E-HRM consequences in Dutch schools

An old-fashioned sector entering the digital age

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Preface

This research project regarding electronic Human Resource Management consequences in the Dutch educational sector has been executed to fulfil the graduation requirements of the master programme Business Administration at the University of Twente. From December 2017 till December 2018 I was engaged in performing this research project. It was a pleasure to get in touch with so many interesting people providing me with even more interesting results.

Without some persons this research project wouldn't be possible, therefore I would like to say thank you to them.

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Management summary

The Dutch educational sector is facing several challenges: budgets are under pressure, a shortage of teachers and a high workload. To challenge these problems the Dutch Ministry of Educational, Culture and Science introduced the Integrated Personnel Policy which had to be adopted and implemented by schools. With this introduction of HRM in the Dutch educational sector also e-HRM technology suppliers penetrated the market. In this explorative study the consequences of e-HRM technology are researched via the following research question: *What are the consequences of e-HRM technology in the Dutch educational sector?*

Via theoretical analysis three categories of consequences were found, namely operational consequences, relational consequences and transformational consequences. These three categories were used to categorize and analyse the findings among. Furthermore the context of the sector and the technological context were taken into account.

Via 17 interviews with 11 employees from the HR department, 1 HR director, 4 general employees/line managers and 1 headmaster it was tried to identify consequences and things related to the technological and sectorial context. Via a questionnaire spread among 184 employees from 3 schools it was tried to quantitatively measure the perceptions about operational and relational consequences and the perceptions of the used e-HRM technology and its different features. Document analysis was used to identify the features present in the e-HRM technology.

The possibilities of the e-HRM technology are extensive, however schools mostly use the administrative features and some features related to policy. Despite critics on the features of the e-HRM technology, it was found the administrative features were scored as satisfied with by employees. The features which were more dependent on policy were all scored not satisfied with. The use of e-HRM has a negative influence on job satisfaction, but it was found e-HRM technology is, at the same time, seen as a basic necessity and further digitalisation of HR is seen as a good development by employees and line managers.

The educational sector is describe as old-fashioned, family-like, people like to take care for each other and people are not eager to judge on each other. Before introducing e-HRM technology many processes were still performed by hand, but reasons to introduce e-HRM technology are to move with times, cost savings, efficiency gains and effectivity gains.

Multiple operational consequences have been identify during the interviews, of which faster processes, less errors and a reduction in FTE were the most common. Digitally less skilled people and line managers reported negative operational consequences during the interviews, but general employees responded neutrally to perceived operational consequences. It was found 80% could be saved on recruitment costs, which could be of importance for practice, since the educational budgets are already under pressure.

Also multiple relational consequences were identified. An improved service quality and a better bond with employees and the board of directors were related to the HR-department. Line managers experience negative relational consequences, since they experience a shift of responsibilities and tasks from the HR-department to them. Digitally less skilled employees experience frustration, but this is related to software in general and not specifically due to the specific e-HRM technology. Despite general employees experiencing anxiety because of the ability in the e-HRM technology to track their performance by line managers and the HR-department, they also experience more trust since processes became more uniform and therefore less randomness in decisions was perceived. It was found there is a dependency of the schools on the e-HRM technology supplier. Also a change in culture to a more business-like culture was identified, without judging whether this is a good or bad development. Via the questionnaire it was found that employees experience relational consequences as negative.

Little transformational consequences were identified. Due to the use of e-HRM technology processes became more structured and uniform, leading to a better execution of the intended policy, which contributes to better strategical performance. Data is used by the HR-department to make reports and by the board of directors to substantiate decisions.

This study contributes to theory via newly identified consequences, especially regarding relational consequences. Practitioners may use this research project as an example what's possible with e-HRM technology and what challenges may be faced.
E-HRM technology may be an answer to the challenges faced by schools, but the lack of strong HRM systems is holding back the schools.

Entering the digital age is one thing, making use of it is something completely different.

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1. Introduction

In the last decades the Dutch educational sector has been under heavy pressures. Reports about the high workload of teachers are manifold and the lack of compensation for teachers is recognized for years (ANP/redactie, 2012). Nowadays, these problems still exist and teachers strike for the same purposes (De Telegraaf, 2018): having a higher compensation and decreasing the workload of teachers. Besides those issues, also the influx of new teachers became an issue and will be in the future for primary education (Kuiper, 2015; Ministerie van OC&W, 2017a). For secondary education these shortages are expected to grow, but are not as pressing as in primary education (Ministerie van OC&W, 2017b).

Whereas in the business sector, companies themselves decide upon HR systems, policies and practices, on the contrary, in the educational sector there is a formal authority involved. Around the turn of the century, the Dutch Ministry of Education, Culture and Science developed the "Integrated Personnel Policy" and encouraged primary, secondary and vocational, educational and training institutions (VET institutions) to implement its policy (Ministerie van OC&W, 2005; Runhaar & Runhaar, 2012). Where the institutions had the freedom on how to implement the policy, the Ministry made sure HRM was in the collective labour agreement, so it was obligatory for all the institutions to start with HRM. HRM covered topics like performance reviews, education and training for and professionalization of the teacher, policy on starters and elderly teachers and more (MBO Raad, 2008). The fact the Dutch Ministry of Education, Culture and Science came up with the "Integrated Personnel Policy", was not surprising, since something had to be done to resolve these important people related issues present in the whole Dutch educational sector. What was new, was the introduction of HRM into the sector. With the introduction of HRM in the sector, also suppliers of e-HRM technology aggressively penetrated the Dutch educational sector, for them a new market was born. The question is whether the use of e-HRM contributes to the solution regarding the experience of a high workload, the lack of compensation and the shortage of teachers. Maybe the annual benchmark of one of the software supplier can shed some light on this.

In their annual HR benchmark, Raet (2015) surveyed 1146 employees, 506 HR- managers and 117 directors, both from the private and public sector, about e-HRM. One of their main conclusion was that the focus of e-HRM is on the automation of basic processes like pay slips, reimbursements and absenteeism registration. The most mentioned reasons for introducing e-HRM comprise for example better and faster information provision (63% mentioned), easier to execute HR-tasks (62%) and better service and quality of the HR-department (54%). Reducing costs (48%) and freeing time for a more strategic HR-role (34%) are mentioned fewer times. Environmental aspects (41%) and modern employability (47%) are other reasons. The experiences from directors and managers do sometimes differ, where little directors see a decrease in costs, HR-managers are more convinced. Both don't believe in less FTE at the HR-department because of e-HRM, and HR didn't become more of a business partner. Employees do have more freedom about their own HR-situation both groups agree, such as place and time independency.

During the past decades the research combination of Human Resource Management (HRM) and Information Systems (IS) has been evolved into the domain of electronic HRM, in other words e-HRM.

In the last ten years, recurring issues have been reported in review articles about the e-HRM research field. These issues are for example the non-theoretical basis of the research (Bondarouk, Parry, & Furtmueller, 2017; Bondarouk & Ruël, 2009; Marler & Fisher, 2013; Ruël & Bondarouk, 2014; Strohmeier, 2007), the micro-level orientation of used theories (Strohmeier, 2007), the fact that more macro-level theories are needed (Marler & Fisher, 2013; Strohmeier, 2007), the lack of a profound paradigm (Strohmeier, 2007), the lack of proper hypotheses testing (Strohmeier, 2007), contextual aspects not taken into account, and if they are, it can be considered as a bonus (Marler & Fisher, 2013; Ruël & Bondarouk, 2014; Strohmeier, 2007), the categorisation and consideration of technology is missing (Strohmeier, 2007), not all the actors are being taken into account (Strohmeier, 2007), there are limited and mixed findings about consequences (Bondarouk, Parry, et al., 2017;

Bondarouk & Ruël, 2009; Marler & Fisher, 2013; Strohmeier, 2007), there is not enough robust evidence concerning the strategic outcomes of e-HRM (Bondarouk & Ruël, 2009; Marler & Fisher, 2013; Strohmeier, 2007), a lack of longitudinal studies (Marler & Fisher, 2013; Strohmeier, 2007), issues with internal and external validity of studies (Marler & Fisher, 2013), research needs methodological grounding (Bondarouk, Parry, et al., 2017) and absence of environmental and moderating factors in the e-HRM research field (Bondarouk, Parry, et al., 2017; Ruël & Bondarouk, 2014).

Even though e-HRM consequences are of big importance for practice according to Strohmeier (2009), the findings about e-HRM consequences are limited and mixed, as already written. Findings on efficiency are mixed, since there are some improvements due to automation of activities, but it is unclear whether this is due to shifting tasks and responsibilities to other departments or individuals within the organization (Strohmeier, 2007). The relational consequences are still in need to be researched, while findings on transformational consequences are not "robust" (Strohmeier, 2007). Strohmeier (2009) also signals the need for conceptualising e-HRM consequences. He signals a parallel between e-HRM and IS consequences, mixed findings, and argues for the need looking at assumptions of concepts, so e-HRM consequences can be conceptualized appropriately.

In this research the e-HRM consequences for the educational sector in the Netherlands have been researched. Since very little scientific literature is available about (e-)HRM in the educational sector, this research will shed light on some aspects of e-HRM and its consequences within this sector. This research also addresses the existing need for practitioners to have more in-depth knowledge about the possible e-HRM consequences, and also address signalled issues like the lack of not all actors involved in research and the lack of quantitative studies.

To do research about the consequences of e-HRM at educational institutions using the same e-HRM technology, the following research question will be used: *What are the consequences of e-HRM technology in the Dutch educational sector?*

In this research the definition of e-HRM will be borrowed from Marler and Parry (2016, p. 2234), e-HRM consists of "…configurations of computer hardware, software and electronic networking resources that enable intended or actual HRM activities (e.g. policies, practices and services) through coordinating and controlling individual and group-level data capture and information creation and communication within and across organizational boundaries.". This definition includes the use of software and hardware to capture and manipulate data to inform and anticipate on, from within the HR-department throughout the whole organization, which is what the participants in this study try to do.

2. HRM & e-HRM in the Dutch educational sector: state of the art

2.1 Pressures from the Ministry of Education, Culture and Science

Even before 1996, it is recognized that the educational sector is under influence of pressures to have a more business oriented way of working (Huxley & Hall, 1996). And even nowadays these pressures still exist, maybe even greater than ever, since there is a very high workload, little compensation and little influx. According to the Secretary of state for Education, Culture and Science (Bijsterveldt-Vliegenthart, 2010) approximately 15% of the starters in primary education leave within the first 5 years of employment, in secondary education it's even higher, 20-25% of the starters leave within the first 5 years of employment, although there is a tendency to come back later.

In the Collective Bargaining Agreement of the Dutch Vocational Education and Training institutions, agreements have been made on HRM policy, under pressure of the Dutch Ministry of Education, Culture and Sciences. The most important part is the so-called "Integrated Personnel Policy". The Integrated Personnel Policy, aims at the horizontal and vertical integration of individual Human Resource (HR) practices (Runhaar & Runhaar, 2012). The vertical integration, or strategic or vertical fit, refers to the alignment of the organisational strategy and its HR policy. Horizontal integration, or internal or horizontal fit, refers to the alignment between HR practices. Important practices within the documents of the Ministry are career development and mobility, educational and training, conditions of employment and reward, performance appraisal, participation and performance pay (Leraren Commissie, 2007; Ministerie van OC&W, 2010, 2011). Institutions starting with HRM didn't (solely) do it because of the pressure from the Ministry, also educational innovations, being a good employer and mergers were triggers to start with HRM (Runhaar & Sanders, 2013).

2.2 HRM research in the educational sector

First, the effectiveness of the Ministry's choice for the Integrated Personnel Policy can be questioned. Although there is evidence for the integration of HR practices (Delery & Doty, 1996), the research of Verburg, Den Hartog, and Koopman (2007) shows that there is no significant difference in performance between firms having internal fit between HR practices and firms no fit at all between HR practices.

Furthermore, although the horizontal and vertical integration of practices is within the Collective Bargaining Agreement and has attention from the Ministry of Education, Culture and Sciences, according to Runhaar and Runhaar (2012) research in the educational sector is still focussed on single HRM practices (Isoré, 2009; Runhaar, 2017) and is still very scarce. Runhaar (2017) argues this single practice focus is due to little fit between some practices, the lack of expertise among policy executives and practices do not meet the needs of individual teachers.

Runhaar and Runhaar (2012) argued there is a gap between investments and the implementation of HRM policies in VET institutions. The implementation gap can be explained by the fact that the managerial HR policy brings control-oriented practices, where at the local level teachers are more likely to show cooperation when having an commitment-oriented HR policy (Runhaar & Runhaar, 2012). Also the phenomenon of mimetic isomorphism has been observed, meaning that institutions copy each other's policies, since none were found to be unique (Runhaar & Runhaar, 2012). The necessity of new behaviours, the lack of alignment with the current organisational culture, the impact of HRM on many policy domains, different rules and procedures are being used within different parts of the organisation, employees being tired of the many changes in policy (due to national or organisational forces), HRM is not being considered as helpful with the assimilation of competence based education, are all hindering factors to the implementation of the Ministry's HRM policy (Runhaar & Sanders, 2013), while intrinsic motivation can be seen as the most fostering factor, the role of the supervisor seems to be critical, thus attention has to be paid to line managers.

In their paper Leisink and Boselie (2014) argue for the use of strategic HRM as successor of the Integral Personnel Policy, since a new agreement between the Ministry of Education, Culture & Science and the representatives of the secondary education institutions was made in 2014 in which the need for a more strategic HRM approach is advocated (Ministerie van OC&W & VO-raad, 2014). Leisink, Knies, Oostvogel, and Aalbers (2016) argue for the importance of people management as part strategic HRM in education, since it has proven to be contributing to several outcomes important to schools. Knies and Leisink (2017a) argue there is little attention for the importance of the role of the (line) managers in the success of implementing strategic HRM in the educational sector. They also mention it's assumed teachers naturally take on responsibility to be assertive, but they question whether this is the case. Training & development, teamwork, challenging work, opportunity to provide feedback and coaching of new colleagues are HRM-practices widely supplied by schools in the secondary education, whereas career prospects, regulations regarding work/life balance, job strain and regulation regarding health and job security are the least supplied HRM-practices (Knies & Leisink, 2017a). They also suggest that there is more going on at school in terms of strategic HRM, than is shown by indicators, since practitioners don't always recognize or link certain behaviours to HRM-activities. Regulatory pressures and the lack of room for policy development are hindering factors regarding the implementation of strategic HRM, while the most important fostering factors are related to the personal traits of managers, like motivation and innovativeness of the manager. They conclude by stating the continuous improvement isn't translated into specific HR-activities and most schools are oriented at traditional HR-practices like training and development. HR-practices regarding high workload and job strain, health and safety and career prospect are only observed at a few schools (Knies & Leisink, 2017a). Knies and Leisink (2017b) show that, although middle managers themselves and school leaders rate the people management of middle managers as good, teachers and administrative personnel are significantly less positive about the people management skills of middle managers. Knies and Leisink (2017b) argue that this effect cannot only be attributed to the tendency to rate one self's performance higher than the actual performance, something else must be going on too. Potential causes like differing expectations are being proposed by them.

2.3 E-HRM without proper HRM

HRM didn't receive much attention in the educational sector, whereas the agreements are made on national level and is executed on school level. There is an implementation gap, mainly due to lack of motivation to cooperate from the individual teachers while intrinsic motivation is vital, even as the role of the line manager, who needs to have the knowledge and skills to execute the policy. Furthermore, little literature about HRM and the educational sector could be found, which may indicate a gap in research. It may seem surprising that besides administrative software, more and more schools start with using e-HRM solutions, especially since HRM itself is has been paid little attention to in the educational sector.

Bondarouk, Harms, and Lepak (2017) showed that organisations need a strong HRM system before starting with e-HRM. Relating this findings to the findings of, for example, Runhaar (2017), it can be questioned whether educational institutions really have strong HRM systems in place and, therefore, whether immediately starting with e-HRM is the way to go.

2.4 E-HRM technology in the private and public sector

Since early e-HRM research begun around 1970's (Bondarouk, Parry, et al., 2017), it has evolved into a sophisticated field where many topics have crossed the table. There are a lot of reviews about the (then) current state of research, where many theoretical and methodological issues were expressed, for example the lack of hypotheses testing (Strohmeier, 2007), the non-theoretical basis of the research (Bondarouk, Parry, et al., 2017; Bondarouk & Ruël, 2009; Marler & Fisher, 2013; Ruël & Bondarouk, 2014; Strohmeier, 2007) and issues with internal and external validity of studies (Marler & Fisher, 2013). Even in the latest reviews, these theoretical and methodological issues are recurring, showing researchers have challenges in the future.

In their article, Bondarouk and Ruël (2009) make a distinction between Human Resource Information Systems (HRIS) and e-HRM. The differences are the magnitude and reach of e-HRM, which is bigger than that of HRIS. Scientific articles about e-HRM technology, its composition, the fact whether a software package or separate software applications regarding different HR practices is beneficial over the other, and other interesting aspects, could not be retrieved, which may indicate a knowledge gap. However, on the subject of HRIS scientific literature is available, although little could be retrieved about software comparison, benefits and possible downsides.

Although a lot is known about the consequences of e-HRM, when reviewing literature, there is little research about how institutions decide on whether to start using e-HRM applications. Ruël, Bondarouk, and Looise (2004) in their case study proposed three main goals for organisations to introduce e-HRM, (1) improve the strategicness of HRM, (2), cost reduction and efficiency improvements, (3), client service improvement and facilitating management and employees. They found the main goal to introduce e-HRM was cost saving and improving the Human Resource efficiency. In her master thesis research project Kuipers (2017) found that although money is important for the business case and organisations should stay within the budget, "qualitative gains" also should be an important factor when measuring the system and that the business case ". . . should not only be based on money, . . ." (Kuipers, 2017, p. 43).

