Two main companies that FrieslandCampina is currently working with for their selection process have been interviewed as well. The first one is HR Organizer which provides FrieslandCampina with the e-assessment they currently use. The second one is BuroSchuite which helps FrieslandCampina with the assessment center they do for their traineeship selection. BuroSchuite provides FrieslandCampina with psychologists as well as advice on objective evaluation. Thereby employees from Pymetrics, Hirevue and Harver, companies currently offering digital solutions for the first selection steps within the recruitment process have been interviewed. Thereby the graduate recruiter of Heineken has been interviewed on his experience with recruitment tools and his choice for the tool they are currently using. All these interviews have been transcribed and coded using MAXQDA to be able to properly analyze them. (Figure 4 appendix)

The company

FrieslandCampina is a multinational company producing and selling consumer products like milk, infant nutrition, cheese and desserts in countries in Europe, Africa and Asia through her subsidiaries. Thereby FrieslandCampina exports dairy products worldwide and sells products to professional buyers like bakeries and businesses in the hospitality industry in western Europe. (Year report FrieslandCampina, 2018)

FrieslandCampina has production facilities in 34 countries and currently employs 23.675 people. FrieslandCampina products are sold in more than 100 countries. The head office is based in Amersfoort, the Netherlands.

FrieslandCampina's activities are divided into four market-oriented business groups which are consumer dairy, specialized nutrition, dairy essentials and ingredients.

The company is owned by Zuivelcooperatie FrieslandCampina U.A. with 18.645 dairy farmers which are based in the Netherlands, Germany and Belgium and is one of the largest dairy cooperatives. (Year report FrieslandCampina, 2018)

History
FrieslandCampina has a long history. Due to a lack of refrigeration, farmers started to join forces in local dairy cooperatives in 1871. To be able to deliver the milk quickly to the customers, they did not have any other choice than to work together. Thereby they also joined forces to gain more power in the market. (Figure 6 appendix)

Later local dairy factories merged into regional dairy factories. These smaller cooperatives started to join in the 1960's. This created the first famous national Dutch brands.

In December 2007 Friesland Foods and Campina announced their intentions to merge. In December, they got the approval and became FrieslandCampina. (Year report FrieslandCampina, 2018)

Nowadays a lot of these farmers are still with FrieslandCampina, over the years they have built an international dairy company that spans the world.

FrieslandCampina is a global company, but focuses on local communities and customers. Not just in Europe but in many countries in Asia, Africa and the Middle east.

Purpose
FrieslandCampina's purpose is nourishing by nature. With its dairy products, FrieslandCampina can contribute towards feeding the worlds growing population. FrieslandCampina focuses on improving its product's recipes and on ensuring that dairy products remain affordable and therefore relevant for all income groups. (Year report FrieslandCampina, 2017)

Thereby FrieslandCampina strives for a good living for their farmers. Its goal is to add as much value as possible to the milk, to be able to make the maximum contribution towards the income. FrieslandCampina strives to pay out one of the highest milk prices in Northwest Europe. Because of this FrieslandCampina remains an attractive company for member dairy farmers. Thereby FrieslandCampina offers member dairy farmers assistance with improving their farm management as well as their milk quality. (Year report Frieslandcampina, 2017

FrieslandCampina focuses on future generations. Therefore, it invests in sustainable long-term growth in the financial health of the company and the cooperative. Its aim is to achieve climate-neutral growth and to reduce the use of scarce resources like water and fossil fuels.

Goals
Firstly FrieslandCampina wants to leverage the unique milk chain: from grass to glass. FrieslandCampina has built strong market and brand positions during its 140 years of history. It has a unique Dutch milk chain, with a valuable concept that continues to bind customers and consumers to their brands like Frisian Flag, Dutch Lady, Peak, Campina and Frico. Throughout the world FrieslandCampina wants to increase its customer demand, by using the from grass to glass concept, investing more in the appeal of Dutch dairy and preserving the visibility of cows in the Dutch landscape. (Year report FrieslandCampina, 2018)

Secondly it wants to generate the highest value from milk. FrieslandCampina aims to generate more revenue from milk supplied, by focusing on products and byproducts of milk that deliver the most value. High quality, safe and sustainable products need to be offered to continue to attract consumers and customers on the short as well as the long-term. Therefore, the processing of milk must continue to meet the increasing demands of the market and the society in terms of quality, safety, sustainability and transparency.

Thirdly it wants to focus on markets providing the highest growth, profit as well as valorization of member milk in the route 2020 strategy. Long-term and sustainable value will be created by utilizing capital, production capacity and employees in an efficient way. FrieslandCampina operates in different markets and every market situation is different. Therefore, FrieslandCampina focuses on limited numbers of product-market combinations. When making these combinations, the focus is on market growth, expected growth of the marketing in combination with FrieslandCampina's ability to grow there, profitability, milk valorization, expanding leading positions, protecting home markets and developing future markets. (Year report FrieslandCampina, 2017)

Lastly FrieslandCampina focuses on highly engaged people effectively working together. FrieslandCampina's employees are the foundation of its success. There is a strong feeling of mutual commitment worldwide. Attention is being paid to continuous improvement of skills and ways of working. For a successful roll-out of the route 2020 strategy, a number of specific areas are important. These consists of improving the capabilities which are key for being successful in the market, reducing costs to enable investment in long-term growth, continuously working on improving the quality of products and safety of employees, and an appropriate business conduct in line with the code of conduct based on integrity, respect and transparency.