Speaking of the educational sector, Campbell, McDonald, and Sethibe (2010) argue that there are contextual differences between the private and public, and the profit and non-profit sector, which need to be taken into account regarding IT governance, concluding a one size fits all approach does not work regarding IT governance. Although the findings of Campbell et al. (2010), in their research about computer literacy and Human Resource Management, Elliott and Tevavichulada (1999), making a comparison between the public and private sector and the similarities and differences of the use of HRIS, found that except for statistics and utility programs, there was no difference between both sectors regarding word processing, spreadsheet, Windows, DOS, database and telecommunication programs. The authors explain this use of the same type of programs due to the programs being "ubiquitous" and the fact they are used for the same HRM "purposes". They also found both sectors using software to carry out their HRM activities. However, they found differences regarding sectors using the software for different HRM functions. The research of Ball (2001) confirms that no differences between sectors could be found regarding the usage of HRIS. Although e-HRM is different from HRIS, the assumption is made that in principle the HRM functions in both sectors are the same and therefore the HRM processes don't differ, supported by the conclusions of Elliott and Tevavichulada (1999) and Ball (2001). Nevertheless, this doesn't indicate that contextual differences didn't play a role in the decision making and in the (pre-)implementation phase.

In articles, HRM practices are being described as being electronic, but it remains unclear whether these practices are enabled by one or by multiple applications. Also, Strohmeier (2007) recognized this lack of technology research already in 2007. In general it can be concluded that regarding e-HRM technology, packages, bundles or programs, there is still a lot to be discovered.

2.5 E-HRM consequences

As a starting point the framework of Strohmeier (2007) has been borrowed (figure 1). The framework distinguishes between e-HRM context, e-HRM configuration and e-HRM consequences, on the micro and macro level. The consequences of e-HRM will be "determined" by the configuration and the contextual factors will be of influence on both the configuration and the consequences. This research focusses on the consequences of e-HRM.
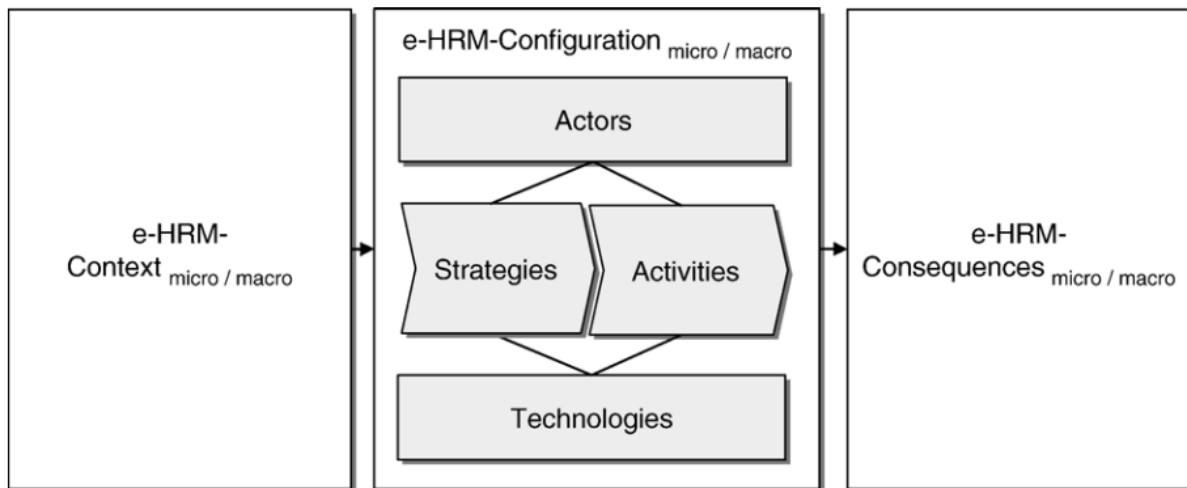
Figure 1: Framework of Strohmeier (2007, p. 21).

In their article, Lepak and Snell (1998) use a distinction of HRM roles made by Snell, Pedigo, and Krawiec (1995), HRM can have an operational role, relational role or a transformational role. Ruël et al. (2004) mention the distinction made by Wright and Dyer (2000), namely transactional, traditional and transformational HRM and conclude this distinction is similar to the one of Lepak and Snell (1998). Operational HRM can be explained as the administrative HR processes, like collect personal informational of the employees and paying their salary. Relational HRM's focus is not on administration, but on ". . . HR tools that support basic business processes . . . " (Ruël et al., 2004, p. 368), and thereby increasing the opportunity and service levels of employees and other partners according to Snell et al. (1995) (as cited in Lepak and Snell (1998)). The link between strategy and HRM is where it is called transformational HRM, thus, activities making HRM more strategic within the institution (Ruël et al., 2004). E-HRM's goals are subject to three forces according to according to Ruël et al. (2004), making HRM more strategic, cost saving, improve client service to management and employees, which leads Marler (2009) to conclude that the three e-HRM goals are cost saving, building resources and strategic alignment and can be directly related to three HRM roles used by Lepak and Snell (1998). Therefore, this research is focussed on the operational, relational and transformational consequences of e-HRM.

2.6 Operational consequences

There is consensus in the literature about what operational consequences actually comprise. Operational consequences are mostly referred to as impacting efficiency, effectiveness and costs savings (Bondarouk, Parry, et al., 2017; Marler, 2009; Strohmeier, 2007) and time savings (Bondarouk, Parry, et al., 2017).

In her article, DeSanctis (1986) was the first one empirically reporting operational e-HRM consequences like cost savings, efficiency and effectivity improvement. Haines and Lafleur (2008) confirm Ball's (2001) finding that IT in the HR-department is mainly used for administrative tasks and to automate routine tasks (Reddick, 2009). According to Strohmeier (2007) several case studies reported productivity gains as a result of using e-HRM for their administrative tasks. The main indicators for these gains are less HR staff, less administration due to automation, processes being faster and costs being saved. Bondarouk, Parry, et al. (2017), in their literature review, conclude that fewer employees are needed to do the HR tasks on the basis of studies from Martinsons (1994) and Hannon, Jelf, and Brandes (1996). Although, these benefits are only being found in case studies, there is also contrary evidence from a study of Ruël et al. (2004) in which these efficiency gains are reported for HR staff, but showed this was due to a responsibility shift to line managers, and from Reddick's (2009) research where respondents did answer contradictory when being asked whether operational goals have been met, which can lead to question the "typical justification" (operational consequences) as the main justification to implement e-HRM. The use of IT also makes HR professionals more focused on IT related HR

activities, such as developing IT-based HR applications and other knowledge based activities (Gardner, Lepak, & Bartol, 2003).

Although the above made reservations about operational efficiency consequences, there are indications that e-HRM may indeed be beneficial in terms of effectivity at some practices. Findings regarding e-recruitment show mixed results, more applicants, but, with lower quality, and even these results have been contradicted according to Strohmeier (2007) in his review. Special recruitment systems fail to deliver fully on saving time and work (Baker, DeTienne, & Smart, 1998). About efficiency gains regarding e-recruitment and e-selection is less debate (Strohmeier, 2007), it has been found that there are cost savings (Buckley, Minette, Joy, & Michaels, 2004) and these gains are also found for e-learning in bigger groups, but it remains a challenge to attract and retain the e-learners (Beamish, Armistead, Watkinson, & Armfield, 2002). Electronic selection doesn't lead to a loss of quality and it reduces employee turnover (Buckley et al., 2004; Strohmeier, 2007). The effectiveness of e-learning is within its flexible delivery to the user (Coppola & Myre, 2002). Communication is enabled via e-HRM, quicker responses and more "information autonomy" with a greater external reach (Gardner et al., 2003).

Strohmeier (2007) recognizes topics for future research regarding operational consequences, namely whether there are real efficiency gains besides a shift in responsibilities and a shift from HR activities to IT activities, if there are real efficiency gains how is the freed time used, and, what are the consequences for employees if efficiency and effectivity of HR activities can be improved. To conclude, in literature there are mixed signals about efficiency gains, just like the findings about effectiveness.

2.7 Relational consequences

Relational consequences are often referred to as the existence of heterogeneous networks due to ". . . new and extended possibilities of interactions between actors, . . ." (Reddick, 2009; Strohmeier, 2007, p. 28), as the improvement of HR services (Reddick, 2009), a greater decision-support role due to an information broker role, HR is involved in changing communication arrangements (Kossek, Young, Gash, & Nichol, 1994) the empowerment of employees to "perform HR activities themselves"(Parry & Tyson, 2011).

Strohmeier (2007) remarks, supported by Bondarouk, Parry, et al. (2017), that the relational e-HRM consequences are almost unexplored territory, but sees it as a crucial aspect of e-HRM at the same time, which is in line with Reddick's study (2009) who found relational and transformational consequences incorporating "major benefits". The few findings existing are better relations between HR staff and the organisation, and the ability to be more connected to the external environment (Gardner et al., 2003), the fact that via e-HRM can be reached out to the whole organisation, so integrating and aligning HR activities (Ruël et al., 2004), and the fact that policy can be made centrally, but executed decentralized. Bissola and Imperatori (2014) findings suggest that trust of employees in the HR department is enabled by the "…greater adoption of relational e-HRM practices,…" (Bissola & Imperatori, 2014, p. 389) and that via relational e-HRM practices the work environment can be more open and trustworthy, although the composition of the sample was limited. A possible negative consequence found in literature is the dependence on external partners regarding to software or could service for e-HRM because of maintenance, support and upgrades (Hannon et al., 1996). In their review Bondarouk, Parry, et al. (2017) also mention changing attitudes towards HR and HR staff, increasing employee satisfaction when using e-HRM and positively influencing company image. Hussain, Wallace, and Cornelius (2007) also found e-HRM is used to improve the image of the HR department (Hussain et al., 2007).

The fact e-HRM makes it possible for employees to see internal vacancies (Ruël et al., 2004) is also a relational consequence of e-HRM usage. Reducing response times and improving service levels, eliminating waste, improving decision quality and enabling enhanced flexibility and customization due to information accessibility improvements can also be considered a relational consequence (Reddick, 2009).

2.8 Transformational consequences

Transformational consequences are all about the change and varying impact of e-HRM on the business strategy, strategy support and company performance (Strohmeier, 2007), change management, outsourcing, service centres and business partnering (Bondarouk, Parry, et al., 2017). Throughout the years HR research also shifted focus from operational and relational consequences to transformational consequences (Marler, 2009).

Three stages of strategic HRM research have been identified (Lengnick-Hall, Lengnick-Hall, Andrade, & Drake, 2009), where the most recent one is focussing on the realisation of the strategic intent of HR policies and practices and their effective execution, which is linked to the strategic evolution perspective of strategic HRM (SHRM).

In their review, Marler and Fisher (2013) identified several studies touching upon e-HRM and its involvement with business strategy, but they conclude that there is "extremely weak" empirical evidence supporting the claim that HR becomes more strategic after implementing e-HRM technology, and these studies are also subject to validity issues. HR staff is paying more attention to be a strategic business partner (Bell, Lee, & Yeung, 2006), which is seen by others too (Haines & Lafleur, 2008), due to more engagement in organisational change activities. Also improved data usage is related to as transformational consequence (Ngai & Wat, 2006). There is only weak evidence that e-HRM technology is being deployed to meet strategic HR objectives and this little evidence is mainly referring to the U.S. context (Marler & Fisher, 2013). They also propose future research to focus on strategic outcomes and the macro-level, while using longitudinal quantitative studies. However, there are hints in the review article of Bondarouk, Parry, et al. (2017) that e-HRM technology enables the HR-department to become more strategic and has a strategic impact on the business by, for example, increased knowledge processing and other transformational consequences stemming for HR globalisation. They also conclude that studies about transformational consequences are still very scarce and more theoretical and methodological "grounding" is needed.

2.9 Towards a research framework

In order to explain the sometimes contradictory consequences, Strohmeier (2009) suggest to have a deeper look at the concept of consequences. Borrowing from Information Systems (IS) literature, four distinct categories of consequences are presented, strict determinism, moderate determinism, strict voluntarism and moderate voluntarism. When technology is the cause of all the consequences, and thereby causally explain the relationships, there is spoken of strict determinism. This view also suggest that there is no free human will. When human actions are considered to be the cause of consequences, there is spoken of voluntarism. This view promotes the free will of humans and the rationality of their actions. The moderate variants of both combine technology and human actions as the cause of consequences.

Strohmeier (2009) suggests to use a concept borrowed from Stewart (1971), a concept in which consequences can vary and are dependent on the exploitation of the possibilities enabled by information systems. Thus, technology can be seen as "…a potential for change that organisations can employ differently." (Strohmeier, 2009, p. 537). This concept can, in general, be classified as moderate voluntarism. Due to the limited choice in technology and the usage of that technology, consequences are "produced" (Strohmeier, 2009).

As referred to earlier, the framework of Strohmeier (2007) is taken as a starting point. Especially the consequences part of it is taken into account this research. Although Strohmeier (2007) refers to the e-HRM context, in this research project context is used differently. As pointed out, there is a suspicion of lack of strong HRM systems in the Dutch educational sector, besides, schools are operating in the public sector instead of the private sector where most of the research is from. Therefore not the narrow e-HRM context, but the broader context is looked at represented by the culture in the educational sector, the history of (e-)HRM at the schools and the goals set when implementing e-HRM. Lastly, on the basis of Strohmeier (2009) and Stewart (1971), the

specific e-HRM technology is taken into account, especially what constitutes the technology, what are its features and the opinion of users. This leads to a framework as can be seen in figure 2.
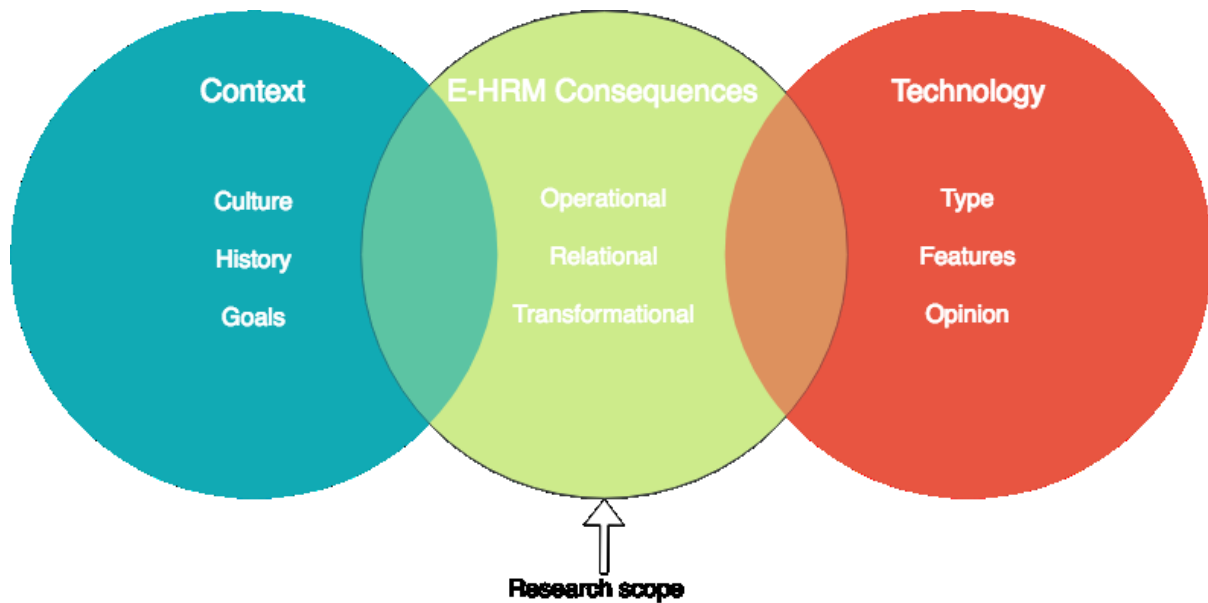
Figure 2: Research framework.

3. Methodology

3.1 Study design

This explorative research consists out of three parts: interviews, a questionnaire and document analysis. The interview part consists out of semi-structured interviews with 17 persons working at five different educational institutions and at one administrative office. The aim of this interview part was to thorough identify the operational, relational and transformation consequences of e-HRM in the Dutch educational sector and to gain better insight in how those consequences impact different categories of employees. The questionnaire part consists out of a questionnaire distributed at 3 schools, which are also participating with the interviews. The aim of the questionnaire was to gain insight in the experienced consequences and perceptions of general employees in the organisations. Document analysis was performed to learn about the capabilities and features of the e-HRM technology.

3.2 Sampling

In this research there were two criteria involved for the selection of the institutions participating in this research.

1). All institutions must be active within the Dutch educational sector.

Since this research is focussed on the Dutch educational sector and the potential differences found within that sector, only institutions active within the Dutch educational sector were researched. This also made it possible to compare the outcomes of this study to the outcomes of studies conducted in other parts of the public sector, and studies from within the private sector.

2). The same e-HRM technology has to be used by the researched institutions.

This criterion is used to rule out the fact that the results may differ just because different e-HRM technology was used. Although every institution can tweak and adjust the e-HRM technology to a great extent, during the study the assumption has been made that these tweaks and adjustments made, are of little impact on the experienced consequences and that human actions are considered as the big differences, and, therefore, cause the potential difference in consequences so that it can be attributed to human factors.

Via an e-HRM technology supplier contacts were made with 7 different institutions, of which six were schools and one was an administrative office. Five of the schools and the administrative office agreed to participate in this research, resulting in a total of six institutions participating. It may see odd to include an administrative office, but this administrative office resells the e-HRM technology of the initial e-HRM technology supplier to schools and together with the schools implement it and sometimes take over the whole administration of those schools, therefore acting as the de facto administrative unit of the schools. Besides that, it is fairly common in the Dutch educational sector to outsource the administrative tasks regarding employees to administrative offices. Due to these facts, there is a lot of knowledge present within these administrative offices about the different consequence and therefore one is included within this research.

All the schools are operating in the Dutch educational sector. The sample consisted out of one foundation with schools for primary education, secondary education and special primary education; one foundation with schools in primary special education and secondary special education; one foundation with schools in secondary education; two foundations with VET schools.

Since this research is publicly available, the interviewees were promised anonymity. To even rule out the slightest possibility of the employer taking actions regarding the employees participating. Since one administrative office is participating and it would be obvious for the employer the answers are from its employees, within this research the administrative office is labelled and name as a school.