HR strategy at FrieslandCampina

FrieslandCampina developed a world-wide human resources strategy. This strategy focuses on three key pillars which are loyalty, talent and change. FrieslandCampina strives for their employees to get personal rewards out of their jobs. Personally, contributing to solving the enterprise challenges, builds the feeling of involvement in this strategy.

A lot of organizations hire people based on the required skills for a job. Since requirements change in time, FrieslandCampina started hiring people based not only on current competences but also on potential for growth and development. Ability, personality and motivation come in here, together with skills they form the behavioral competencies on which recruiters focus during the selection. (Year report FrieslandCampina, 2017)

Psychometric tools give the possibility to measure the capacity, motivational drivers and personality, which gives an insight in whether the candidates are a fit for the job and whether the candidate has an ability to grow and develop him or herself. These tools are currently used by FrieslandCampina for their candidate selection.

Selection process at FrieslandCampina

An overview of FrieslandCampina's current selection process will be given. This process differs between the recruitment of candidates for regular jobs and the recruitment of candidates for the traineeships. Both procedures will be explained, the focus will be on the traineeship selection process, and the candidate experience during this process.

Regular positions

FrieslandCampina makes use of in-house recruitment. As seen before, this is especially in the last steps of the recruitment process beneficial for the candidate experience. People are recruited by talent specialists or so called talent scouts. Every discipline has its own talent specialist. Which means there are specialists for finance, supply chain, business and IT, technology as well as marketing and HR vacancies.

After applying for a position at FrieslandCampina, candidates can be invited for a first interview. This is mostly done by both the talent specialist and the hiring manager. FrieslandCampina used to work with unstructured interviews, however more elaborated research has been done by the company, and as explained before as well, structured interviews are a much better and reliable way of recruiting. Therefore, FrieslandCampina implemented the use of structured interviews.

FrieslandCampina describes this the following way:

'Structured interviewing is about **standardizing interview questions & standardizing the evaluation** in order to hire the best candidate. '(FrieslandCampina, Structured interview kickoff TANL, 2017)

Arguing the following;
'Structured interviewing has been shown to influence interview validity. Research has consistently found that structured interviews are much more reliable and valid than traditional, unstructured interviews. In fact, some research has shown they're almost **twice as effective** in predicting job performance.' (FrieslandCampina, Structured interview kickoff TANL, 2017)

Before the interview the talent, specialists needs to define 3 job related competencies together with the hiring manager. They can choose out of 15 most common competences.
During interviews FrieslandCampina makes uses of the STAR methodology. The STAR methodology is a job interview technique, which is used by interviewers to gather all relevant information about a specific capability that the job requires. The STAR methodology has a high degree of predictability of future on-the-job performance. Recruiters should ask candidates about a specific behavior by following the structure below:

- **S**ituation: What was the context? Describe the situation?
- **T**ask: What was needed? What were the objectives?
- **A**ction: What did you do? What difficulties did you encounter?
- **R**esult What was the outcome? What did you learn?

The interview: (FrieslandCampina Internal document, Template Structured interview background information, 2017)

1. Introduction *(first 10 minutes of the interview)*
1.1 Welcome at FrieslandCampina
1.2 Introduce yourself and your interview partner in a couple of minutes
1.3 Ask the candidate to introduce him/herself

2. Middle section of the interview *(35 minutes)*
2.1 Work experience so far (10 minutes)
Ask the candidate to tell something about his/her current work experience which related to the job he/she is applying for.
2.2 Managerial competences (15 minutes)

Think Broadly	Situation when you took several scenarios into consideration before acting?
	Situation when you had a creative solution to solve a problem?
Handle pressure	How do you handle pressure?
	Which moment did you think you would not be able to perform a specific task correctly?
Create impact	What kind of feedback did you receive after a formal performance in front of several stakeholders?
	When did you noticed that you had made a good first impression on others?
Delegate	Example where you delegated responsibilities to the right people? How did you leave room for own initiative?
	Example where delegating went wrong, which led to poor outcome?
Motivate others	When did you have many setbacks and how did you motivate your colleagues again?
	Example where you as a project leader had to indicate how the proposed goals needs to be achieved?

Please note that you don't have to use all of these questions.

2.3 Desired Mindset & Behavior (10 minutes)
Purpose Driven, Commercially Obsessed and Owners' mindset are important Mindset & Behaviors FrieslandCampina is looking for in their future employees.

Could you please give an example of a…	
Purpose Driven	moment when you had to chose between a short term advantage and acting responsibly?
	project or activity you were responsible for and which received a lot of criticism?
Commercially Obsessed	specific contribution you made which led to commercial enhancement of the company?
	moment when you had to take the plunge while there were still unanswered questions?
Owners' mindset	project or activity you were responsible for and which received a lot of criticism?
	realistic business opportunity you could indicate and signal?

Please note that you don't have to use all of these questions.

3. End of the interview (last 15 minutes of the interview)

3.1 Motivation FrieslandCampina & Position

Why FC & why are you interested in this position?

3.2 Questions from the candidate

3.3 Inform candidates about next steps

E-assessment and next round interview.

After the first interview the candidate will be invited to make the HR organizer test. This test consists of several parts which include a personality questionnaire, a work orientation questionnaire and a capacity test. The capacity test consists of a verbal reasoning, a numerical reasoning as well as an inductive reasoning test. When evaluating the traineeship selection process, this test as well as the company providing the test will be discussed more detailed. After successfully completing the test, candidates will be invited for another interview with the HR business partner and the next level manager, the candidate will get the results after this round.

Selection process from a recruiter point of view.
One talent specialist manager and two talent specialist have been interviewed, all currently working at FrieslandCampina. These talent specialists recruit in the field of supply chain, technology and marketing positions. These interviews will now be discussed.

Interviews with talent specialists
Overall recruiters are positive about the recruitment process. 'I like that we have the two interviews and I think the e-assessment is good as well.' 'It is easy to reach us, you can find our contact details everywhere.' 'It would be good to make a difference between candidates for the pass rate of the e-assessment.' 'I do not agree with the pass or fail rate, if you fail you can still be a high performer in the position, why should a plant operator have the same score as an executive.'
'In general candidates like the process but it can take quite long.' 'We are very good at slowing down processes.'

Talent specialist about opportunities for future recruitment
'The current labor market is very scarce, you need to attract applicants, you need to think about both efficiency and candidate experience.' 'We should innovate cause it can save you a lot of time and work, but we should keep the personal contact.' 'CV selection takes a lot of time, if you look at the entire process this would be the most interesting part to consider, however you should not exaggerate efficiency.'
'When using robots for CV selection, you standardize the position requirements. It is difficult cause you need to know what the requirements are which you can base your selection on and which are not. Thereby when recruiting for IT, different systems can be used, but when the applicant has knowledge of a system the recruiter did not put as a required word, the system will kick the CV out, you need to implement all the correct words and make sure you do not take out candidates by default.'
'If you update candidates regularly about the status of the vacancy, you can manage expectations. Thereby you need to compare the investment the candidate is willing to make compared to what you get out of it. Currently the investment of the candidate is bigger than the one of the company.'

'Using video interviews is generation dependent. A lot of people are not exposed to the new technologies, and millennials on the other hand find it easier to work with.' 'Unfortunately, candidates from 35 and above are not familiar with it and it is not a part of their nature. In 5 years, when more companies start rolling it out, then it will be okay to use it.'
'It also depends on the discipline you are recruiting for, technical people are not the right target for these types of innovations.' I think that in 5 years from now, this is something we cannot do without, but it is important to focus on the right target group. Marketing and sales positions might be a good start.'
'Digitalization of agendas would also be a useful tool to speed up the process, I do not know whether it can work since some manager do not update their agenda.'

Talent specialists about the readiness of FrieslandCampina for recruitment innovations
'Always keep in mind the candidate and not only what it can bring the company. What makes us happy as well as the candidates and the managers. Speed is important to improve the candidate experience. '
'There is still a long way to go, there are a lot of things that need to be addressed before rolling out initiatives like this.'
'It really depends on the target group, for the traineeship program you can use it, these are young people it is easy to find them and they are an easier target group. Maintenance people for instance are very scarce and I do not care whether they are willing to make a video or not.'
'Use artificial intelligence for bulk positions, it removes bias and it makes the process more standardized, thereby you can capture all data in a couple of days.'

The traineeship

The corporate traineeship at FrieslandCampina is a two-year traineeship, which starts twice a year. Within this traineeship, trainees will complete two assignments, within the disciplines they have been recruited for. Thereby trainees get a full range of development opportunities. The interdisciplinary trainee group will take part in professional as well as social activities and they will receive several trainings like personal development and presentation skills trainings. Thereby they also get their own budget which can be used for trainings in their field of interest. The trainee-group is split up in different disciplines which are Supply Chain/Operations, Finance, Business & IT, HR, Commercial and Technology. (FrieslandCampina, 2018)

In-house days

To be able to get to know FrieslandCampina and to get to know what it is like to work in a multinational operation which operates as a B2B as well as B2C company, students can be invited to the FrieslandCampina In-house days. During these days' presentations about the company will be given, as well as presentations about more specific disciplines. Thereby students will play the Dairy Dilemma game, this is a game through which they can get to know the company and the difficulties you face when dealing with different stakeholders within the business. (FrieslandCampina, 2018)

Process and selection

To be able to be selected for the traineeship at FrieslandCampina candidates need to pass different selection rounds. The author observed a FrieslandCampina fast-track selection day. The following information provided on the traineeship selection day will be based on both FrieslandCampina assessment documents as well as own observations from the author. Every step of the selection process including the CV and motivation, the video pitch, the e-assessment as well as the assessment center will be discussed now. For each different step opinions from trainees about that step will be given. Interviews with Maarten Hack and Marleen Schuite will be discussed where appropriate.

CV selection and motivation letter
If candidates think they are a suitable Corporate Trainee, they are invited to apply for the first selection round. This consists of uploading their CV with an optional motivation letter. CV's have been evaluated by recruiters. The author observed the following about the CV selection: The CV selection is done in a very structured way in which candidates can get points based on different criteria. These criteria include relevant studies, interesting internships (preferably in a multinational fast moving consumer good company), experience abroad like an exchange or internship, extracurricular activities like committees and board years and finally any other activities like top sports or work as student assistants. These different criteria are all weighted based on importance. If the student successfully passes this round, he/she will be invited to go to the next round.

Trainee feedback about CV check and motivation letter
This is the first step of the traineeship recruitment process and therefore the first time the candidates get in touch with FrieslandCampina. This step is perceived as 'very clear and really structured.' Candidates from this point onwards know 'what to expect from the process' and find the procedure 'very clear.' However, this was the first step in the process and most candidates found that from this step onwards the process took too long, it all 'took a very long time.' 'I got the feeling that the motivation letter was not read by the recruiters.'

Video motivation
The author observed that after candidates upload their resume for the FrieslandCampina traineeship, they are invited to upload a short motivation video in which they elaborate on their motivation. The motivation video can be made at home and can be recorded as many times as the candidate wants. During this video candidates give a short introduction about themselves and they answer three different questions. The first one is why they choose for the FrieslandCampina traineeship, the second why they choose for the specific discipline that they applied for and the third one is about their unique strength.