As mentioned, an e-HRM technology supplier arranged initial contact between the researcher and the educational institutions and administrative office. After brining the researcher in touch with the participating institutions, the contact was solely via the researchers. As to the best knowledge the e-HRM technology supplier didn't promise the institutions any benefits from participating in the research and has no reason to assume the contrary.

3.3 Interviews

During this research semi-structured interviews have been held with 17 interviewees to identify e-HRM consequences. Three interview protocols have been made for 3 specific groups of employees: 1). General employees/line managers 2). HR-department 3). Board of directors (appendices 1, 2 & 3).

The employees interviewed can be categorized as follows: 11 employees from the HR department; 1 HR director; 4 general employees/line managers; 1 headmaster (appendix 15). Since the division of responsibilities and tasks was not that strict in some cases, for example an employee from the HR department also being a line manager, or a headmaster of a school under control of a central Board of Directors, combinations of protocols have been used in relevant cases to cover as many topics as possible.

All the interviews were recorded, all the interviews were transcribed and all the interviews were analysed along the research framework via the actual coding method. First all, relevant pieces of text related to one theme have been grouped together in one document. This led to 13 initial themes, namely: operational consequences, relational consequences, transformational consequences, the culture within the Dutch educational sector; the situation before the (current) e-HRM technology; tasks/processes performed with the e-HRM technology; reasons to start using (new) e-HRM technology; goals set when introducing the e-HRM technology; impact on the job of interviewees; the impact on the perception the employer being innovative and on sustainable employability; problems before, during and after the implementation; remarks regarding

(the specific) e-HRM technology; other consequences. After consulting a senior researcher, the initial procedure was adjusted, 2nd level coding was immediately performed during the 1st level coding stage. When the 2nd level coding was finished, 3rd level codes have been applied per topic.

After review, the following topics have been categorized as relevant for this research: operational consequences, relational consequences, transformational consequences, the culture within the Dutch educational sector; the situation before the (current) e-HRM technology; tasks/processes performed with the e-HRM technology; reasons to start using (new) e-HRM technology; goals set when introducing the e-HRM technology; impact on the job of interviewees; the impact on the perception the employer being innovative and on sustainable employability; remarks regarding (the specific) e-HRM technology.

Before starting the interview, participants were given a consent form which stated they have been informed about the goal of the research, the methods used and potential risks. Also addressed was the fact results are anonymised and questions regarding the research have been answered on forehand. By singing the form participants also agreed with audio recording, voluntary participation and the fact they could stop cooperating with this research project at any given time without providing any reason.

3.4 Questionnaire

The questionnaire (appendix 4) was designed on the basis of the theoretical findings of consequences and on the topics present in the current state of the scientific literature concerning e-HRM consequences. The questionnaire was aimed at the employees of the specific schools, to investigate their general perceptions of operational and relational consequences. Besides those two consequences, general characteristics and also whether the respondent is a line manager has been recorded, since literature indicates that line managers experience the use of e-HRM differently than general employees. Other questions were about whether respondents were satisfied with the e-HRM technology or specific parts of the e-HRM technology, whether the employee thinks the use of e-HRM technology contributes to the sustainable employability of the employer and whether the (further) digitalization of HRM is a "good" development. The questionnaire contained 27 questions for non-line managers and 29 questions for line managers. This difference is due to two questions aimed at line managers only. The statements were measured on a 5-point Likert scale, some general purpose questions, e.g. whether somebody is a line managers, were measured differently, for example binary. The questionnaire was distributed digitally at three of the five schools described earlier, with an estimated response rate of 18.6%. The data from participants in the questionnaire cannot be traced back to individuals by the researcher, therefore ensuring anonymity for the participants.

A total of 184 respondents answered the questionnaire. 53.8% of the respondents identify themselves as females, 44.6% as males and 1.6% did prefer not to answer that question. 42.9% has an appointment as teacher and 57.1% as administrative personnel. 14.7% Is (also) a line manager and 85.3% was not. The age composition and the recap of the information above can be found in table 1.

Respondents	184	100%

Gender		100%
Females	99	53.8%
Males	82	44.6%
Prefer not to answer	3	1.6%

Age		100%
< 30	20	10.9%
31 - 40	33	17.9%
41 - 50	45	24.5%
51 - 60	56	30.4%
> 60	30	16.3%

Main occupation		100%
Teacher	79	42.9%
Administrative	105	57.1%

Is respondent a (line) manager?		100%
Yes	27	14.7%
No	157	85.3%

Table 1: Characteristics of the respondents of the questionnaire.

The aim of the questionnaire was to gain insight in the experienced consequences of a bigger sample within the organisations, to be able to say something about the population regarding operational and relational consequences. Before the analysis the data has been recoded and to be able to investigate these operational and relational consequences summated scales were created.

From the questionnaire, items 6, 8, 10 and 16 measure whether the speed of a process has been increased, so these items are considered measuring operational consequences. As an example, question 6: *The use of self service in [Name e-HRM technology] saves me time arranging my staff matters.*

Items 7, 9, 11, 12, 13 and 15 measure the availability of information, changed communication arrangements, the improvement of HR-departments service based on the assumption that the image reflects the perceived service. These question are considered to measure relational consequences. As an example, question 11: *With the introduction of [Name e-HRM technology], my relationship with the HR-department has improved.*

Summated scales have been created on the basis that of one respondent none of the answers on the individual questions was 6, which corresponds to "not applicable". For the operational e-HRM scale 29 cases were left out, resulting in 155 remaining cases (appendix 5). For the relational e-HRM scale 22 cases were left out, resulting in 162 cases (appendix 6).

Looking at the reliability of both scales, the reliability, as reflected by Cronbach's Alpha, of the operational e-HRM scale has a Cronbach's Alpha of 0.810 (appendix 5) and the relational e-HRM scale has a Cronbach's Alpha of 0.849 (appendix 6). A Cronbach's Alpha above 0.800 is considered good. Zooming in on the operational e-HRM scale it can be seen for all four items that if they are deleted the Cronbach's Alpha will decrease between 0.032 and 0.069 (appendix 5). It wouldn't make sense to leave out one of the items because it will lower the reliability of the scale. The relational e-HRM scale shows the same pattern (appendix 6), leaving out one item will decrease the Cronbach's Alpha with a minimum of 0.013 and a maximum of 0.042. Also for this scale the same argumentations applies, leaving out one of the questions would decrease the reliability.

A factor analysis has been performed to check for unidimensionality of both scales, as can be seen in appendices 7 & 8. For the operational e-HRM scale one factor has been extracted with principal component analysis (appendix 7). The same is true for the relational e-HRM scale, one factor has been extracted with principal component analysis (appendix 8). Thus, both scales can be used in further analysis.

For further analysis a statistical software package was used to produce frequency tables, do calculations and to perform t-tests. Before performing those tests, assumptions for testing were checked.

Normally, if there is checked for difference between groups, independent t-tests or one-way ANOVA are used. There still is a believe that normality is a requirement to do those tests. The believe that the data needs to be distributed normally is not true, the data doesn't have to be normally distributed, but the distribution of the means has to be normally distributed (Norman, 2010). According to Norman (2010), the assumption of normality of the distribution of the means is not required for sample sizes greater than 5, because the Central Limit Theorem shows that ". . . the means are approximately normally distributed regardless of the original distribution." (Norman, 2010, p. 628), resulting in ". . . nearly correct answers even for manifestly nonnormal and asymmetric distributions like exponentials." (Norman, 2010, p. 628). This principle is applied in this research project.

3.5 Document analysis

In order to research the technological part of the research framework, document analysis has been performed. The website of the supplier of e-HRM technology has been reviewed to determine the type of technology and its features. This was done by looking for keywords indicating HR activities and processes and for words like hardware, software and cloud(ware).

4. Findings

4.1 E-HRM technology: types, features, opinions

4.1.1 E-HRM technology according to document analysis

During the document analysis 10 webpages have been analysed and it has been found that the type of e-HRM technology is cloud software, accessible on any device. In the cloud software different "HR-processes" and HR-activities are embedded: talent management; recruitment & selection; performance management; training management; skill management; succession planning; people analytics; workforce management; workforce planning; absenteeism management; personnel file; self-service; HR-administration; flexible benefits; digital signature; payroll management.

4.1.2 Tasks and processes within the e-HRM technology used by schools

All of the schools mentioned the pay slip and the personnel files as processes done digital, via the system. Pay slips are sent digitally, but on some schools are still available on paper for employees specifically demanding it. The personnel file is always accessible for the HR-department, but at some schools employees also have access into their own personnel file. Other processes which are partially automated via the e-HRM technology are, for example, reimbursements, performance review cycle and absenteeism. One school also used the e-HRM technology to publish internal vacancies. Employees can start certain processes themselves, for example uploading certificates from a training or reimbursement, which are automated via the system. This requires a self-service environment for the employees, available in the e-HRM technology. Some schools also use a combination of the e-HRM technology covered in this research and other e-HRM technology and software to perform HR-tasks. Especially other software was mentioned related to building reports and manipulating data, since the tools within the current e-HRM technology aren't considered sufficient.

Yes, [name e-HRM technology], the performance management cycle and the pay slip can be seen. – **Quote 1:** 3.a – Head master SSE

4.1.3 Perceptions of e-HRM technology according to interviewees

During the interviews interviewees were asked about their opinion about the e-HRM technology. Although there were some positive remarks, it has to be stated that most of the remarks were about the negative aspects. The user friendliness of the e-HRM technology was, in general, perceived as outdated, mediocre or not intuitive, despite some positive remarks from others. The updates of the e-HRM technology contribute to this perception even more, since after an update the layout is sometimes changed, leading to some frustration by employees.

I'm content with the potential it has, but I'm not content with the ease of use. – **Quote 2:** 1.a – HR Director

Also, many respondents mentioned the many options available within the e-HRM technology, which they perceived as too many options, leading to a negative perceptions about the e-HRM technology. Within the e-HRM technology itself some processes or features are not automated, for example your personal information is in the system, but you still have to type in your name in forms, this was mentioned by multiple interviewees too as an annoyance. One feature of the e-HRM technology specifically received a lot of negative feedback, the feature to make reports. The negative feedback was mainly about too much information being in reports, again, an outdated layout, but worse, different reports do differ regarding the same information, for example regarding the percentage of absenteeism. This led to schools using the information of the e-HRM technology but using other technology to produce reports to at least get a number which doesn't differ. It was even mentioned that if the number didn't reflect the real situation, at least the error within the reported number is the same.

You've got absenteeism data and sometimes there is a difference. There were different reports available within [Name e-HRM technology] for the absenteeism feature, but they weren't always equal. That's a pity of course, because you need to manage in one way and within [Name analytics software] the numbers are always reported the same way, so that way it's comparable between teams, locations and service departments. – **Quote 3:** 6.b – Salary administrator

One interviewee mentioned the e-HRM technology being a bit too professional with too many features which made people see the e-HRM technology as "*instrumental*". Last, but not least, the fact the e-HRM technology is used by schools doesn't mean it's tailored for schools, and more broadly, the context of the educational sector. This finding was mentioned by several interviewees as a negative aspect of the used e-HRM technology.

4.1.4 Perceptions of e-HRM technology according to respondents of the questionnaire

In the questionnaire questions have been included about to what degree respondents are satisfied with the e-HRM technology and its features, as can be seen in table 2. The overall opinion about the e-HRM technology, with a mean of 3.29, is slightly positive concerning employees. Having a look at the different features accessible to all employees, only the performance management scores slightly negative and, on the contrary, the digital pay slip scores very high, indicating employees are very satisfied with that feature. There were no significant differences between general employees and line managers. Regarding two features specifically aimed at line managers, the findings are negative. Both the absenteeism and management information feature are scored below neutral. Indicating line managers are slightly not satisfied with both features, scoring a 2.65 and a 2.74 on average.

	# Employees	Mean
e-HRM technology package in general	183	3.29
Self service	184	3.16
Personnel file	173	3.43
Digital pay slip	181	4.13
Performance management	144	2.84

	# Line managers	Mean
Absenteeism	26	2.65
Management information	27	2.74

Table 2: Number and means of employees and line managers regarding the overall e-HRM technology and different e-HRM technology features.

4.1.5 Job satisfaction

With the questionnaire it has been investigated what the introduction of e-HRM technology means for the job satisfaction (appendix 9) via question 14 of the questionnaire: "*The use of [Name e-HRM technology] contributes to my job satisfaction.*". With a mean of 2.83 it can be concluded that the used e-HRM technology does slightly negatively influence the job satisfaction of employees. There is no significant difference between general employees and line managers. The fact e-HRM influences the job satisfaction (slightly) negatively is surprising, since during interviews it was mentioned employees don't use the e-HRM technology very often, and also regarding the fact employees are satisfied with the e-HRM technology as is shown in the technology section of this research. As explained in the context section, a lot of older employees are working in the Dutch educational sector. Combined with the finding that the digitally less skilled employees are mostly also older employees, it is interesting to research whether this is a possible explanation for the finding that the job satisfaction is negatively impacted by e-HRM.

4.1.6 Innovativeness & sustainable employability

The fact employers introduce e-HRM into their organization, or increase the range of e-HRM technology within their organization, isn't considered as innovative by their employees. According to most interviewees it is a basic condition, a necessity, without e-HRM technology organizations cannot be as innovative as with e-HRM technology, but e-HRM technology is not being considered innovative to most of the interviewees, it's just supportive to being innovative. Some don't agree and do consider e-HRM as innovative, but on the contrary, others don't see it contributing to innovation at all, or it's not innovative in general, but only for this specific sector it is. The fact e-HRM technology is used doesn't make the employer more attractive for outsiders to start working for according to interviewees.

Nowadays it's normal to arrange your own things, no bank or insurance company where you can't login and why shouldn't you be able to do that at your employer, at whom you work 40 hours a week nota bene, that's really strange to me. – **Quote 4:** 4.b – Head of HR

In the questionnaire there was also asked about the contribution of e-HRM technology to sustainable employability. With a mean of 3.40 (appendix 10) employees do agree e-HRM technology contributes to sustainable employability. Especially line managers agree with the importance of e-HRM technology contributing to sustainable employability, since there is a significant difference with non-line managers. Line manager have a mean of 3.78, where non-line managers score 3.34

Together with the findings of the interviews it can be concluded that employees view the use of e-HRM technology as of importance for the sustainable employability of an employer, but don't consider it as innovative, only as a basic necessity. The fact line managers score significantly different regarding e-HRM technology and its contribution to sustainable employability, may be explained by the fact they do see the potential for e-HRM, as they have gained new tasks and responsibilities, or, should do what they already have

should have done, and experience this can be more efficient and effective with the use of technology than on paper, but further research is necessary.

4.1.7 Further use of e-HRM technology regarding HRM

In the questionnaire it was also asked to the respondents whether they think the further digitalisation of HRM a good development. With a mean of 3.86 (appendix 11) the respondents answered positively on this question. There is also a significant difference found between general employees and line managers. Line managers are extremely positive, with a mean of 4.44, whereas general employees are positive, with a mean of 3.76. Comparing this results with the impact on job satisfaction it may seem surprising that the means are so high. However, maybe it can be argued that employees, and especially line managers, do see the potential of e-HRM which is not realized yet. Further research can shed some light on this possible explanation.

4.1.8 Reflection on findings related to technology

The e-HRM technology provides a manifold of features, of which only some are used by schools. Primarily the administrative features of the e-HRM technology are used, while the more policy related features are only used by some of the schools. Despite the negative sentiment when asked about feedback on the specific e-HRM technology during the interviews, the employees do score the administrative features as being satisfied with in the quantitative part. However, the more policy related features are all scored not satisfied with. The use of e-HRM technology is experienced as having a negative influence on job satisfaction, although e-HRM is seen as a basic necessity for sustainable employability, and even stronger by line managers than general employees. Increasing the use of e-HRM technology is a good development as considered by employees and line managers.

4.2 Context: culture, history & goals

4.2.1 Culture & sectorial context

To understand the usage of e-HRM in the Dutch educational sector, it is necessary to understand the sectorial context. The educational sector is described by the interviewees as having a focussing on the quality of their primary service, the process of educating pupils. To support the quality of the education most schools invest in the quality and development of the teachers. Contrary, there is a shortage of teachers and the budgets are under pressure, leading to difficult choices for the boards of directors.

We focus predominately on the development of our employees, it's of importance that teacher will be developing continuously, so, that's an important thing for us. Furthermore additional things like absenteeism policy, sustainable employability, age-related personnel policy, that kind of things. – **Quote 5:** 4.b – Head of HR

Another challenge is the big group of older employees almost ready for their pension, leading to extra pressures for an optimal strategic workforce planning. The development possibilities are primarily focussed on employees contributing to the primary process, so administrative employees don't have that much opportunities to develop themselves. The culture in the educational sector can be described as to care for each other, being a family, not eager to judge each other's performance and old-fashioned.

Well, that there is taken care of people. I'm an employee and my supervisor has to take care of me. That's what you see a lot in the educational sector. I'm speaking predominately about primary education, since . . . – **Quote 6:** 5.b – Administrator-Advisor

4.2.2 The previous situation

Looking at the situation before the use of the current e-HRM technology, some schools used e-HRM technology for pay rolling and other minor administrative tasks, but most of the administrative tasks were done on paper, with the hand and required a lot of time and signatures from employees, managers and directors at spatial different locations of the same organisation. The processes had many steps and this has led

to, for example, fragmented information, time-consuming processes to collect the right information, lost files or lost information, time lag with information, errors when manually copy the information to another paper or computer. This all could be have led to a lack of coherency and structure.

It was not unusual that employees wrote down personnel details in Excel or Word and in the next column the full time equivalent, and when it changed, adjust it by hand with pencil, the change also has consequences for the salary, that was then also calculated using a pencil. – **Quote 7:** 3.c – Head of HR

4.2.3 Reasons & goals to switch to current e-HRM technology

All the complicated manual processes made the schools contemplate whether their ways of working needed to be changed. According to interviewees the schools had to "move with the times", in other words, they thought their ways of working were (becoming) old-fashioned. Other reasons to start with the use of sophisticated e-HRM technology were the publisher of the old software used ceased the program, to give the HR-department a qualitative boost and to have less bureaucracy for managers. The interviewees had high expectations of the new e-HRM technology, the new e-HRM technology should lead to efficiency and effectivity benefits, quality improvements, more uniformity and costs savings.