Trainee feedback about the video motivation
Candidates perceive this part of the process as a 'bit awkward' and were 'a bit afraid' of the video. They said it was 'tough to record three different questions in such a short period.' 'You want to answer as much as possible, and show how motivated you are.' Thereby it is not 'sure what is expected.' Some candidates make videos which are filmed at different locations like the farm and others make it at home behind a webcam. However, on the other hand it is 'good to give a first impression.' And 'you get out of your comfort zone.'

E-assessment
The author observed that if a candidate has been selected based on the strength of their CV and their motivation video, they will be send a digital assessment. This assessment evaluates various skills and abilities. The test includes capacity tests (numerical, verbal and inductive reasoning), a personality questionnaire and a motivation-based questionnaire. The test is created by cut-e. 'Cut-e is a specialist and world leader in talent measurement and psychometric assessment for recruitment selection and development.' (Interview Maarten Hack) HR organizer uses the cut-e tests and FrieslandCampina works together with HR Organizer from which they rent the online test.

Interview with Maarten Hack

Maarten Hack is the CEO of HR-organizer and worked for Gartner (Former CEB and SHL). He has been interviewed concerning the cut-e test (now acquired by AON) that is being used by HR organizer.

Maarten emphasizes the creation of a good job profile to be able to give the candidate a suitable assessment. He says that 'creating a good job profile is the most important step within the selection process.' 'The profile should include a description of the tasks, responsibilities, authorizations as well as competencies.' This information is important for several reasons. Firstly, it guides the recruiter to the right candidates, it explains them what is expected from the candidates and what their role and responsibilities will be. Thereby a good profile also recruits suitable candidates. Suitable candidates need to be attracted by the description. Therefore, the description needs to be as specific as possible so that the candidates feel invited. (Smit, Verhoeven& Driessen, 2006)

Currently all trainees that apply for the different disciplines within FrieslandCampina get the same test. According to Maarten this is fine but 'it depends on the extent to which the discipline is important for the development of the trainee as well as the end results whether the test should be adapted.' 'If the discipline is important, more than one job profile should be created. If it is not important, one profile is enough.'

According to Maarten 'the most innovative way of testing is adalloc testing. 'Adalloc testing is offered by cut-e. It can be used for measurement of competencies, personality dimensions, attitudes, interests values and job requirements. When using adalloc testing, the concepts to be assessed are not rated absolutely but they are being compared successively. The instrument adapts the sensitivity constantly to the subject which is to be measured during the measurement process. This method decreases the possibility of cheating and memorizing. (Cut-e, adalloc adaptive allocation of consent, 2018)

Figure 7. (Cute-e, 2018)

Maarten explains adalloc testing the following: 'If you choose two times something like I love to sell things, then the system sees that you like this, so it does not bother you with that topic anymore.'

Maarten says that 'HR professors and psychometrics in his network say that from an academic point of view currently not much is being done on researching and testing of new psychometric tests.'

Maarten Hack about cheating
When asking Maarten about the chance of cheating in the test he argued the following: 'Every test starts with a contract of honesty, stating that you are the person that you are supposed to be. From experience, we know that it is very exceptional that people do not make the test themselves. This has been tested with a police organization, we let all participants make the test at home and let them redo the test in the office, and we saw that scores at home were lower than the ones at the office.'

Maarten Hack about practicing
When asking Maarten whether it is unfair that some people have the possibility to practice and others do not, he answers this: 'It is best to give everyone the opportunity to test as many times as they want. In theory, you do the test a 1000 times, but you will never get the same questions. Number series on the other hand are easy to practice, and you can become good at it. Each of our tests has a gambling correction, the system sees that you give an answer without looking at the data sheet and therefore subtracts points. More practice gives a better normal distribution but not per se a higher score.'

Maarten Hack about the future
'In the future we might see that we skip face validity, since it is not needed. Deductive, inductive reasoning and short memory are the most important indication for someone's thinking level, however this is low on acceptance since candidates look for face validity. Candidates will feel that the test is irrelevant or not suitable for the job they are applying for.' Face validity in a test or measure plays an important role in enhancing respondent motivation and effort. When assessing intelligence, job related or aptitude performance, high-face validity can contribute to test-score validity. This is done by optimizing the motivation of the respondent to perform well on the test. However, on the negative side, face validity renders test responses to different sort of self-report and self-presentation biases on the part of respondents. When you assess traits beliefs or attitudes that are undesirable or unacceptable, face validity can be a disadvantage. This is because trait, attitude and behavior being assessed are revealed to the test-taker when face-validity is high. (Bornstein, 1996) 'Thereby I think that tests will be shorter as well. Everything needs to go quicker and faster nowadays.'

Trainee feedback on the e-assessment
The test is being perceived as 'very different than the tests at other companies. 'You can choose your own language; however, this should be communicated better.' The test is 'fine and very structured.' You know the three areas on which you will be tested. 'What is nice about the test is that you have a limited amount of time for all the questions, compared to for instance 3 minutes per question.' 'I also liked that you can redo one part, at the end you hear in which part you performed worst and you get the possibility to redo that part.'

Final selection day
The author observed that when candidates successfully pass the e-assessment, they are invited for the final selection-day at the head office in Amersfoort. During this day candidates, will participate in different activities. The day consists of four different tasks. These include a role play an interview with a recruiter about the e-assessment, an interview with people from the business, and a group discussion. During this day actors and psychologists come to the office. The actors and psychologists work for BuroSchuite. Thereby BuroSchuite provides FrieslandCampina the group case as well as the case for the roleplay. The different parts of the final selection day will now be discussed and opinions from trainees about every part will be given.

The role play
During the selection day the author observed a role-play. The role-play, is done by an actor/actress who is hired through BuroSchuite. When entering this part of the process, the candidate gets 20 minutes to read through the case. In this way, the candidate can familiarize him/herself and can prepare what he/she will say. After 20 minutes the actor enters together with two assessors. There is a discussion of about 20 minutes between the actor and the candidate. After this discussion, the candidate leaves and will be evaluated by the assessors as well as the actor. Candidates are being evaluated on six different topics which are acting decisively, creating acceptance, taking responsibility, listening and motivating others. Act decisively is taking rational, realistic and solid decisions which are based on consideration of sufficient available facts and alternatives, thereby guaranteeing good timing. Creating acceptance is exercising influence on people and situations, communicating ideas concise and clearly and focusing on acceptance. Taking responsibility is making sure to be recognized as the responsible party, guarding the matching authority and means. Being approachable for personal actions and for the action of others which fall under that responsibility as well as for the results. Listening is encouraging others successfully to give relevant information and feedback. Motivating others is reaching goals easier by clearly indicating the intended effect, by achieving a positive attitude regarding work and by creating a strong will to succeed in others. They can score on a scale from 1-5 per topic. Thereby there is an overall rating at the end in which they must grade the candidate on a scale from 1-5 and say whether it is a hire or no hire. (FrieslandCampina, beoordelingsformulier role-play, 2018)

Trainee feedback about the role play
The role play is one of the 4 parts of the assessment day. For many candidates, this was the scariest part because you do not know what to expect. 'I liked the roleplay because it is so different than what you are used to.' 'The observant had clear feedback immediately after the roleplay.' 'In this part, it is very important that you listen and show understanding.' 'It is a strong method to see how an applicant reacts in certain situations.' 'It is very hard to know what to do here, a lot of companies do not have a roleplay and I got a no hire in this part.'

The e-assessment interview
When you finish the e-assessment a report about you is being created. During the selection day, a talent specialist from the candidates' discipline discusses this report with the candidate. The candidates are being evaluated on four different topics which are capacity, ambition, relation and learning. Capacity is the understanding of where you are and where you need to go. Ambition is drive, commitment and determination to get where you want to be. Relationship is to unleash the drive and potential of people and make them cooperate. Finally learning is realizing potential by learning from others and from yourself. All these topics are evaluated on a low-average-high score and an overall grade on a 1-5 scale is given, with a hire or no hire decision. (FrieslandCampina beoordelingsformulier assessment, 2018)

Trainee feedback about the e-assessment interview
The opinions about this part of the assessment-day were very diverse. Some interviewees saw this as 'a nice part where preparation really makes a difference.' 'You can really prepare this part and use situations in your life as examples.' Whereas others argued that 'this part is too straightforward, they tell you what is in the report and you just agree with it.'

The interview
This interview is done with people from the business and focuses more on skills. The candidate is evaluated on four different topics. The first one is dependent on the discipline for which the candidate applies. In case of a candidate applying for a finance traineeship for example, the first topic is acting financially aware, this means that the candidate acts with the realization that every euro to be earned can be spend only once, the candidate estimates costs and earnings realistically and understands the cost-structure of work-related activities. The second topic is generating solutions, here the candidate is being evaluated on whether he/she comes with adequate solutions. The third topic is cooperating, in which the candidate should show that he/she actively contributes to realizing common goals. He/she improves mutual communication, shares information easily and supports others. The last one is creating acceptance, the candidate should show that he/she exercises influence on people and situations and communicates ideas concise and clearly focusing on acceptance. All these topics are evaluated on a scale from 1-5. An overall grade on a 1-5 scale is given as well as a hire or no hire decision. (FrieslandCampina beoordelingsformulier interview business, 2018)

Trainee feedback about the interview with the business
'This interview is totally different and more objective, in which you can show what you can contribute to the company.' Some trainees argued that this interview was 'not that hard', whereas others argued that the interviewers were 'quite hard on them.' 'It is also a possibility to get to know a little more about the actual job.'

The group discussion
In this part of the selection process the candidates get a case. They have 10 minutes to read through the case, write down individual points for the discussion and hand these in. Then they

have 2 minutes to present individual points to the observer. After that they have 15 minutes for the group discussion in which they have tp take decisions and set basic principles and 5 minutes for a group presentation with decisions and arguments. During this case candidates are being evaluated on several topics which are accomplishing goals, cooperating, communicating creating acceptance and motivating others. They are again evaluated on each of these points on a scale from 1-5 and get an overall evaluation on a 1-5 scale with a hire or no hire decision. (FrieslandCampina beoordelingsformulier, 2018)

Trainee feedback about the case discussion
Trainees who were interviewed were from traineeship groups which started during different years. Since the case changed throughout the years, the opinions about it were different. Some argued that the case was an 'old-fashioned case'. 'The group discussion was very cheesy, it was a group of highly educated people giving politically correct answers.' 'Newer trainees argued that the case was interesting and you got to know more about the company.'

At the end of the day all managers and assessors come together to evaluate all the candidates and decide on who will be hired or not. A few days after the selection day, candidates are personally notified as to whether they have been selected for our FrieslandCampina Corporate Traineeship this is done via phone.

Overall feedback and improvements on the selection process
In this part the overall feedback and improvements given by trainees on the selection day will be discussed. Afterwards interviews with Maarten Hack and Marleen Schuite will be evaluated.