Yes, because it's more efficient. I stand with that. In my opinion, when something new is promoted, for example digital, or digital reimbursement, before it's implemented, I think wow, you know, yes, there are still people calling to get their pay slip on physically, who want to hand in their reimbursement documents on paper, that's out of place nowadays. Look at banks, there you also just have to use iDeal. – **Quote 8:** 2.a – HR-consultant

When implementing the e-HRM technology there were high expectation like cost savings, efficiency and effectivity gains and less errors, which were also considered as goals when starting to use the new e-HRM technology. Another goal most interviewees mentioned was a time goal, from that day onwards this system should be operational. Furthermore a goal as we want to digitalize as much as possible was mentioned, which is rather vague due to the many possible interpretations. One school wanted to do an evaluation after a year, but this was merely informal, only line managers and team leaders were asked informally, employees never had a say at all.

Yes, the goal was to digitalize as much as possible, which is still the goal. – **Quote 9:** 4.b – Head of HR

Looking back on the goals set, there are mixed findings. Interviewees reported that the system was operational when planned, for most of the time, but a goal like cost saving has been mentioned as not been met as intended by few interviewees. Furthermore interviewees couldn't easily remember other goals or whether the goals have been met, which can be included in future research.

Yes, we did digitalize and automate, so those goals have been achieved. The goal I talked about earlier, the reduction in FTE's, that's not fully achieved. – **Quote 10:** 1.a – HR Director

4.2.4 Reflection on findings related to the context

The educational sector faces different challenges, from a shortage of new teachers, budgets under pressure and many teachers being only a few years before their pensions. The fact interviewees describe the sector as old-fashioned, family-like, to care for each other and not eager on judging each other is interesting regarding the context of them starting to use e-HRM, a relatively new development. The fact many processes were on paper before using this e-HRM technology can be seen by some as a perfect example of being old-fashioned. Although, regarding goals and reasons to change, moving with times, cost savings, efficiency and effectivity gains are indicating the old-fashioned culture is changing.

4.3 Consequences: operational, relational, transformational

4.3.1 Operational consequences

Interviewees answered very extensively relating to the topic of operational consequences. Since cost savings, efficiency gains, effectivity gains and error reduction were also mentioned as reasons and goals to start with e-HRM technology, or make more extensive usage of e-HRM technology, these topics are a starting point.

When looking at operational consequences it is necessary to make a distinction between three groups of employees: 1.) HR employees; 2.) Line mangers; 3.) General employees. This distinction is necessary since interviewees mentioned several topics beneficial for one of the groups, but having a negative impact on one of the other groups. First having a look at some consequences having a positive impact on one or more of the groups and not having a negative impact.

To have access to all the information within the system *anyplace* and *anytime* is mentioned as big advantage, also leading to information being available immediately. If this is considered with the fact that, according to interviewees, the information is stored at one location and the information is also more complete due to the use of e-HRM technology, this leads to efficiency gains for the HR-department and line managers. Questions from or about employees can be answered quicker, since it's much easier to look up the right data and the HR-department doesn't receive requests if they can look up some files anymore.

I think, speaking from the user side, because I'm also a user from one side, that when I, for example, need to fill out my tax papers and I need my annual statement, then I can request it from home quickly. For me that's a big advantage. – **Quote 11:** 4.a – Application manager

The fact (new) e-HRM technology was going to be used, led to a review of processes, cutting out irrelevant steps and automating as much as possible. This in itself is a big efficiency gain according to several interviewees. Since the processes are digital employees, line managers and the HR-department don't have to put signatures on papers, and pass them on to each other via internal mail to other spatial location to have another signature. Since everything is digital, with one mouse-click a signature or a confirmation is given and this saves a lot of processing time. A few interviewees mentioned not all processes being faster, but also remarked this could be to the specific form designed by their school and not to be attributed to the fact e-HRM technology was being used.

Looking at the amount of actions needed I can say, in the previous situation, you had to go to the website, you had to print the form, that's already the second action, you had to fill it out, third action, then you needed a signature, that's the fourth, then the supervisor, fifth, the supervisor had to send it to here, so the amount of actions is just reduced to three I think, instead of fifteen, and it prevents losing track of the form within the process. – **Quote 12:** 6.a – Team manager PSA

Another benefit for everybody is the fact no outdated forms are present and scattered within the organization. An employee can only use the digital form, which is up to date if the HR-department updates it, so the employee doesn't find a stack of outdated forms and doesn't hand them in. This leads to a benefit for everybody, no emails, phone calls and fill out another form is needed anymore, which is, especially for the HR-department, beneficial as processer of those forms.

Yes, a lot less and look, it was always corrected of course, because we got a phone call, and that sort ballast you don't have anymore. Actually, it doesn't go wrong anymore and we don't get any phone calls about it anymore. In that sense, it's more quiet and stable. – **Quote 13:** 1.a – HR Director

For errors, follow-up phone calls and emails are also not necessary anymore. Since information of employees is already in the system, this can be used in the other processes, so no errors can be made with personal information for example. Since it is digital all the manually retyping from paper to the computer has stopped,

this also has led to a significant drop in errors and the necessity to manually check for errors, freeing time for the HR-department. Since the e-HRM technology also keeps track of the process its history, everybody knows where the process is halted and can contact the specific persons directly instead of wondering why the letter hasn't been received yet. Due to regular backup and cloud-technology files shouldn't get lost, whereas papers often get put in a drawer and just when you need them you don't remember where you did store them.

Yes, everybody has got insight, at which desk, digital desk, the form is. So for everybody it's insightful who has to do what, so if the team manager hasn't approved a reimbursement yet, then they don't have to contact us, no, they can see for themselves and directly contact the team managers to say something is going wrong, why don't you forward it. So that's more efficient and you've got time savings because of it. – **Quote 14:** 6.b – Salary Administrator

When zooming in on the HR-department, the use of e-HRM technology was mentioned to save FTE, most of the time for administrative tasks such as digitize papers and combining data. Besides the cut in FTE, there were also new tasks assigned or obtained by the HR-department, leading to an even bigger efficiency gain. On the contrary, interviewees also mentioned the fact the administration of the e-HRM technology takes more time than expected and even new personnel was acquired specifically for maintaining the e-HRM technology. However, the amount of FTE saved on the administrative side exceeds the amount of FTE which is necessary for e-HRM technology administration, leading to a net efficiency gain according to interviewees, but this gain is less than expected of forehand.

Yes, because we do have two functional administrators, of whom we did have only one in the previous situation. – **Quote 15:** 1.b – HR Advisor

Although it is mentioned by the interviewees that also line mangers should experience efficiency gains due to automated processes with less steps, this is often not perceived by line mangers. On the contrary, line mangers even perceive *more* work. According to interviewees, although line managers see that the e-HRM technology makes processes better, the mangers experience it as a shift of tasks from the HR-department to them. They have to do the administration which was previously done by the HR-department, in their perception.

With the absenteeism feature, in the previous situation you saw a plan of action had to be made and then you were going to print an action plan and brought it to the manager and said do it this or that way, now actually a manager can see he has to make a plan of action. So he has to get used to a new routine, actually, he has to look daily whether he has things to do. That's a task which is shifted to them. Therefore, we have more time for other things. – **Quote 16:** 6.a Team manager PSA

This leads to line mangers having the feeling they have to do more than in the previous situation, which is also acknowledged by interviewees, but according to some, with a rather surprising statement, namely, line mangers are now forced to do the things they always should have done. Another explanation by the interviewees about the line mangers' perception is the fact the e-HRM technology sends notifications and reminders to the line managers. These reminders are, according to some interviewees, experienced as a burden and feels like the tasks to do are bigger than in reality. Line mangers are constantly reminded during the week about tasks they have to fulfil within the system, although, from an HR perspective, this leads to more accurate, better and more up to date information.

Yes, more has to be done compared to what they were used to, because absenteeism management, that you are the case manager of your employees as supervisor. In the previous situation it was the same, but then they didn't do it. . . . so they now perceive more should be done and perceive it as disadvantageous too. – **Quote 17:** 2.b – Team leader PSA

General employees don't work with the e-HRM technology very often according to interviewees. Although the processes are also easier and improved for them, due to the little usage this has little to no impact on their jobs since their core task is teaching pupils and doing administrative work related to that. There is mentioned that a specific group of general employees experience the use of e-HRM technology as a heavy burden and the e-HRM technology itself as complicated. This group of employees can be categorized as people with no affinity with computers, software or any other electronic device in general and most of the time these employees are relatively old. They experience the use of the e-HRM technology as very time consuming and sometimes the e-HRM technology is even not used at all, leading to an employee not being reimbursed due to the e-HRM technology being too complicated and being afraid to ask for help, even though there is help available.

Do you hear the amount of actions I have to perform. Firstly, I already buy a more expensive ticket, then I have to make a picture of it, which I have to send to myself by email. Only that's already different than just staple it and fill out the form and done. So, it does cost me a lot of time to figure it out a little bit. Then, in [Name e-HRM technology] you've to find the correct form. I can't do that, so I need the help of a younger colleague. And I know I do speak for more people. You know, each time it's about €9,-, so you think, never mind. But if you add up all those times, you'll think I'm crazy, because it will be a fair amount of money, yes. – **Quote 18:** 4.d – Teacher

Since the group of employees which are relatively old is very big within the education sector, this can be a signal for organisations considering introducing e-HRM technology to specifically pay attention to this finding. However, this may be a time-related issue, nowadays people are grown-up with technology and computers. During the interviews it was mentioned by less digitally skilled interviewees that in the educational sector many different software programmes are used for different aspect, like a tool for timetables, software to register the grades of pupils, an email account and so on. The manifold of software programs leads to two problems, the irregular use and the many usernames and password. The irregular use of software makes it very hard to get affinity with it and very hard to start understanding the software, or even just the process within the software. Not in particular e-HRM technology, but it's hard to understand any software (programme). The constant changes of, or within, the software makes it very difficult for them and, since all those different tools and programs require usernames and passwords, this makes it even more complicated for them.

Well, with an update it's a burden to a lesser extent, however, predominantly when you have to start using a different program. We previously had, let's say three years ago, a system to track pupils, but we changed to another program, from a different software supplier, which works differently, much more complicated, more possibilities. Yes, then you've to do it all over again. – **Quote 19:** 3.b – Teacher

The above described efficiency and effectivity gains and losses are not the only things impacting costs saving. Since the e-HRM technology has a specific feature for absenteeism, interviewees made remarks about that feature. The fact e-HRM technology is used to register absenteeism has no direct impact on cost savings according to interviewees. Since the process is better monitored and actions can be taken on the right moment, for example, fines from the UWV, a governmental institution, can be prevented. Looking at recruitment, the e-HRM technology speeds up the process just a little bit since vacancies can be put out earlier and with one mouse click applicants can be rejected, however, the process of inviting people and having interviews is not sped up by it, having only a minimal effect on the efficiency of the recruitment process. Interviewees didn't have numbers whether there were more applicants or whether the applications were of a different level since the use of the e-HRM technology. One important finding is that the use of this recruitment feature saved both schools using this feature approximately 80% on employment agencies and head-hunters, which in one case was a cost saving of €800.000 annually.

Very much. Let's have a look, previously we spent more than one million and now it's below two hundred thousand. – **Quote 20:** 1.b – HR Advisor

Since a lot of data is within the system, it was to be found easier to introduce successors in the organisation due to the knowledge transfer process being smoother, everything is in the system. One interviewee mentioned the fact information could be combined in the e-HRM technology, as a cost saver. Employees claimed to have a right to a special regulation from the collective bargaining agreement for older employees, the "BAPO"-regulation, in which is regulated that older employees, if they want to make use of this regulation, are cut on their income but they can work less hours. Employees claimed to have made use of the agreement and the employer let them work less hours, but due to the e-HRM technology the employer eventually found out the employees never had been cut on their salary. This had cost a lot of money for the school. One last cost saver is the saving of a lot of paper, which also was mentioned to be an environmental-friendly consequences of the use of e-HRM technology.

We didn't manage the system, so when we started working with [Name e-HRM technology], we could have a look and see this employee is appointed for 5 days, claims to make use of the BAPO-regulation, but he doesn't pay for this BAPO-regulation, in other words, it was never formalised and he, for years, worked 4 days a week, but we paid him for 5 days a week, and he didn't pay anything for the regulation. That kind of mistakes we could uncover, and we found many employees to be in the same situation. So, many things went wrong. –
Quote 21: 3.c – Head of HR

Several interviewees mentioned that not the e-HRM technology itself leads to cost savings and also not the policy itself, but the interplay between the e-HRM technology and the policy leads to costs savings for certain processes.

Regarding the quantitative findings, 155 respondents answered all four the questions for the operational e-HRM scale (appendix 12) with a mean of exactly 3.000. This means that employees are neutral about operational consequences, thus, on average, not perceiving positive or negative operational consequences. If this is checked for line managers, it can be seen (appendix 12) that there is no significant difference, concluding that the operational consequences are perceived neutrally.

4.3.2 Reflection on operational consequences
During the interviews many efficiency and effectivity consequences have been found. Faster processes, less errors and FTE savings were reported. However, this is dependant to which group of employees one belongs. Many of these operational consequences are related to the processes itself and are mostly visible to the HR-department. Digitally less skilled employees and line mangers were reported to spend more time on certain tasks. Line managers reported a shift in tasks from the HR-department to them, leading to more responsibilities for them. Surprisingly, the finding from the questionnaire is that employees perceive operational consequences as neutral and there was no significant difference with line managers, as would be expected based on the interviews. The finding 80% could be saved on recruitment costs is of importance for practice, since the educational budgets are already under pressure.

4.3.3 Relational consequences
The relational consequences of the use of e-HRM technology are found throughout the whole organization. During the interviews many consequences were identified, which are reported below. Starting with the HR-department itself.

The biggest relational consequence is an improved service quality of HR itself. The quality of HR is regarded as improved due to the HR-department being faster, having more knowledge, it can give more advice to employees than before using the e-HRM technology, they can better inform employees and they make less errors. These improvements are related to the e-HRM technology in terms of having more information and being able to perform analysis, having a better overview and have access to accurate numbers.

Yes, as I just told, the fact you can think with the employees, what do you exactly want, now we've got more time for it. – **Quote 22:** 4.b – Head of HR

Members of the HR-department are less dependent on each other regarding information, since most of the information can be found in the system. Employees regard the service quality of the HR-department as improved because it causes less trouble for the employees, for example less lost files or less errors in letters or e-mails which need to be corrected. Although the previous findings shared by most of the interviewees, some interviewees don't see an improved service quality and, for example, regard it only as different way of operating or just don't see an improvement (or decline) at all.

No, not the e-HRM technology itself. Maybe it does, and I'm missing it. But, not the e-HRM technology, but to do the salary administration yourself, that is forcing you to gain knowledge, the e-HRM technology is just a means, not a goal in itself. – **Quote 23:** 3.c – Head of HR

According to interviewees, the relationship between employees and the HR-department is also changing. With the improved service level, the HR-department is changing from being administrative to more a service-oriented department. Employees asking questions about pensions and asking advice from the HR-department, for example. Employees regard this change in relationship in general as beneficial for them.

You perceive you've to deal with different labour laws, pensions are maybe going to change, look, at [Name of employee]'s place, there it is like, no pay slip is the same, you've to, some people just come and ask advice, like, is it possible to work half of the time and then pensions etcetera, we've almost become like advisors. – **Quote 24:** 6.a – Team mangers PSA

The image of the HR-department is changing too. To external stakeholders the image is improved because of their perception the HR-department's service level being improved and they also experienced a better bond with HR. The department is also considered to be more visible within the organisation and being seen as more professional, whatever this really means, at least the interviewees regard it a positive.

Yes, better, for me that's a strange word, more professional, I don't know whether it's better, but it is anyway more professional. – **Quote 25:** 3.a – Head master SSE

Some of the interviewees experienced a growth in their professional network due to special days organized by the e-HRM technology supplier for customers. They meet representatives of other schools at those meetings and keep in touch afterwards. Interviewees indicated to, sometimes, ask advice or help from them with regulations or specific cases, most of them not being related to the e-HRM technology. Other schools didn't experience a growth in their professional network at all. Besides the days of the software supplier, no other growth in their professional network was mentioned during interviews.

Yes, but it is supported by [Name e-HRM technology supplier], so it's done on our own, it's because of the network events of [Name e-HRM technology supplier] that we got in touch with others. – **Quote 26:** 3.c – Head of HR

In one organisation the use of e-HRM and its widespread possibilities of control led to an interesting discussion, to what extend should they control the line managers. This discussion about control and monitoring is a direct consequences of the introduction of this e-HRM technology. The directors feel insecure, can they trust their line managers in their ability to make important decisions? The HR-director was an advocate of little control and trust the line managers in their ability to judge situation and make the right decisions, since all the necessary information is available to them. This led to the policy to only have sample-based monitoring taking place.

Assuming that people always do the wrong things and therefore need a lot of control, so that's really a strong vision we talk about. That also influences the mutual relationship, because of the professional discussion you've together, but also different opinions, my colleague of finance has a different view, for example. – **Quote 27:** 1.a – HR Director

The perceptions and experiences of the line managers are not as positive as those of HR-employees. Line managers see the use of e-HRM as taking over the administrative part of the HR-department, leading to unhappy line mangers and line manager with a negative attitude regarding the e-HRM technology and during the change process, making them more resistant. Interviewees from the HR-department also have the perception of a switch of tasks from the HR-department to line managers, but only being it very minor. A different experience is that e-HRM forces the line managers to finally do what they also should have been done, this lack of executing policy cannot longer be covered.

Every time when I have a discussion with the line managers I give advice, it's yes, it has benefits for the HR-department, but not for us. We became expensive administrators, yes, that discussion I'll lose, I'm avoiding that discussion on purpose. – **Quote 28:** 1.b – HR Advisor

Besides executing policy, e-HRM helps to increase the execution of the intended policy, since the process is embedded in the system it's not easy to deviate from, which is seen by some as having less freedom. It is more clear who's responsibility it is, due to the workflows in the system. Not only for the line managers or HR, but also for employees. When a reimbursement is declined, HR is not longer to blame, since the employee now knows it actually his direct managers who decides on their request. The line mangers can't hide behind the HR-department any more with excuses the HR-department denied the request. E-HRM leads to clear communication between the HR-department and line managers and the consequences of decisions are more insightful for HR and line managers.

Well, in some cases for sure. When employees file a reimbursement which isn't correct, in the previous situation, you got the incorrect file back from HR with feedback what was wrong, the perception was, it wasn't allowed by HR. In the current situation this is different, the head master denies the reimbursement, so we say, we only give advice to deny it because of this and that, now the head master has to go to the person to tell I don't know what you are doing, I'm not going to reimburse this. So, that makes it different. – **Quote 29:** 4.b – Head of HR

It has been mentioned by an interviewee that all the line managers have to follow the specific policies and agreements otherwise the use of e-HRM technology becomes a burden due to different ways of using the policy between line managers. Most of the other interviewees experienced the opposite, due to e-HRM there is more structure in processes and less incongruity/more uniformity in policy execution leading to less randomness in policy, it becomes more objective, which leads to more trust from employees and a change of the image of the line mangers as being more professional.

I think it was deepened, I think people like that the same questions are asked, objectively. I think it will give a bit more confidence. – **Quote 30:** 3.a – Head master SSE

Also general employees experience having more responsibilities and tasks, since they have to do things themselves, instead of sending the information to their line manager or HR, which in the previous situation did the administrative tasks. This comes together with less perceived freedom, since the system determines the boundaries. Since the use of e-HRM, some employees got the feeling their progress could be tracked and that things had to be done, which they experienced as a threat. This is not entirely fictional, since it was mentioned by an interviewee that he had better insight in the performance of his employees, so underperformers could finally be tracked easier and normal performance could be given the recognition they deserved.

So you give people less freedom, they have to do certain things so to say. Firstly, they have to do things and besides that we also have a way to control them. – **Quote 31:** 5.a – Administrator-Advisor

On the other hand, the employees do see the benefit, for example the faster service from HR which also leads to a better image and relationship with HR for employees. The service HR can give besides the e-HRM technology is perceived as complementary to the e-HRM technology. Although, some interviewees didn't report a change in image or in relationship, but mentioned it was already good.

I think it's clear and I think HR is accessible. As I just said, very approachable. So, fine, because it's a nice addition to the application. – **Quote 32:** 3.b – Teacher

Since employees view their core task as teaching and since employees don't use the e-HRM technology very often, it is also mentioned the e-HRM technology doesn't have an influence at all on the relationship between the HR-department and the employees. There is one concern regarding these findings, employees which are less digitally skilled strongly prefer to keep working on paper. It is very difficult for them to adjust and much guidance is needed for them.

Yes, I think it's quiet silly actually, because the administration tells me to do it digital and then I think, I don't know how. If tell them I don't know how, then you've to find somebody who has got some time at that moment, very often it's a younger colleague, and ask how are we going to do this. How do I get reimbursed. – **Quote 33:** 4.d – Teacher

The satisfaction of employees doesn't change much because of the introduction of the e-HRM package, most of the employees report the little impact the e-HRM technology has on their daily routine, it's only used a few times per year for a short time. Only the digital less skilled employees experience a big impact in their routine, leading to be less satisfied with their job and also the help they get is not sufficient, or in their perception, there is no help at all. However, it has been mentioned this is not due to this specific e-HRM technology package, it's about the bigger picture for them. They have to use many different systems, for which they need a different password and username and those systems change regularly, so they don't get used to a system.

I also do have the feeling that, when concerning a little bit of information, which I normally put on paper in ten minutes, I've to spend one and a half hour to find out how to do it, just to put that information in a system. That's very frustrating for me sometimes. It also has to do with software you don't use regularly. – **Quote 34:** 3.b - Teacher

During the interviews it became clear that the schools are very dependent on the e-HRM technology supplier. This, obviously, already starts during the implementation, but continues when using the e-HRM technology. The most important thing for schools is the uptime of the system. The interviewees reported little error with the uptime, the last major system wide downtime was approximately two years ago. Sometimes there are little problems and the schools have to trust the supplier to take action immediately. Employees don't notice many system errors, which are mainly seen as force majeure, however, some experience it as disturbing. Waiting half an hour and try again helps most of the time. The HR-department from some schools, on the other hand, did report problems like slow back-end systems and peak load on the servers. Updates are sometimes annoying for the schools, since buttons or the lay-out changes, leading to questions and frustration from the HR-department, as well as from line managers and employees, however, these updates are also requested by the same schools from the e-HRM technology supplier, for example to add functionalities to the e-HRM technology. The most errors occur on the back-end side of the system, so employees are not affected much. Besides the e-HRM technology supplier, a power outage is another concern of the schools, if that happens, at most schools, the HR-department can be sent home, since everything is digital and within the e-HRM technology.

If the system is down, you immediately can't do anything anymore. So, in the case of [Name e-HRM technology], if [Name e-HRM technology] is down, I can send my colleagues home, because we, not only [Name e-HRM technology], we are so much automated, that when internet breaks down, or [Name of e-HRM technology] is down, [Name e-HRM technology] we use for everything. If that's down, you can't do anything. – **Quote 35:** 3.c – Head of HR

Interviewees reported that since the Board of Directors got used to their reports, the fact they can produce factual numbers to support policy and make decisions more insightful, their information need increased. The HR-department is taken more seriously by the Board of Directors since they can give them facts and realistic outlooks, leading to more trust from the Board of Directors and more confidence in the HR-department. On the contrary, this finding was not mentioned by several other interviewees, they mentioned that the relationship just didn't change at all.

In the previous situation I had to come to the Board of Directors regularly for complaints and now I don't have to do that anymore. They trust the team, but also the system. – **Quote 36:** 2.b – Team leader PSA

The fact e-HRM technology is used and everything becoming more digital has an impact on the way of communicating inside the organisation. Interviewees do mention that there is less face to face communication and that the communication becomes less personal. However, this is not immediately seen as a bad change in communicating. The last thing to mention is that for some interviewees the culture within the organisation was changing a bit due to e-HRM technology (implementation). They felt it was becoming more business-like, which is not a judgement by them whether this is a good or bad change, but a just a mere fact. It is likely these two findings are interrelated, since communication is a part of culture.

Well, it's not a judgement actually. I think the conversation is more business-like, but with that I don't mean that this is a bad development, because in fact we are here for business reasons, we work here. But this is just my observation. – **Quote 37:** 3.b - Teacher

An impact on the relationship between employees and their job is the fact the e-HRM technology is available anyplace, anytime. Although, employees don't use the e-HRM technology that often at the moment, this may become a challenge later on. One of the organizations used the internal vacancies option of the e-HRM technology, which also is considered to be a relational consequences (Ruël et al., 2004).

The questions of the relational e-HRM scale are answered by 162 respondents, with a mean of 2.85 (appendix 13). Since 3.00 represents a neutral answer, this finding is (slightly) negative. The result can be interpreted that employees experience relational consequences as having a negative impact. There has been checked for being a line manager or not being a line manager, but this does not have a significant difference (appendix 13). This leads to the conclusion that all employees experience relational consequences slightly negative.

4.3.4 Reflection on relational consequences
From the interviews a manifold of relational consequences have been identified. In general the relational consequences are perceived positive or neutral. Improved service quality of the HR-department, a change from being an administrative department to being a service-oriented department, clear and better communication and being more visible within the organisation are some examples. On the contrary, two groups experience predominantly negative relational consequences, line managers and digitally less skilled employees. General employees experience anxiety due to their progress is being tracked, sometimes, but they do see the benefit of e-HRM for the organisation. It's debateable whether this is actually a bad development for the organisation, because it can also be used to, maybe finally, help identify underperformers so measures can be taken to help increase their performance. But the use of e-HRM technology also increases the trust of employees in the line managers and HR-department, since the e-HRM technology leads to less randomness and more uniformity. The fact there is less face-to-face communication and the culture is becoming more

business-like are facts, but, also here, it can be questioned whether this is a good or bad change. The organisation is very dependent on the e-HRM technology supplier, which sometimes lead to frustrations, for example regarding updates or systems interruptions. On the other hand, via de e-HRM technology supplier contacts with other schools are made, leading to a broader professional network for some of the schools.

Despite some groups being very sceptic and experiencing negative relational consequences, most of the interviewees mentioned an improvement or neutral development regarding relational consequences. On the contrary, the results of the questionnaire show a (slightly) negative perception of relational consequences. It would be understandable if this could be attributed to the line managers, but surprisingly no significant difference has been found. This indicates other factors are of influence. Since less digitally skilled people are perceiving the relational consequences negatively according to interviewees, maybe the focus should be more on this group, since it is a big group within the Dutch educational sector.

4.3.5 Transformational consequences

Due to the e-HRM technology processes became more structured and more uniform. Employees can't circumvent the forms in the e-HRM technology, since the e-HRM technology forces the use of the distinct form or fields within the form. For example, for a performance review the intended questions are asked and have to be answered, this cannot be skipped by the line manager anymore, since this review is done on the basis of the questions in the e-HRM technology. The HR-department can easily check whether all performance reviews have been executed. This has a positive impact on the quality of the policy execution, the actual execution of the policy is more in line with the intended policy, which may contribute to the schools' strategy and performance.

Well, I think 30% just wasn't done and because this couldn't be noticed, it wasn't recognized by HR, because HR had to look in the files for control. And when it was done, sometimes, one would write 4 lines, and somebody else wrote a report. So that randomness was in place. – **Quote 38:** 3.a – Head master SSE

The most important element of e-HRM technology is the fact more data, more reliable data and more accurate data is available. This availability of data leads to the perception that decisions can be substantiated with better facts. Board of Directors and the HR-department use the data, reports and analysis to base policy on or to convince partners within the organisation such as line managers or general employees. According to interviewees the influence of reports, and therefore data, on decisions is big, since reports are important to the Board of Directors. In some organisations also the line managers have access to some reports and data, although, it's not monitored whether they use the reports. Besides the initial policy making, the data is also used to monitor policy and the whole organisation.

They approve, because then they have management information, they can do something with it. And they are also more in control, which is their role. – **Quote 39:** 4.b – Head of HR

Because of the fact e-HRM technology is used and less errors are made at the HR-department, there is more time to focus on the strategic challenges of the organisation. Although, since the e-HRM technology is being used as an instrument, policy has to fit the constraint of the e-HRM technology interviewees mentioned, otherwise it's a waste of resources.

5. Discussion

In this research a manifold of operational and relational consequences, and a few transformational consequences, have been identified. Zooming in on the operational consequences it can be concluded some processes are more efficient and more effective. However, for some processes this is perceived differently by employees of distinct groups. As shown by Ruël et al. (2004) line managers could experience a shift of tasks and responsibilities from the HR-department to them. In this research line managers perceived this, for some

processes, too. However, representatives of the HR-department have a different explanation for this perceived shift in tasks and responsibilities, namely line managers finally start doing what they always should have been doing. It remains debatable whether there is an actual shift of responsibilities from the HR-department to line managers which needs to be addressed in future research.

Although processes being more efficient and effective according to interviewees, this is not perceived by general employees when taking into account the quantitative part of the research. Since the outcome of the questionnaire regarding operational consequences is neutral, it can be questioned whether e-HRM technology has an impact on the normal employee. This is confirmed during the interviews by interviewees indicating they just rarely (have to) use the e-HRM technology, having little to no impact on their core tasks. Despite digitally less skilled employee experiencing negative operational consequences, it can be questioned whether this is due to the e-HRM technology itself, since it was stated by them during the interviews that the use of software in general has an impact on their daily routine, of which e-HRM technology is just one. Since digitally less skilled employees are in general of a higher age and the group of employees with a higher age is overrepresented in the Dutch educational sector, it is recommended for practitioners to involve digitally less skilled employees from the start onwards when adopting e-HRM technology and to keep attention focussed on this group after the implementation. Since there are indications not the specific e-HRM technology but the manifold of software programmes and technological solutions used are impacting the digitally less skilled employees, it is of interest how this issue can be dealt with in the future, because technology keeps evolving.

The fact both schools using the recruitment feature of the e-HRM technology saved costs is not new. Buckley et al. (2004) already showed e-recruitment potentially savings costs and also the findings of Baker et al. (1998) about no savings in time and work are not new. But the fact both schools saved 80% of the costs, for one schools this saving was €800.000, makes it important to highlight this finding for other practitioners, since budgets in the Dutch educational sector are under pressure combined with the shortage of teacher.

As written, Strohmeier (2007) recognized topic for future research, namely whether real efficiency gains besides a shift of responsibilities are present, how time freed is used and what the consequences for employees are. This research contributes to those topics by showing there are real efficiency gains besides a (debateable) shift in responsibilities, that the time freed is partly used to administer the e-HRM technology and that general employees experience the operational consequences neutrally.

Zooming in on the relational consequences multiple have been identified, of which some are in line with earlier findings in literature. For example, the dependency on the e-HRM technology supplier, as reported by Hannon et al. (1996), and the fact there is more trust from employees in line managers and the HR-department as is in line with the findings of Bissola and Imperatori (2014). The findings of Gardner et al. (2003) are supported by the fact that also in this study an increase in relations between the HR-department and employees and between HR and the board of directors has been observed, although according to some interviewees this image already was good or did not change at all. The fact relational consequences are explored, addresses the remark of Strohmeier (2007) and Bondarouk, Parry, et al. (2017) that relational consequences are almost unexplored territory.

Most of the relational consequences are perceived positive or neutral and most of the relational consequences are related to the HR-department, for example an improved service quality and an improved image of the HR-department to employees. During the interviews it became clear the HR-department was starting to transition from an administration oriented to a service oriented department, which in itself is a relational consequence due to the change in the relationship with employees. This transition is enabled via e-HRM technology by combining information.

Despite Bondarouk, Parry, et al. (2017) mentioning changing attitudes and increasing employee satisfaction, line managers were found to experience negative relational consequences, already starting with the

introduction of e-HRM. The perception e-HRM technology leads to a shift of responsibilities from the HR-department to line managers cause them having a negative attitude regarding the change process and regarding the use of e-HRM technology. This can impact the whole organisation, which is something practitioners should be cautious about when introducing e-HRM technology.

During the interviews general employees have voiced their concerns about their performance being able to be tracked by line managers and the HR-department via e-HRM technology. This caused them experiencing fear and anxiety. A possible explanation for this behaviour can be found in the family like culture, where judging one another is not common practice as was voiced by interviewees. On the other hand, it can be questioned whether, from a business perspective, the ability to track employees is bad, since underperformers can now be identified. It is advised to practitioners to address this issue on forehand within the organisation and be transparent about it, whatever direction is preferred. On the other hand, employees do also stress that e-HRM technology increase the trust in line managers and the HR-department since there is uniformity and less randomness in decisions made by them.

A surprising finding is the fact the introduction of e-HRM technology lead to discussions between directors and higher management about trusting line managers taking the right decisions and the extent to which the line managers' decisions should be monitored. This findings is important both from a theoretical and practical perspective, since this has not been observed and these questions are likely to popup in other organisations too when introducing e-HRM technology.

Started with stating the relational consequences almost all were perceived positive or neutral, the result of the questionnaire indicated something different. Employees do experience relational consequences negatively, and more surprisingly, there is no significant difference between line managers and general employees. A possible cause can be the big group of older employees which are relatively digitally less skilled according to interviewees. More research is needed to identify the causes of this finding. Also practitioners should be aware of this finding which can potentially lead to unhappy employees.

The fact employees mention there is less face to face communication, less personal contact and the perception the culture is changing to a more "business-like" culture, doesn't mean this is seen as a bad change. It was presented as a fact by interviewees, but the desirability of this change was not questioned by them.

Zooming in on the transformational consequences, this study doesn't identify many transformational consequences. The most interesting one is e-HRM technology enabling processes to be more uniform and thereby removing objectivity and randomness. This also leads to the actual policy being more executed in line with the intended policy, which, by assuming the policy is related to the school's strategy, contributes to the schools performance. This finding suggest that there is empirical evidence supporting the claim that HR can become more strategic after implementing e-HRM technology, as was questioned by Marler and Fisher (2013) due to "extremely weak" evidence. This finding also contributes to theory, since Bondarouk, Parry, et al. (2017) mentioned studies about transformational consequences being scarce.

In their article Lengnick-Hall et al. (2009) also mention the realization of the strategic intent of HR policies and practices and their effective execution as being linked to transformational consequences. When taking into account the finding of Bondarouk, Harms, et al. (2017) that strong HRM systems need to be in place before starting with e-HRM technology and the findings of, for example, Runhaar (2017) it can be questioned whether schools do have strong HRM systems in place and therefore whether this consequence is having much impact. It is recommend to practitioners to design strong HRM systems to make better use of this potential consequence.

The fact data is used to substantiate reports and policy was also found during this study and is considered as a transformational consequences (Ngai & Wat, 2006). However, the use of data to substantiate reports and base

policy on was mentioned, but the actual impact on strategic and business outcomes was not mentioned and measured. Therefore it cannot be concluded that great use of data to substantiate reports and decisions has actual transformational consequences at all.

As already mentioned in the findings part, interviewees mention the importance of the human touch, since e-HRM technology and the data isn't the holy grail according to them. The interplay between e-HRM technology, policy, practice and person is what makes the difference according to them.

If the consequences are connected to the technological findings of this study it can be concluded that the most used features of the e-HRM technology are still the administrative features, which are also perceived as being satisfied with by employees. However, the features which are subject to policy are rated negatively. Making the assumption these policy related features do bring relational consequences, it may, again, be concluded schools need to start with designing a strong HRM system before making use of those features.