The most important feedback which was said by all the trainees is that the process takes too long. The process is perceived as 'very long'. 'It is a time-consuming process.' 'FrieslandCampina is quite late with the offer.'
Thereby 'both motivation video as well as a video pitch is a bit double.' A lot of trainees argued that they were not sure what to say in the motivation video without repeating the motivation letter. 'It is not clear that the motivation letter is not mandatory.'

Overall 'the assessment day is perceived as very nice and well organized.' 'It is a moment for the company to choose you, but also for you to choose the company. 'I got more excited about the company due to the selection day.' 'From the start, we felt very welcome, and they showed they were happy to have us there.' 'I really liked to possibility to talk to other trainees, they are able to tell you things that assessors will not.' 'The trainees have gone through the same day and understand your feeling.'

Maarten Hack's feedback about the assessment center
When asking Maarten about the validity of assessment centers he argued the following; 'One of our interns did a predictive validity study. In a lot of cases the predictive validity of full day assessments was lower than with a single psychometric test. Assessors often make a mess, and the most powerful assessor gets its right.

Even when using structured rating scales, reliability of the data is very low. The best way is a structured interview, guided by the competences that are being assessed. When competencies are more important for the job they should be talked about in more detail during the interview.'

Marleen Schuite' s about the assessment center.
One of the main concerns about assessment centers is the lack of objectivity of the assessors. Marleen explains how BuroSchuite tries to stay objective the following. 'When doing a case, or roleplay you need to know beforehand what you want to get out of it. It is not possible to measure all competencies in just one case, but you can choose four competencies. Then you can write the competencies down and link them to indicators which show these competencies. If you observe problem analyzing behavior for instance, I check whether the person raises questions for example and asks for explanation when the situation is not clear for him/her. So, we use different indicators and rate the competencies on a 5-point scale. A 5-point scale is a good one to work with, so when structuring the whole assessment, you make sure that the assessment is more objective.'

'It is important that the psychologist makes sure the managers do not take over the business case. Managers can be very subjective and always have their opinion ready after the case. However, they need to look at the competencies. The psychologist writes down what the candidates say during the case. Therefore, the psychologist can show what the candidate literally said and judge whether he/she showed the right competencies based on that. Structure and systematic evaluation make sure that the assessment is more objective. Actors in the roleplay for instance also share their opinion about the candidate. It is all about the behavior that you observe and the things the candidate literally says.'

When asking Marleen what she thinks can be improved during the assessment center she said the following: 'I do think that the level of the interviews done during the assessment center is low. Therefore, I think the important of the business interview should be less and we should put different weights on the different parts of the assessment.'
'I do see a relation between the score on the e-assessment and the score on the assessment day. However, you always have exceptions.'

Marleen Schuite about cheating
'When candidates try to cheat on tests or assessment centers, they do use the information and the abilities that they have. If you are able to affectively fill in the test, then you are able to choose for the right option. They show the behavior which they think is the most effective. It is still quite hard to consistently show that behavior. If you are able to do that, I am already impressed cause apparently you do understand how to fill in the test.'

Marleen Schuite about validity
'When doing assessments, you look at capacities. Research shows that online capacity tests are the best predictor. When we use capacity tests we use the one from HR organizer. When looking at predictive validities HR organizer is a very good instrument. However, I do want to see someone in action to be able to judge how they will work later. I always include a behavioral component.'

New tools available to digitalize the recruitment process

The next part will focus on ways to digitalize the recruitment process at FrieslandCampina. Since most of the complaints about the recruitment process at FrieslandCampina are about the first steps in the process, which are perceived as quite long, software that can help companies improve this part of the process have been considered and current trainees have been interviewed about their experience with these sorts of tests and processes.

Pymetrics

Pymetrics is a company providing games to assess candidates. In this part the information provided by the company will be discussed first. After that opinions from both Maarten Hack and Marleen Schuite on games within recruitment will be discussed and finally the focus will be on the candidate experience from a trainee point of view.

Interview Pymetrics

Pymetrics are games being used to assess candidates. Pymetrics uses people's behavior to assess cognitive, social and personality traits. In this case behavior-based assessments replaces self-report instruments where possible and are often used as the first round of the selection process. This makes recruiters save a lot of time in the CV-selection.

Pymetrics' main focus is on recruiting more diverse employees. The round of games skips the CV-selection round, which causes that more different profiles are being selected, which increases diversity. The global neuroscience community developed the assessment tools. Building blocks of cognitive and emotional functioning are being tested. Traits are measured by playing games, rather than asking candidates to answer questions. Custom-cross validated profiles for each role and company are being created based on top performers. The game can match a candidate who is not a good fit for one role to a different one where they are a fit.

How it works
1. Existing employees play Pymetrics neuroscience games
2. Pymetrics analyzes trait data and trends are identified
3. Pymetrics builds customer algorithms representing success and audits for bias
4. Candidates play games and match to opportunities.

Twelve different games are being played by candidates after they apply for a job. These games vary from pumping up a balloon to clicking the space as much as possible. All these games test different abilities. (Interview and presentation by Pymetrics, 2018)

Pymetrics and feedback from Maarten Hack

'Some serious game profilers claim they can be as valid as psychometric testing, but this is not true. Games have a very low Cronbach alpha and their predictive validity cannot be high. When testing reliability of the tools, people are being asked to do a game or test a couple of times. The Cronbach alpha of our psychometric test is between .7 and .9 whereas the Cronbach alpha of games is between .2 and .3.' Thereby Maarten argues the following 'big companies who have experimented with games, put back normal tests after one year of piloting.

Line managers did not even crush the answers, ambitious candidates were not happy making a game and there is no face validity.' Lastly, he argues that 'gaming is only an attraction, sourcing and recruiting tool, actual selection should be based on psychometric tools.'