Since there were remarks about the user-friendliness of the e-HRM technology, this should be taken into account by practitioners, also since there is a group of digitally less skilled employees and it was found by Davis, Bagozzi, and Warshaw (1989) that the perceived ease-of-use has a big influence on the actual use of technology. Since all schools in this research use the same e-HRM technology, also a recommendation to the e-HRM technology supplier could be made. The look and feel and the lay-out of the e-HRM technology were considered outdated and some features as not user-friendly, which, as shown by Davis et al. (1989), do impact the use of the e-HRM technology. Therefore it is recommended to incorporate the feedback of users during the design process of new features so the user-friendliness of the software is guaranteed. But still, e-HRM technology is seen as a necessity for sustainable employability and an increased use of e-HRM technology is seen as a good development by employees and line managers.

As a last remark it was mentioned that since the processes became more digital, less paper was wasted by the schools, which may be considered as an environmental effect. On the other hand, since more power needs to be used due to the digital nature of e-HRM technology, this leads to question the net effect on the environment.

5.1 Limitations

This study is subject to some limitations which should be taken into account when interpreting this research. Firstly it is important to note that one head master and director have been interviewed. It may be that more detailed findings or nuances will be found if more directors and head masters will be interviewed.

Regarding the questionnaire it should be noted that line managers were asked in their role as general employees and not in their role as line managers, except for the last two questions. It may be that line managers would score the questions differently when answered from the perspective as line manager instead of the perspective of general employee.

The author of this research is a non-native speaker of the English language. Since the interviews were held in Dutch, it may be that with the translation of quotes details or nuances were lost. This is tried to overcome by providing the original Dutch quotes in appendix 14.

The respondents of the questionnaire and interviewees taking part in the interviews were from schools active in, solely or a mix of, primary education, secondary education, vocational education, special primary education and special secondary education and the results have been presented as an overview of the educational sector. This neglects the fact that there may be differences regarding these specific field schools are active in, for example, schools active in primary education may have different e-HRM consequences than schools active in secondary education. Future research should determine whether there are level specific differences between schools.

The fact all schools used the same e-HRM technology made it easier to identify consequences, since the technology was assumed not to be the cause of potential differences found. However, it may be that the use

of the same e-HRM technology does have an influence on the findings. Therefore other technology should be taken into account in future research and the results should be compared with this study to check for technological influences on the findings.

This research did not take into account some characteristics as gender and age as there was no theoretical evidence. During the interviews it became clear that age may be a factor regarding the perceptions of consequences, since older people are assumed to be less digitally skilled. Future research should take age into account as a control variable.

In this research a first attempt of quantitatively measuring operational and relational consequences was made. The scales used showed to be one factor, were reliable and are considered to be measuring operational and relational consequences. However, since this is a first attempt, improvements are more than welcome.

6. Conclusion

This explorative research project started with the curiosity about the Dutch educational sector and the combination with e-HRM technology. The goal of this explorative research project was to the investigate the consequences of e-HRM in the Dutch educational sector, by answering the following research questions: *What are the consequences of e-HRM technology in the Dutch educational sector?* On the basis of a framework of context, technology and consequences the e-HRM consequences in the Dutch educational sector have been identified.

After identifying operational, relational and transformational consequences via interviews and collecting evidence about perceptions of employees via a questionnaire, this research question can be answered as follows.

In the Dutch educational sector there are multiple operational consequences which lead to costs savings, efficiency gains and effectivity gains. However, predominantly line managers experience negative operational consequences and the general employee perceive the operational consequences as neutral. This study also identified relational consequences to be present in the Dutch educational sector. The relational consequences are mainly identified by and related to the HR-department, however line managers and employees are also impacted by relational consequences. The relational consequences related to the HR-department are mostly considered to be positive or neutral, but the relational consequences related to line managers and employees are considered to be mixed or negative. Lastly, little transformational consequences were identified during this research project.

The contribution of this study to theory is the fact some new consequences have been identified, especially regarding relational consequences. New explanations and insight on existing theoretical findings have been provided and a first attempt to measure operational and relational consequences quantitatively was made. This study can be of help and guidance for practitioners when thinking about introducing e-HRM within an educational institution to show the possibilities and the potential problems which may be faced.

E-HRM technology is seen as a basic necessity and the further use of e-HRM technology is considered as a good development by employees. The old-fashioned sector is becoming more modern by adapting e-HRM technology as many processes were previously done by hand.

In potential e-HRM technology may be an answer to the challenges the educational sector is facing, for example budgets that are under pressure. But in reality many schools do lack strong HRM systems which need to be in place to make good use of e-HRM technology as can be seen by the negative perceptions regarding relational consequences and the little transformational consequences identified.

Entering the digital age is one thing, making use of it is something completely different.

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Appendices

Appendix 1: Interview protocol employee English and Dutch

Appendix 2: Interview protocol HR-employee English and Dutch

Appendix 3: Interview protocol Board of Directors English and Dutch

Appendix 4: Questionnaire Dutch and English

Appendix 5: The operational e-HRM scale

Appendix 6: The relational e-HRM scale

Appendix 7: Factor Analysis of the operational e-HRM scale

Appendix 8: Factor Analysis of the relational e-HRM scale

Appendix 9: Statistics on job satisfaction

Appendix 10: Statistics on innovativeness & sustainable employability

Appendix 11: Statistics on further digitalisation of HRM

Appendix 12: Statistics regarding the operational e-HRM scale

Appendix 13: Statistics regarding the relational e-HRM scale

Appendix 14: Dutch quotes

Appendix 15: School and respondents

Appendix 1: Interview protocol employee English and Dutch

My name is XXXX and in the context of my master study at the University of Twente I want to ask you some questions about your experiences with the use of technology related to human resource management and staff matters, the impact it has on the HR-department and what it means for the policy of your institution.

When I ask about a situation, it's about your personal situation. No answer is right or wrong. It's about your first spontaneous reaction and you don't think about it for a long time. I want to stress that the information you provide me with, will be handled confidential. It cannot be traced back to you as a person. You can at any time stop this interview, without providing any reason.

This interview will approximately last about one hour. Firstly I start with a general introduction where I'll ask you about the nature of your activities to become familiar with your work. Next, I'll ask you some questions regarding the personnel policy at your school, the influence of e-HRM technology on your daily activities and the influence of the e-HRM technology on your relationship with (your supervisor and) the HR-department.

To be sure I'll understand you correctly and to be able to review it at a later moment, I would like to record this interview. Do you give consent for that?

Then I want to ask you to read this Informed consent form and if you agree with the content, we can start with this interview and I'll start the recording.

Who & what?

1. What is your gender?
2. What is your age?
3. Can you tell me your job title and the nature of your activities?
4. What's your tenure in the educational sector?
5. What is your tenure at this school, and how long regarding this job title?

HRM

1. What is the personnel policy of your school according to you?
2. Are you satisfied with the personnel policy of your school?
3. Do you think your schools treats its employees well? Why? Why not?
4. If you could change one thing of the policy, what would it be? Why don't you do that?

General

1. For how long have you been working with the current e-HRM technology? Which tasks you perform with the e-HRM technology? What was the previous situation?
2. Were promises made or goals set regarding employees at the introduction of e-HRM technology? Which goals? Which promises? Are the goals meet and promises delivered?
3. What's your opinion about the use of e-HRM technology in general, apart from this specific e-HRM technology?
4. What does the use of e-HRM technology mean for you? (Different activities? Different tasks?)
5. Do you think e-HRM technology contributes to innovative and sustainable employability?

Operational

1. Which tasks do you perform with the e-HRM technology?
2. Do you save time by using the e-HRM technology? Which saves the most time? Or do you have to spend more time to certain tasks? If you have freed time, how do you spend it?
3. Which tasks are taking more time than in the previous situation?
4. If you adjust or file something, is it processed faster by the responsible entity, for example the HR-department or your supervisor compared to the situation before the introduction of the e-HRM technology?
5. Did the software give you a better overview about your own staff matters (or of the employees you supervise)? Which forms have to be filled out or which actions need to be taken.
6. What's your opinion about the self service feature regarding the e-HRM technology? (Can you quantify?) (Why?) Which rating do you give the e-HRM technology? And the different features, for example absenteeism, recruitment and selection, personnel file, performance management?
7. Do you consider it to be easier to work with the e-HRM technology? (Why?) (Which cons are present using the e-HRM technology?) (Everything easy to find? Clear?) Quantify!
8. If you can mention one thing, what should be different or what should be added to the e-HRM technology?

Relational

1. (If applicable) How do you describe your relation with the people you supervise? Did the relationship change after the introduction of self service?
2. How is your relationship with the HR-department and why?
3. How did your image of the HR-department develop after the introduction of e-HRM technology?
4. Why do you think the HR-department is doing on a daily basis? Do you perceive this being done in a better way after the introduction of e-HRM technology? What should the HR-department do what they don't do at this moment, according to you?
5. Did the e-HRM technology contribute to a better overview of your school's policies regarding education or HRM? In which way? What's your opinion about that?
6. Does the e-HRM technology contribute to you being better informed via the e-HRM technology? Which areas? What's your opinion about it? Why?
7. Are your own behaviour, for example the amount of times you were ill or that you didn't had a performance review yet, became more insightful? What do you do with this information?
8. Are you more satisfied with your job after the introduction of the e-HRM technology? Why? Is there a relationship with the software or with something else?

Transformational

1. How did your job change by the use of e-HRM technology? Did you gain tasks? Did you lose some tasks? What's your opinion about it?

Closing

1. Is there something you want to tell me regarding some questions asked or some thoughts you have?

I want to thank you for your cooperation regarding this interview. Do you appreciate receiving the transcript of this interview so you can give feedback if you would like to? What is your email address?

Thank you very much for your participation and cooperation!

Mijn naam is XXXX en ik wil u graag in het kader van mijn masterstudie aan de Universiteit Twente vragen stellen over uw ervaringen met de software die wordt gebruikt om de personeelszaken te regelen, de impact die dat heeft op de afdeling personeelszaken en wat dat betekent voor het beleid van uw onderwijsinstelling.

Wanneer ik u vraag naar uw situatie, gaat het uitdrukkelijk om uw PERSOONLIJKE SITUATIE. Geen enkel antwoord is goed of fout. Het gaat om uw eerste spontane reactie en u hoeft niet te lang nadenken. Ik wijs er met nadruk op, dat de informatie die u verstrekt hoogst VERTROUWELIJK behandeld zal worden. U kunt op elk moment, zonder reden, besluiten niet meer verder te willen gaan met dit interview.

Het vraaggesprek zal ongeveer een uur in beslag nemen. Als eerste begin ik met een algemene introductie waarin ik u zal vragen over de aard van uw werk, om een indruk te krijgen van uw werkzaamheden. Vervolgens zal ik u een aantal vragen stellen over het personeelsbeleid van uw onderwijsinstelling, de invloed van de software op uw werkzaamheden en de invloed van de software op uw relatie met uw leidinggevende en de afdeling personeelszaken.

Om er zeker van te zijn dat ik uw antwoorden goed overneem en begrijp zou ik het gesprek graag opnemen, zodat ik dit gesprek later nog eens rustig terug kan luisteren. Gaat u hiermee akkoord?

Dan zou ik u willen vragen om dit toestemmingsformulier door te lezen en als u daarmee akkoord gaat, kunnen we met dit interview beginnen en zet ik de opnameapparatuur aan.

Wie & wat?

1. Wat is uw geslacht?
2. Wat is uw leeftijd?
3. Zou u mij kunnen vertellen welke functie u heeft en waaruit uw werkzaamheden bestaan?
4. Hoe lang bent u werkzaam in de onderwijssector?
5. Hoe lang bent u al werkzaam bij deze onderwijsinstelling, en hoe lang al in deze functie?

HRM:

1. Wat is volgens u het personeelsbeleid van uw onderwijsinstelling?
2. Bent u tevreden met het personeelsbeleid van uw onderwijsinstelling?
3. Vindt u dat uw onderwijsinstelling op een goede manier met haar personeel omgaat, waarom wel of waarom niet?
4. Als u iets mocht veranderen aan het personeelsbeleid, wat zou dat zijn? Waarom?

Algemeen

1. Hoe lang werkt u al met de huidige software voor personeelszaken? Welke taken doet u met de software? En wat was de situatie daarvoor?
2. Zijn er vooraf beloftes gemaakt of doelen gesteld naar u toe door de onderwijsinstelling? Welke doelen? Welke beloftes? Zijn ze gehaald of uitgekomen?
3. Wat vindt u van de digitalisering van personeelszaken in het algemeen, losgezien van de software die er wordt gebruikt?
4. Wat betekent de digitalisering van personeelszaken voor u? (Andere werkzaamheden? Andere taken?)
5. Vindt u dat het gebruik van software voor personeelszaken bijdraagt aan innovatief en toekomstbestendig werkgeverschap?

Operationeel

1. Welke taken voert u uit met de software?

2. Bespaart u tijd door het gebruik van de software? Waar zit die tijdswinst in? Of bent u meer tijd kwijt aan bepaalde taken door de software? Waar besteedt u uw vrijgekomen tijd aan?
3. Welke taken nemen meer tijd in beslag dan in de situatie hiervoor?
4. Als u iets wijzigt of iets indient, wordt dat dan ook sneller verwerkt door de verantwoordelijke, bijvoorbeeld personeelszaken of uw leidinggevende dan in de situatie voor het gebruik van de software?
5. Heeft u door de software meer overzicht gekregen over uw eigen personeelszaken of van diegene waar u leiding aan geef? Waar in het proces de formulieren liggen of wie er actie moet ondernemen?
6. Wat vindt u van het gebruik van de selfservice software die je gebruikt? (Kunt u dat kwantificeren?) (Waarom?) Welk cijfer zou u de software geven? En van de andere modules, bijvoorbeeld verzuimmanager, werving & selectie, personeelsdossiers en performance management?
7. Vindt u het gemakkelijk werken met de software? (Waarom?) (Welke nadelen kleven er aan de software?) (Alles makkelijk vindbaar? Overzichtelijk?) Kwantificeren!
8. Als u 1 ding zou mogen noemen, wat zou er dan anders moeten of moeten worden toegevoegd aan de software?

Relationeel?

1. (Indien van toepassing) Hoe is uw relatie met uw mensen waar aan u leiding geeft? Is de relatie veranderd na de invoering van de selfservice module?
2. Hoe is uw relatie met de afdeling personeelszaken en hoe komt dat?
3. Hoe is uw beeld van de afdeling personeelszaken veranderd nadat uw personeelszaken digitaal worden afgehandeld?
4. Wat denkt u dat de afdeling personeelszaken allemaal doet? Vindt u dat ze dit beter doen sinds de invoering van de software? Wat zou de afdeling personeelszaken volgens u moeten doen wat ze op dit moment niet doen?
5. Heeft de software bijgedragen aan een beter inzicht in het beleid van uw instelling op het gebied van onderwijs of uw personeelszaken? Op welke manier? Wat vindt u daarvan?
6. Zorgt de software voor een betere informatievoorziening naar u toe? Op welke gebieden dan? Wat vindt u daar van? Hoe komt dit?
7. Zijn uw eigen gegevens en eigen gedragingen, bijvoorbeeld hoe vaak u ziek bent of dat u nog geen ontwikkelingsgesprek heeft gehad met uw leidinggevende, meer inzichtelijk voor u geworden? En wat doet u met die informatie?
8. Bent u meer tevreden over uw baan sinds de invoering van de software voor personeelszaken? Hoe komt dat? Heeft dat te maken met de software of met iets anders?

Transformationeel

1. Hoe is uw baan veranderd door het gebruik van de software voor personeelszaken? Zijn er taken bij gekomen? Zijn er taken weggegaan? Wat vindt u daarvan?

Afsluitend:

1. Wilt u graag nog iets kwijt naar aanleiding van eerdere vragen of gedachten die nu bij u opkomen?

Ik wil u graag bedanken voor de medewerking aan dit interview. Stelt u het op prijs als ik de uitwerking van dit interview naar u toe mail, zodat u daar eventueel nog feedback op kunt geven? (Wat is uw emailadres?)

Hartelijk bedankt voor uw medewerking!

Appendix 2: Interview protocol HR-employee English and Dutch

My name is XXXX and in the context of my master study at the University of Twente I want to ask you some questions about your experiences with the use of technology related to human resource management and staff matters, the impact it has on the HR-department and what it means for the policy of your institution.

When I ask about a situation, it's about your personal situation. No answer is right or wrong. It's about your first spontaneous reaction and you don't think about it for a long time. I want to stress that the information you provide me with, will be handled confidential. It cannot be traced back to you as a person. You can at any time stop this interview, without providing any reason.

This interview will approximately last about one hour. Firstly I start with a general introduction where I'll ask you about the nature of your activities to become familiar with your work. Next, I'll ask you some question about the influence of the e-HRM technology on your daily activities. Lastly, I'll ask questions regarding the influence of the e-HRM technology regarding your school's policy.

To be sure I'll understand you correctly and to be able to review it at a later moment, I would like to record this interview. Do you give consent for that?

Then I want to ask you to read this Informed consent form and if you agree with the content, we can start with this interview and I'll start the recording.

Who & what?

1. What is your gender?
2. What is your age?
3. What's your tenure regarding HR-employee in the educational sector?
4. What's your tenure at this school?
5. Can you tell me your job title and the nature of your activities?

General

1. What's your opinion about using e-HRM technology? Why?
2. What's your opinion about the ease of use of the e-HRM technology?
3. What are the pros of the e-HRM technology for you personally?
4. What are the cons of the e-HRM technology for you personally?
5. What should be changed in the e-HRM technology?
6. What should be added to the e-HRM technology?
7. Do you think e-HRM technology contributes to innovative and sustainable employability?

HRM

1. Do you think your schools treats its employees well? Why? Why not?
2. What are the most important points of the personnel policy of your school for you personally and why?
3. What do you think about the personnel policy of your school?
4. If you could change one thing of the policy, what would it be? Why don't you do that?

Operational

1. Do you spend less time regarding staff matters which are processed by the e-HRM technology because of the use of employees and managers? To which areas? How come?

2. Did you save time by using the e-HRM technology so you could work on new things or things which already should have been done? If so, which one and why?
3. Are the processes faster for employees? For example filing a reimbursement.
4. Did the absenteeism frequency and absenteeism duration decrease? What's the influence of the e-HRM technology on that development? Did you also save costs regarding absenteeism? If not, why not? Less fines from the UWV?
5. Are the employees helped faster when they are ill? If not, why not? If yes, why?
6. How do you use the report feature of the e-HRM technology and why in that way?
7. What's your opinion about the reports? (Simple, clear, fast, quality?)
8. Are you able to get more candidates for vacancies by using the e-HRM technology? What's the effect on the quality of the candidates? Are the vacancies filled quicker?
9. What is the effect of the e-HRM technology regarding employee turnover? And regarding internal mobility?
10. Did the costs for head hunters and agency's drop by using e-HRM technology? If not, why not?
11. To what extent does the software help line mangers regarding the performance review cycle? And the employee?

Relational

1. Has the relationship between the HR-department employees improved by the use of e-HRM technology? If so/if not, why? And the relationship between the HR-department and the board of directors? If so/if not, wy?
2. How did the professional network of the HR-department develop after the introduction of e-HRM technology? Why?
3. Has the quality of the HR-department increased by using e-HRM technology?
4. How did the employee satisfaction develop after the introduction of e-HRM technology? What are the reasons for that?
5. Are you able to inform the employees better regarding dailiy activities, why? And the Board of Directors? Why?
6. Are you satisfied with the influence of the e-HRM technology regarding line management?

Transformational

1. Did the role of the HR-department change by the introduction of e-HRM technology? How? Why?
2. How did the impact of the HR-department regarding the policy of the school develop after the introduction of e-HRM technology? Why?
3. What's the influence of reports on the policy of the school? On which areas? Why?
4. Did absenteeism become a hot topic after the introduction of e-HRM technology? Why/why not?
5. What's your opinion about the Board of Directors using your feedback? Why?

Closing

1. Is there something you want to tell me regarding some questions asked or some thoughts you have?

I want to thank you for your cooperation regarding this interview. Do you appreciate receiving the transcript of this interview so you can give feedback if you would like to? What is your email address?

Thank you very much for your participation and cooperation!

Mijn naam is XXXX en ik wil u graag in het kader van mijn masterstudie aan de Universiteit Twente vragen stellen over uw ervaringen met de software die wordt gebruikt om de personeelszaken te regelen, de impact die dat heeft op de afdeling personeelszaken en wat dat betekent voor het beleid van uw onderwijsinstelling.

Wanneer ik u vraag naar uw situatie, gaat het uitdrukkelijk om uw PERSOONLIJKE SITUATIE. Geen enkel antwoord is goed of fout. Het gaat om uw eerste spontane reactie en u hoeft niet te lang nadenken. Ik wijs er met nadruk op, dat de informatie die u verstrekt hoogst VERTROUWELIJK behandeld zal worden. U kunt op elk moment, zonder reden, besluiten niet meer verder te willen gaan met dit interview.

Het vraaggesprek zal ongeveer een uur in beslag nemen. Als eerste begin ik met een algemene introductie waarin ik u zal vragen over de aard van uw werk, om een indruk te krijgen van uw werkzaamheden. Vervolgens zal ik u een aantal vragen stellen over de invloed van de software op uw werkzaamheden. Als laatste zal ik u vragen stellen over de invloed van de software op het beleid van uw onderwijsinstelling.

Om er zeker van te zijn dat ik uw antwoorden goed overneem en begrijp zou ik het gesprek graag opnemen, zodat ik dit gesprek later nog eens rustig terug kan luisteren. Gaat u hiermee akkoord?

Wie & wat?

1. Wat is uw geslacht?
2. Wat is uw leeftijd?
3. Hoe lang bent u werkzaam in uw functie van personeelszaken in de onderwijssector?
4. Hoe lang bent u al werkzaam bij deze onderwijsinstelling?
5. Zou u mij kunnen vertellen welke functie u heeft en waaruit uw werkzaamheden bestaan?

Algemeen

1. Wat vindt u van de digitalisering van personeelszaken? Waarom?
2. Wat vindt u van het gebruik van de software?
3. Welke voordelen heeft het gebruik van de software voor u?
4. Welke nadelen heeft het gebruik van de software voor u?
5. Wat zou er anders moeten aan de software?
6. Wat zou er moeten worden toegevoegd?
7. Vindt u dat het gebruik van software voor personeelszaken bijdraagt aan innovatief en toekomstbestendig werkgeverschap?

HRM:

1. Vindt u dat uw onderwijsinstelling op een goede manier met haar personeel omgaat, waarom wel of waarom niet?
2. Wat zijn voor u de belangrijkste punten uit het personeelsbeleid van uw onderwijsinstelling en waarom?
3. Wat vindt u van het personeelsbeleid van uw onderwijsinstelling?
4. Als u iets mocht veranderen aan het personeelsbeleid, wat zou dat zijn?

Operationeel

1. Bent u minder tijd kwijt aan personeelszaken die nu via de software geregeld worden door het gebruik van de software door medewerkers en managers? Op welke gebieden? Hoe komt dat?
2. Heeft u door het gebruik van de software meer tijd gekregen om aan zaken te werken die zijn blijven liggen of aan nieuwe zaken? Zo ja, welke en waarom die?

3. Gaan de processen voor de medewerkers nu ook sneller? Bijvoorbeeld het indienen van declaraties?
4. Zijn de verzuimfrequentie en de verzuimduur omlaag gegaan? Komt dat door het gebruik van de software? Zijn ook de verzuimkosten omlaag gegaan? Zo nee, waarom niet? Minder boetes UWV?
5. Worden medewerkers sneller geholpen als ze ziek zijn? Zo nee, waarom niet? Zo ja, hoe komt dat?
6. Hoe gebruikt u de rapportagemodule uit de software en waarom op die manier?
7. Wat vindt u van de rapportages? (Eenvoudig, overzichtelijk, snel, kwaliteit?)
8. Bent u door de software in staat om meer kandidaten te vinden voor vacatures? Wat is het effect op de kwaliteit van de kandidaten? Worden de vacatures ook sneller gevuld?
9. Wat is het effect van de software op het ongewenst verloop? En op de interne mobiliteit?
10. Zijn de kosten voor bemiddelingsbureaus en headhunters gedaald? Zo nee, waarom niet?
11. In welke mate helpt de software de lijnmanager in de gesprekscyclus? En de medewerker?

Relationeel

1. Is de band tussen personeelszaken en de medewerkers verbeterd door het gebruik van de software, zo ja/nee, waarom? En die tussen personeelszaken en het bestuur, zo ja/nee, waarom?
2. Hoe heeft het professionele netwerk van de afdeling personeelszaken zich ontwikkeld door het gebruik van de software? Hoe komt dat?
3. Is de kwaliteit die de afdeling personeelszaken levert omhoog gegaan door het gebruik van de software?
4. Hoe heeft de medewerkerstevredenheid zich ontwikkeld na de invoering van de software? Hoe komt dat volgens u?
5. Bent u door het gebruik van de software beter in staat om de medewerkers te informeren over lopende zaken, hoe komt dat? En de directie? Hoe komt dat?
6. Wat is de invloed van de software op de sturing door de lijn?

Transformationeel

1. Is de rol van de afdeling personeelszaken veranderd door het gebruik van e-HRM? Hoe? Waarom?
2. Hoe heeft de impact van de afdeling personeelszaken op het beleid van de school zich ontwikkeld sinds het gebruik van de software? Hoe komt dit?
3. Wat is de invloed van rapportages op het beleid van de school? Op welke gebieden? Hoe komt dat?
4. Is door digitalisering verzuim meer een beleidsonderwerp geworden? Waarom wel/niet?
5. Vindt u dat er genoeg wordt geluisterd naar de adviezen van de afdeling personeelszaken, en hoe komt dat volgens u?

Afsluitend:

1. Wilt u graag nog iets kwijt naar aanleiding van eerdere vragen of gedachten die nu bij u opkomen?

Ik wil u graag bedanken voor de medewerking aan dit interview. Stelt u het op prijs als ik de uitwerking van dit interview naar u toe mail, zodat u daar eventueel nog feedback op kunt geven? (Wat is uw emailadres?)

Hartelijk bedankt voor uw medewerking!

Appendix 3: Interview protocol Board of Directors English and Dutch

My name is XXXX and in the context of my master study at the University of Twente I want to ask you some questions about your experiences with the use of technology related to human resource management and staff matters, the impact it has on the HR-department and what it means for the policy of your institution.

When I ask about a situation, it's about your personal situation. No answer is right or wrong. It's about your first spontaneous reaction and you don't think about it for a long time. I want to stress that the information you provide me with, will be handled confidential. It cannot be traced back to you as a person. You can at any time stop this interview, without providing any reason.

This interview will approximately last about one hour. Firstly I start with a general introduction where I'll ask you about the nature of your activities to become familiar with your work.

Next, I'll ask you some question about the HR-policy at your school(s), and afterwards I'll ask questions about the consequences of the use of e-HRM technology.

To be sure I'll understand you correctly and to be able to review it at a later moment, I would like to record this interview. Do you give consent for that?

Then I want to ask you to read this Informed consent form and if you agree with the content, we can start with this interview and I'll start the recording.

Who & what?

6. What is your gender?
7. What is your age?
8. Can you tell me your job title and the nature of your activities?
9. What's your tenure in the educational sector?
10. What is your tenure at this school, and how long regarding this job title?

HRM

1. What are the most important points of the personnel policy of your school and why?
2. Do you think your schools treats its employees well? Why? Why not?
3. Are your employees satisfied with the personnel policy?
4. Which challenges are there regarding Human Resource Management?
5. If you could change one thing of the policy, what would it be? Why don't you do that?

General

1. For how long do you as an institution use the current e-HRM technology? What did the previous situation look like?
2. Why did you make the choice to digitalize HRM?
3. Which goals did you set on forehand regarding this digitalization?
4. Did you succeed in reaching the goals? If so, why not? What are you going to do about it?
5. Do you think e-HRM technology contributes to innovative and sustainable employability?
6. Which unexpected cons come with the use of the current e-HRM technology?

Operational

1. Does the use of e-HRM technology lead to cost savings? If so, regarding which processes or areas?
2. What's your opinion about the standard reports available within the e-HRM technology?
3. What's your opinion about the quality of the reports from the e-HRM technology? What about the simplicity and the speed?

Relational

1. Are you satisfied with the influence of the e-HRM technology regarding line management?
2. Did the service quality of the HR-department increase by using e-HRM technology? Why do you think so? Can you quantify it?
3. How did the relationship between the Board of Directors and the HR-department develop after the introduction of the e-HRM technology?
4. How did the relationship between the Board of Directors and the employees develop after the introduction of the e-HRM technology?
5. Are you able to better inform employees regarding ongoing business by using the e-HRM technology?
6. How did the job satisfaction of employees develop after the introduction of the e-HRM technology? Why did it develop this way?

Transformational

1. Did the role of the HR-department change because of the introduction of e-HRM technology? How? What do you think about this change?
2. How does the changing role of the HR-department contribute to the optimization of the primary processes? For example, better teacher, better education and to be more in control.
3. How did the impact of the HR-department on the policy of the school develop after the introduction of the e-HRM technology? Why in this way? What's your opinion about it?
4. What's the influence of reports on the policy of the school? Regarding which areas? Why so?
5. By introducing e-HRM technology has absenteeism become more of an issue? Why/why not?
6. Is the HR-department able to give better advice and better information to you regarding policy after the introduction of e-HRM? How do you perceive this? Regarding which areas? If no, why not? Did you hope for it?
7. Did you gain new possibilities after introducing e-HRM technology?

Closing

1. Is there something you want to tell me regarding some questions asked or some thoughts you have?

I want to thank you for your cooperation regarding this interview. Do you appreciate receiving the transcript of this interview so you can give feedback if you would like to? What is your email address?

Thank you very much for your participation and cooperation!

Mijn naam is XXXX en ik wil u graag in het kader van mijn masterstudie aan de Universiteit Twente vragen stellen over uw ervaringen met de software die wordt gebruikt om de personeelszaken te regelen, de impact die dat heeft op de afdeling personeelszaken en wat dat betekent voor het beleid van uw onderwijsinstelling.

Wanneer ik u vraag naar uw situatie, gaat het uitdrukkelijk om uw persoonlijke situatie. Geen enkel antwoord is goed of fout. Het gaat om uw eerste spontane reactie en u hoeft niet te lang nadenken. Ik wijs er met nadruk op, dat de informatie die u verstrekt hoogst vertrouwelijk behandeld zal worden. U kunt op elk moment, zonder reden, besluiten niet meer verder te willen gaan met dit interview.

Het vraaggesprek zal ongeveer een uur in beslag nemen. Als eerste begin ik met een algemene introductie waarin ik u zal vragen over de aard van uw werk, om een indruk te krijgen van uw werkzaamheden.

Vervolgens zal ik u een aantal vragen stellen over het HR-beleid op uw onderwijsinstellingen(en), en daarna zal ik u vragen stellen over de gevolgen van het gebruik van software.

Om er zeker van te zijn dat ik uw antwoorden goed overneem en begrijp, zou ik het gesprek graag opnemen, zodat ik dit gesprek later nog eens rustig terug kan luisteren. Gaat u hiermee akkoord?

Dan zou ik u willen vragen om dit toestemmingsformulier door te lezen en als u daarmee akkoord gaat, kunnen we met dit interview beginnen en zet ik de opnameapparatuur aan.

Wie & wat?

6. Wat is uw geslacht?
7. Wat is uw leeftijd?
8. Zou u mij kunnen vertellen welke functie u heeft en waaruit uw werkzaamheden bestaan?
9. Hoe lang bent u werkzaam in de onderwijssector?
10. Hoe lang bent u al werkzaam bij deze onderwijsinstelling, en hoe lang al in deze functie?

HRM:

5. Wat zijn de belangrijkste punten uit het personeelsbeleid van uw onderwijsinstelling en waarom?
6. Vindt u dat uw onderwijsinstelling op een goede manier met haar personeel omgaat, waarom wel of waarom niet?
7. Is uw personeel tevreden met uw personeelsbeleid?
8. Welke uitdagingen spelen er op het gebied van personeelsbeleid?
9. Als u iets mocht veranderen aan het personeelsbeleid, wat zou dat zijn? Waarom doet u dat niet?

Algemeen

6. Hoe lang werkt u al met de huidige software voor personeelszaken? En hoe was het daarvoor?
7. Waarom hebt u de keuze gemaakt om personeelszaken te digitaliseren?
8. Welke doelen heeft u vooraf gesteld met betrekking tot digitalisering?
9. Is het u gelukt de doelen te behalen? Zo nee, waarom niet? Hoe gaat u dat aanpakken?
10. Vindt u dat het gebruik van software voor personeelszaken bijdraagt aan innovatief en toekomstbestendig werkgeverschap?
11. Welke onverwachte nadelen zitten er aan het gebruik van software voor personeelsbeleid?

Operationeel

9. Leidt het gebruik van de software tot kostenbesparing? En zo ja, op welke gebieden? HR-afdeling? Verzuimkosten? Boetes UWV?
10. Wat vindt u van de standaardrapportages die u ter beschikking worden gesteld door de software?
11. Wat vindt u van de kwaliteit van de rapportages die u kunt maken via de software? En de eenvoud? En de snelheid?

Relationeel

9. Bent u tevreden met de invloed van de software op sturing van HR-taken door de lijn?
10. Is de servicekwaliteit van de afdeling personeelszaken omhoog gegaan door het gebruik van de software? Waarom vindt u dat? Kunt u dat kwantificeren?
11. Hoe heeft de relatie tussen de directie en de personeelsafdeling zich ontwikkeld na de ingebruikname van de software?
12. Hoe heeft de relatie tussen de directie en het personeel zicht ontwikkeld na de ingebruikname van de software?
13. Bent u in staat uw personeel beter te informeren over lopende zaken door het gebruik van de software?
14. Hoe heeft de medewerkerstevredenheid zich ontwikkeld na de invoering van de software? Hoe komt dat volgens u?

Transformationeel

6. Is de rol van de afdeling personeelszaken veranderd door het gebruik van software voor personeelszaken? Hoe? Waarom? Wat vindt u van die verandering?
7. Draagt de veranderende rol bij aan het optimaliseren van het primaire proces, bijvoorbeeld betere docenten, beter onderwijs, meer 'in control zijn'?
8. Hoe heeft de impact van de afdeling personeelszaken op het beleid van de school zich ontwikkeld sinds het gebruik van de software? Hoe komt dit? Wat vindt u daarvan?
9. Wat is de invloed van rapportages op het beleid van de school? Op welke gebieden? Hoe komt dat?
10. Is door digitalisering verzuim meer een beleidsonderwerp geworden? Waarom wel/niet?
11. Kan de afdeling personeelszaken u beter informeren en adviseren over beleidskeuzes sinds het gebruik van de software? Waar merkt u dat aan? Op welke gebieden? Zo nee, waarom niet? Had u dat gehoopt?
12. Welke nieuwe mogelijkheden heeft u gekregen door het gebruik van de software?

Afsluitend:

1. Wilt u graag nog iets kwijt naar aanleiding van eerdere vragen of gedachten die nu bij u opkomen?

Ik wil u graag bedanken voor de medewerking aan dit interview. Stelt u het op prijs als ik de uitwerking van dit interview naar u toe mail, zodat u daar eventueel nog feedback op kunt geven? (Wat is uw emailadres?)

Hartelijk bedankt voor uw medewerking!

Appendix 4: Questionnaire Dutch and English

1. Wat is uw geslacht? - What is your gender?

Vrouw / Man / Ik beantwoord deze vraag liever niet
Female / Male / I prefer not to answer this question

2. Wat is uw leeftijd? - What is your age?

30 jaar of jonger / 31-40 jaar/ 41-50 jaar/ 51-60 jaar/ 60 jaar of ouder
30 years or younger / 31-40 years / 41-50 years / 51-60 years / 60 years or older

3. Hoeveel jaren bent u werkzaam bij deze onderwijsinstelling? - What is your tenure at your current school?

Korter dan 1 jaar / 1-5 jaar / 5-10 jaar / 10-20 jaar / Langer dan 20 jaar
Shorter than 1 year / 1-5 years / 5-10 years / 10-20 years / Longer than 20 years

4. Hoeveel jaren bent u werkzaam in de onderwijssector? - What is your tenure in the educational sector?

Korter dan 1 jaar / 1-5 jaar / 5-10 jaar / 10-20 jaar / Langer dan 20 jaar
Shorter than 1 year / 1-5 years / 5-10 years / 10-20 years / Longer than 20 years

5. Bent u voornamelijk werkzaam als docent of bent u voornamelijk werkzaam in de ondersteuning? - What is your main occupation?