Pymetrics and feedback from Marleen Schuite
'I think games are nice to use, but you need to add a capacity test. I think it is more predictive to assess someone online with an e-assessment and create a funnel from there, than to use games as a starting point. Thereby I think games create tensions and insecurity because candidates do not know what is expected. It is super important to make sure people feel comfortable and you should be transparent in what you measure.'

Pymetrics and feedback from trainees
Unilever is one of the main companies currently using Pymetrics as the first round of the graduate selection process. Some of the trainees interviewed have applied for Unilever as well and therefore played the games. Opinions varied widely about the games. 'The games were an eye opener and really different than I ever experienced.'
'I did not like the game, it was fun but it does not feel like you are applying for something.'
'I visited the Unilever in-house day, they said that they saw a cultural fit with me. Then I played the games and I did not get through, I am not sure how they test it and I am not sure whether they will get the best candidates.'
'To be fair the games for me were useless. I did an internship at Unilever at that time and all the interns that I knew who played the game did not get through. The managers thought it sucked as well and corporate directors were complaining about the process. Managers who played the game themselves did not even pass.'
'The game was so random, one time I would click and the balloon would explode right away, or I would keep on clicking and it still would not explode.'
'The games are not based on capacities or what kind of person you are but more on competences.' 'The games were very confusing, I scored very low on numerical and memory, while all the other assessments I made show that these are my strong parts.'

Hirevue
Hirevue is a company providing an all-in-one video interview and pre-hire assessment solution. In this part the information provided by the company will be discussed first. After that opinion of Maarten Hack will be discussed and finally the focus will be on the candidate experience from a trainee point of view.

Interview with Hirevue
Hirevue is an all-in-one video interview and pre-hire assessment solution. It transforms the way in which companies discover hire and develop their talent. Video interviews are combined with I-O science and artificial intelligence. Hirevue video intelligence assesses candidates on 7-10 minute screening interview. Video assessments are customized based on top performers in the organization. The role of the recruiter has changed and has been redefined in the last couple of years. A lot of time used to be spent in the beginning of the funnel and no time was spent at the end of the funnel. Nowadays it becomes the opposite, focusing on spending time at the bottom of the funnel is important. The fact that every candidate has an interview creates a better candidate experience than before. The interview is being assessed using artificial intelligence. The focus is on how the candidate communicates, by focusing on the tone of the voice. 'When a candidate says something he/she can mean 5 different things.' This all depends on the tone of the voice. Thereby there is a focus on the emotions being displayed. 'Every person has 42 muscle movements in their face which are micro-expressions. These can show sadness, happiness surprise and many more different kinds of emotions. Lastly the words being used by the candidate are monitored. Hirevue is used by Unilever as well, this is the second round in their graduate selection process. (Interview and presentation by Hirevue, 2018)

Hirevue and feedback from Maarten Hack
'One of my colleagues did research on using artificial intelligence in interviews. With my old company we thought about buying these companies, however in practice there is a lack of predictive validity. It is very easy to fake.'

Hirevue and feedback from trainees
Candidates who passed the game round also did the Hirevue interview for Unilever. Most candidates did not experience this round positively. 'This part is very easy to manipulate, you can easily solve the case by saying keywords that they want to hear within the first minutes. The computer only focuses on these words.'
'I was very nervous cause you only get one shot, I do not like to talk to a computer about how I solve problems, I prefer to have someone in front of me. 'I found it a bit awkward to talk to a screen.' 'I think that with the pitch you give at FrieslandCampina you can show a more personal story.'

Harver

Harver automates parts of the pre-hiring and selection process. In this part the information provided by the company will be discussed first. Afterwards the opinion of the campus recruiter of Heineken as well as the opinion of Maarten Hack on Harver will be evaluated and finally the focus will be on the candidate experience from a trainee point of view.

Interview with Harver

Harver automates parts of the pre-hiring and selection process. It takes charge of the candidate inflow. Harvers' technology matches jobs and candidate profiles. The candidate experience is being modernized and candidates are applying in a fun way.

The brand and the culture of the company can be shown through the videos and situational judgement as well as other cognitive tests can be implemented. Recruiters do need to watch the recorded videos themselves. Harver is currently used by companies like Heineken and Ahold. (Interview and presentation by Harver, 2018)

Interview with Heineken recruiter about Harver.

A recruiter from Heineken has been interviewed. Heineken lately implemented Harver for their recruitment process and during this interview they explained why.
Heineken used to have a regular cognitive test from CEB, they had to pay per test. Therefore, they first pre-selected before they sent people to the test. When using Harver they can send everyone to the first test round. Together with Harver they created a candidate experience in which the candidate can see the environment at Heineken and thereby the candidate does cognitive tests and answers situational judgement questions as well as English tests, this is all combined with a video interview. Due to the huge amount of applicants that Heineken has, this method is very beneficial for them. They do think that the validity of the test that is being used in the system is lower than the validity of the CEB test that they used before.
They also considered using Pymetrics, however they found the criteria of the ideal profile too limited. 'Every director has a different personality and the CEO that we have in 10 years might have a totally different personality from the one we have now. Thereby the test is only linked to personality and there is no cognitive part included, which still predicts a lot.'
Heineken considered using Hirevue as well, however with Harver they could implement everything including the test and Hirevue only offers the video. Thereby Harver works two ways, candidates are being tested but you can also show applicants a realistic view of how the company works and what they can expect when they start working for the company. 'We really see it as a tool that helps us to easier identify good quality candidates.'

Harver and feedback from Maarten Hack

When asking Maarten what he thinks about Harver he said the following: 'This is a nice tool, but it is more employer branding. Our psychometrics tests are the best indicator, which is proven as well. It is nice to combine this test in combination with the video's but the videos are more an employer branding tool.'

Harver and feedback from trainees

Since Heineken just implemented Harver this year, none of the trainees had any experience with the use of the program there. However Ahold, a leading food retailer, uses Harver as well for the trainee selections. Some trainees applied for Ahold and had the following opinion on the use of Harver.

'With Harver they first show you around at the office and in the supermarkets. They explain you a situation and every time you get three options on how you could act in the situation. You have to range these answers from 1-3. It is nice to see the company and get a good view of what it looks like.'

Conclusion and recommendations

In this thesis, research has been done on different tools and processes within recruitment and selection. There has been a focus on traditional tools within recruitment like cognitive tests and interviews as well as more innovative tools like video assessments, chatbots and games. This has been researched from a theoretical point of view as well as a more practical side by interviewing different actors playing a role in the recruitment process.

It is important to emphasize that both literature research as well as qualitative research show that the cognitive test is extremely important in the process, due to its high predictive validity as well as its reliability. When looking at options to replace these tests and use games in the recruitment process, no evidence can be shown about the reliability and validity of these new tools. The future has to show how companies, which just implemented the games, perceive the quality of their new hires. Currently no real evidence can be brought here since the implementation is too new. Thereby the candidate experience when using games was negative, due to a lack face validity. Candidates applying for regular positions might be unwilling to play games. Managers in companies currently using the games as selection round are unsatisfied as well.

The use of video interviews with artificial intelligence does not show any evidence on reliability and validity either so far. Thereby candidate experience is negative as well and cheating is perceived as being easy. The use of video interviews for regular positions is perceived as negative, due to a lack of experience with the use of these tools.

The use of an all integrated system including cognitive tests as well as video interviews is good for the candidate experience for trainee applicants. In this way, the candidate gets to know the company better and it makes it more personal, which causes higher quality candidates to apply. The validity of the tests currently being used in this system has not been proved, but opportunities might arise to implement other tests in the system. On the other hand, regular candidates might be less willing to go through the entire process online since this is not what they are used to.

The use of chatbots will speed up the process, but has shown to be difficult to implement with the companies' current applicant tracking system.

When deciding upon the assessment tools being used for different jobs, the job type and level, the purpose of the assessment, the validation requirement and the legal defensibility need to be taken into consideration. The use of literature as well as qualitative research shows that cognitive tests in combination with the use of structured interviews have the highest validity in the selection and recruitment process. These two tools already used by FrieslandCampina should therefore stay in the process. Cheating within cognitive tests is possible, however experience has shown that this does not often happen and more innovative tools to prevent cheating are being created. Psychological tests have shown to have a low validity, however they are needed to be able to ask competency based interview questions during the structured interview. The validity of the use of assessment centers is relatively low, however it is perceived as useful to actually see the candidates for a day. Furthermore the day is perceived positively by candidates since they get to possibility to get to know the company.

It is positive that FrieslandCampina currently does the whole recruitment process in-house. If FrieslandCampina wants to implement other tools in their recruitment process and if the company wants to apply this to different types of jobs it should focus on the goal of this implementation. Is the goal to increase efficiency, to reduce bias, to increase the quality of hire or to improve the candidate experience? If that has been decided a more precise focus can be, on which tool can help to reach this goal.

For now FrieslandCampina should not implement any of the new tools but should keep on using the process that they currently have. Validity of both the cognitive test and the structured interview is high and the process is being perceived as positive by applicants. The biggest problem currently faced by candidates as well as recruiters is the length of the process. Although the use of different tools discussed might increase efficiency and new technologies as well as artificial intelligence have a potential to speed up the applicant screening process, the number of applicants the company currently has it not particularly high that it is needed to implement these tools. Thereby the company is not ready for the changes and it should wait until these technologies have proven themselves. When implementing new tools, the risk of a digital division between younger applicants applying for jobs like trainee programs and regular applicants who are older and apply for more senior positions will be bigger, and older applicants might be unwilling to make use of the tools.

To summarize;

- *FrieslandCampina should keep the e-assessment as well as the structured interviews since these are highest in validity. The psychological test should be kept to be able to interview about competencies.*
- *FrieslandCampina should wait before implementing any new technologies, since not enough is known about validity and reliability of new instruments.*
- *FrieslandCampina should get a clear understanding of the goal of the digitalization of the recruitment process, is this the candidate experience, efficiency, reducing bias or increasing quality of hire, since every tool offers a solution for a different problem*
- *FrieslandCampina should keep in mind that older generations might be unwilling to work with new available instruments, which might cause a digital division*
- *Further research should be done on other countries and their recruitment challenges before implementing any new tool.*

Limitations

Within this research the focus has been on trainees and recruiters within FrieslandCampina as well as companies that FrieslandCampina is currently working with. This can cause bias since these interviewees all have a role within the company already and have had positive results after they have gone through the recruitment process. Therefore, interviews should be done with applicants who went through the traineeship process but did not get hired, as well as candidates who got hired by other companies using the new tools that have been discussed to get a less biased view on available tools.

Thereby before starting the research it would have been better if FrieslandCampina had a clear goal of what it wants to improve within the process, when deciding this, it is easier to find suitable tools for those improvements. Thereby the focus on this research has mostly been on the headquarter. Since FrieslandCampina is looking for a tool that can be used on a global level, interviews should be done with offices in other countries as well, to find out the current challenges in the other offices and make sure that new tools do not only focus on the headquarter challenges but also on the challenges which other offices are currently facing.

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