Docent / Ondersteuning
Teacher / Administrative

6. Het gebruik van self service in [Naam e-HRM technologie] bespaart mij tijd in het regelen van mijn eigen personeelszaken. - The use of self service in [Name e-HRM technology] saves me time arranging my staff matters.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

7. Door het gebruik van self service in [Naam e-HRM technologie] heb ik meer inzicht gekregen in mijn eigen personeelszaken. – By using self service in [Name e-HRM technology], I've got better insight into my own staff matters.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

8. Met self service in [Naam e-HRM technologie] verloopt de afhandeling van declaraties sneller dan voor het gebruik van self service. – With self service in [Name e-HRM technology] I'm reimbursed quicker compared with the situation before using self service.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

9. Door het gebruik van self service in [Naam e-HRM technologie] is het voor mij duidelijker hoe ik mijn eigen personeelszaken moet regelen. – By using self service in [Name e-HRM technology] it's more clear for me how to arrange my staff matters.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

10. Door het gebruik van [Naam e-HRM technologie] kan ik de afdeling Personeelszaken gemakkelijker bereiken. – By using [Name e-HRM technology] it's easier to get in touch with the HR-department.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

11. Door de invoering van [Naam e-HRM technologie] is mijn relatie met de afdeling Personeelszaken verbeterd. – With the introduction of [Name e-HRM technology], my relationship with the HR-department has improved.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

12. Door het gebruik van [Naam e-HRM technologie] is mijn inzicht in het beleid van mijn school verbeterd. – By using [Name e-HRM technology] my insight of the school's policies is improved.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

13. De invoering van [Naam e-HRM technologie] draagt bij aan de kwaliteit van de dienstverlening van de afdeling Personeelszaken. – The introduction of [Name of e-HRM technology] led to an improvement in service quality of the HR-department.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

14. Het gebruik van [Naam e-HRM technologie] draagt bij aan mijn werktevredenheid. – The use of [Name e-HRM technology] contributes to my job satisfaction.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

15. Door het gebruik van [Naam e-HRM technologie]is het beeld van de afdeling Personeelszaken positiever geworden. – By the use of [Name e-HRM technology], the image of the HR-department became more positive.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

16. Door de self service in [Naam e-HRM technologie] heb ik sneller contact met de afdeling Personeelszaken dan voor het gebuik van self service. – By use of self service in [Name e-HRM technology] I got in touch more quickly with the HR-department than before the use of self service.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

17. Digitalisering van personeelszaken vind ik een goede ontwikkeling. – Staff matters becoming more digital is a good development.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

18. [Naam e-HRM technologie] helpt mij in de voortgang van de gesprekscyclus met mijn leidinggevende. – [Name e-HRM technology] helps with the progress of the performance review cycle with my manager.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

19. [Naam e-HRM technologie] helpt mij met het waarborgen van mijn eigen professionaliteit en kwaliteit. – [Name e-HRM technology] helps me guarantee my own professionality and quality.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

20. [Naam e-HRM technologie] helpt mij in het feedback vragen aan anderen over mijn functioneren. – [Name e-HRM technology helps me with asking for feedback about my performance from coworkers.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

21. Software voor personeelszaken draagt bij aan toekomstbestendig werkgeverschap. – E-HRM technology contributes to sustainable employability.

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

22. Ik ben tevreden met self service in [Naam e-HRM technologie]. – I'm satisfied with self service in [Name e-HRM technology].

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

23. Ik ben tevreden met het digitaal personeelsdossier in [Naam e-HRM technologie]. – I'm satisfied with the digital personnel file in [Name e-HRM technology].

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing

Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

24. Ik ben tevreden met de digitale salarisstrook in [Naam e-HRM technologie]. – I'm satisfied with the digital pay slip in [Name e-HRM technology].

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

25. Ik ben tevreden met de gesprekscyclus/performance management in [Naam e-HRM technologie]. – I'm satisfied with performance review cycle/performance management in [Name e-HRM technology].

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

26. Ik ben tevreden met [Naam e-HRM technologie]. – I'm satisfied with [Name e-HRM technology].

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

27. Bent u ook werkzaam als (lijn)manager? – Are you also a (line) manager?

Ja / Nee
Yes / No

28. Ik ben tevreden met verzuimmanagement in [Naam e-HRM technologie]. – I'm satisfied with absenteeism management in [Name e-HRM technology].

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

29. Ik ben tevreden met management informatie in [Naam e-HRM technologie]. – I'm satisfied with management information in [Name e-HRM technology].

Helemaal eens / Mee eens / Neutraal / Mee oneens / Helemaal mee oneens / Niet van toepassing
Strongly Agree / Agree / Neutral / Disagree / Strongly disagree / Not applicable

Appendix 5: The operational e-HRM scale

Case Processing Summary

		N	%
Cases	Valid	155	100.0
	Excluded[a]	0	.0
	Total	155	100.0

a. Listwise deletion based on all variables in the procedure.

Amount of respondents with valid answers on all the questions.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.810	.813	4

Reliability of the operational e-HRM scale.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The use of self service in [Name e-HRM technology] saves me time arranging my staff matters.	8.68	7.023	.619	.770
With self service in [Name e-HRM technology] I'm reimbursed quicker compared with to situation before using self service.	8.73	7.757	.594	.778
By using [Name e-HRM technology] it's easier to get in touch with the HR-department.	9.25	7.449	.673	.741
By use of self service in [Name e-HRM technology] I got in touch more quickly with the HR-department than before the use of self service.	9.34	7.939	.637	.760

Cronbach's Alpha if item Deleted.

Appendix 6: The relational e-HRM scale

Case Processing Summary

		N	%
Cases	Valid	162	100.0
	Excluded[a]	0	.0
	Total	162	100.0

a. Listwise deletion based on all variables in the procedure.

Amount of respondents with valid answers on all the questions.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.849	.851	6

Reliability of the operational e-HRM scale.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
By using self service in [Name e-HRM technology], I've got better insight into my own staff matters.	13.58	14.357	.570	.836
By using self service in [Name e-HRM technology] it's more clear for me how to arrange my staff matters.	14.04	13.303	.665	.818
With the introduction of [Name e-HRM technology], my relationship with the HR-department has improved.	14.78	14.534	.586	.833
By using [Name e-HRM technology] my insight of the school's policies is improved.	14.76	14.345	.602	.830
The introduction of [Name of e-HRM technology] led to an improvement in service quality of the HR-department.	13.99	13.087	.653	.822
By the use of [Name e-HRM technology], the image of the HR-department became more positive.	14.50	13.717	.736	.807

Cronbach's Alpha if item Deleted.

Appendix 7: Factor Analysis of the operational e-HRM scale

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.753
Bartlett's Test of Sphericity	Approx. Chi-Square	210.683
	df	6
	Sig.	.000

Kaiser-Meyer-Olkin & Bartlett's Test of Sphericity for the operational e-HRM scale.

Component Matrix[a]

	Component 1
The use of self service in [Name e-HRM technology] saves me time arranging my staff matters.	.788
With self service in [Name e-HRM technology] I'm reimbursed quicker compared with to situation before using self service.	.765
By using [Name e-HRM technology] it's easier to get in touch with the HR-department.	.838
By use of self service in [Name e-HRM technology] I got in touch more quickly with the HR-department than before the use of self service.	.810

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

One factor retrieved for the operational e-HRM scale.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.565	64.119	64.119	2.565	64.119	64.119
2	.649	16.230	80.349			
3	.460	11.505	91.854			
4	.326	8.146	100.000			

Extraction Method: Principal Component Analysis.

More than 60% of the variance is explained by the factor.

Appendix 8: Factor Analysis of the relational e-HRM scale

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.823
Bartlett's Test of Sphericity	Approx. Chi-Square	388.939
	df	15
	Sig.	.000

Kaiser-Meyer-Olkin & Bartlett's Test of Sphericity for the relational e-HRM scale.

Component Matrix[a]

	Component 1
By using self service in [Name e-HRM technology], I've got better insight into my own staff matters.	.694
By using self service in [Name e-HRM technology] it's more clear for me how to arrange my staff matters.	.780
With the introduction of [Name e-HRM technology], my relationship with the HR-department has improved.	.724
By using [Name e-HRM technology] my insight of the school's policies is improved.	.729
The introduction of [Name of e-HRM technology] led to an improvement in service quality of the HR-department.	.774
By the use of [Name e-HRM technology], the image of the HR-department became more positive.	.838

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

One factor retrieved for the relational e-HRM scale.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.448	57.467	57.467	3.448	57.467	57.467
2	.799	13.317	70.785			
3	.614	10.237	81.022			
4	.470	7.827	88.849			
5	.400	6.669	95.518			
6	.269	4.482	100.000			

Extraction Method: Principal Component Analysis.

Close to 60% of the variance is explained by the factor.

Appendix 9: Statistics on job satisfaction

Statistics

The use of [Name e-HRM technology] contributes to my job satisfaction.

N	Valid	181
	Missing	0
Mean		2.83
Median		3.00
Std. Deviation		1.052

Valid responses, mean, median and standard deviation of Job Satisfaction.

The use of [Name e-HRM technology] contributes to my job satisfaction.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	22	12.2	12.2	12.2
	Disagree	44	24.3	24.3	36.5
	Neutral	64	35.4	35.4	71.8
	Agree	44	24.3	24.3	96.1
	Strongly Agree	7	3.9	3.9	100.0
	Total	181	100.0	100.0	

Frequency and percentages of answer categories regarding Job Satisfaction.

Group Statistics

	Are you also a (line) manager?	N	Mean	Std. Deviation	Std. Error Mean
The use of [Name e-HRM technology] contributes to my job satisfaction.	No	155	2.88	1.009	.081
	Yes	26	2.58	1.270	.249

Respondents per group, mean, standard deviation and standard error mean of Job Satisfaction.

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | |
| | | | | | | | | 95% Confidence Interval of the Difference | |
		F	Sig.	t	df	Sig. (2-tailed)	Std. Error Difference	Lower	Upper
The use of [Name e-HRM technology] contributes to my job satisfaction.	Equal variances assumed	6.155	.014	1.352	179	.178	.222	-.138	.739
	Equal variances not assumed			1.147	30.511	.260	.262	-.234	.835

Nonsignificant t-test for Job Satisfaction.

Appendix 10: Statistics on innovativeness & sustainable employability

Statistics

E-HRM technology contributes to
sustainable employability.

N	Valid	173
	Missing	0
Mean		3.40
Median		3.00
Std. Deviation		.862

Valid responses, mean, median and standard deviation of Sustainable Employability.

E-HRM technology contributes to sustainable employability.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	6	3.5	3.5	3.5
	Disagree	13	7.5	7.5	11.0
	Neutral	71	41.0	41.0	52.0
	Agree	71	41.0	41.0	93.1
	Strongly agree	12	6.9	6.9	100.0
	Total	173	100.0	100.0	

Frequency and percentages of answer categories regarding Sustainable Employability.

Group Statistics

	Are you also a (line) manager?	N	Mean	Std. Deviation	Std. Error Mean
E-HRM technology contributes to sustainable employability.	No	146	3.34	.881	.073
	Yes	27	3.78	.641	.123

Respondents per group, mean, standard deviation and standard error mean of Sustainable Employability.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Std. Error Difference	Lower	Upper
E-HRM technology contributes to sustainable employability.	Equal variances assumed	4.874	.029	-2.486	171	.014	.178	-.793	-.091
	Equal variances not assumed			-3.087	46.361	.003	.143	-.730	-.154

Significant t-test for Job Satisfaction.

Appendix 11: Statistics on further digitalisation of HRM

Statistics

Staff matters becoming more
digital is a good development.

N	Valid	184
	Missing	0
Mean		3.86
Median		4.00
Std. Deviation		.904

Valid responses, mean, median and standard deviation of Further digitalisation of HRM.

Staff matters becoming more digital is a good development.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	2.2	2.2	2.2
	Disagree	13	7.1	7.1	9.2
	Neutral	26	14.1	14.1	23.4
	Agree	102	55.4	55.4	78.8
	Strongly agree	39	21.2	21.2	100.0
	Total	184	100.0	100.0	

Frequency and percentages of answer categories regarding Further digitalisation of HRM.

Group Statistics

	Are you also a (line) manager?	N	Mean	Std. Deviation	Std. Error Mean
Staff matters becoming more digital is a good development.	No	157	3.76	.921	.073
	Yes	27	4.44	.506	.097

Respondents per group, mean, standard deviation and standard error mean of Further digitalisation of HRM.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Std. Error Difference	Lower	Upper
Staff matters becoming more digital is a good development.	Equal variances assumed	2.655	.105	-3.736	182	.000	.182	-1.039	-.321
	Equal variances not assumed			-5.572	60.710	.000	.122	-.924	-.436

Significant t-test for Further digitalisation of HRM.

Appendix 12: Statistics regarding the operational e-HRM scale

Statistics

Operational e-HRM scale

N	Valid	155
	Missing	0
Mean		3.0000
Median		3.0000
Std. Deviation		.88778

Valid responses, mean, median and standard deviation of the operational e-HRM scale.

Group Statistics

	Are you also a (line) manager?	N	Mean	Std. Deviation	Std. Error Mean
Operational e-HRM scale	No	130	3.0288	.85001	.07455
	Yes	25	2.8500	1.07044	.21409

Respondents per group, mean, standard deviation and standard error mean of the operational e-HRM scale.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				95%
		F	Sig.	t	df	Sig. (2-tailed)	Std. Error Difference	L
Operational e-HRM scale	Equal variances assumed	3.822	.052	.922	153	.358	.19397	
	Equal variances not assumed			.789	30.091	.436	.22670	

Nonsignificant t-test for the operational e-HRM scale.

Appendix 13: Statistics regarding the relational e-HRM scale

Statistics

Relational e-HRM scale

N	Valid	162
	Missing	0
Mean		2.8549
Median		3.0000
Std. Deviation		.73443

Valid responses, mean, median and standard deviation of the relational e-HRM scale.

Group Statistics

	Are you also a (line) manager?	N	Mean	Std. Deviation	Std. Error Mean
Relational e-HRM scale	No	135	2.8556	.72299	.06223
	Yes	27	2.8519	.80375	.15468

Respondents per group, mean, standard deviation and standard error mean of the relational e-HRM scale.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				95%
		F	Sig.	t	df	Sig. (2-tailed)	Std. Error Difference	
Relational e-HRM scale	Equal variances assumed	.906	.343	.024	160	.981	.15531	
	Equal variances not assumed			.022	34.919	.982	.16673	

Nonsignificant t-test of the relational e-HRM scale.

Appendix 14: Dutch quotes

Quote 1: *Ja, [Name e-HRM technologie], de jaargesprekkencyclus en de salaris kan je inzien.* – **3.a – Directeur VSO**

Quote 2: *Ik ben wel tevreden over de potentie die dat heeft, maar ik ben matig tevreden over het gebruiksgemak daarvan.* – **1.a – Directeur P&O**

Quote 3: *Je hebt bijvoorbeeld verzuimcijfers en die corresponderen niet altijd helemaal, er waren verschillende rapportages binnen [Naam e-HRM technologie] voor de verzuimmanager en die kwamen niet altijd overeen. Dat is natuurlijk vervelend, want je moet op één manier sturen en vanuit [Naam analysesoftware] komen de cijfers altijd maar op één manier uit het systeem dus dan is het ook gewoon binnen de teams en de scholen en de diensten goed te vergelijken.* – **6.b – Salarisadministrateur**

Quote 4: *Dat hoort er gewoon bij tegenwoordig, je moet je eigen dingetjes regelen, dus geen bank, geen verzekeraar waar je niet kunt inloggen en waarom zou je dat bij je eigen werkgeven, waar je nota bene 40 uur in de week werkt, waarom zou je het daar niet hebben, dat vind ik echt heel gek.* – **4.b – Hoofd Personeelszaken**

Quote 5: *Nou, wij sturen vooral op ontwikkeling van medewerkers, dat is van belang voor de docenten dat zij blijven ontwikkelen, dus dat is voor ons een heel belangrijk punt. En verder allerlei bijkomende zaken, ziekteverzuimbeleid, we zetten ook in op duurzame inzetbaarheid, leeftijdsbewust personeelsbeleid, dat soort zaken.* – **4.b – Hoofd Personeelszaken**

Quote 6: *Nou, dat er graag voor mensen gezorgd wordt. Dus ik ben medewerker en mijn leidinggevende moet voor mij zorgen. Dat zie je nog heel veel terug in het onderwijs. Dan spreek ik voornamelijk over het primair onderwijs, omdat . . .* – **5.b – Administrateur-Adviseur**

Quote 7: *Nou, het was niet ongebruikelijk dat mensen personeelsgegevens in een Excelletje of Worddocument zetten en daarachter werktijdfactoren gingen zetten en dan met de pen erbij gingen schrijven als het veranderde, en dat heeft dan salarisconsequenties, dat werd dan ook met de pen gedaan.* – **3.c – Hoofd HR**

Quote 8: *Ja, omdat het efficiënter is. Daar sta ik ook wel achter. Ik vind het wel, als hier iets nieuws wordt gepromoot, digitaal bijvoorbeeld, of declareren, dat dat digitaal, voordat dat er door heen is, dan denk ik jeetje, weet je, ja, er zijn nog steeds mensen die bellen die hun loonstrook willen krijgen, die hun declaratie op papier willen indienen, dat is gewoon niet meer van deze tijd. Kijk naar de banken, die moet je ook gewoon met je iDeal.* – **2.a – HR-consultant**

Quote 9: *Ja, het doel was zo veel mogelijk digitaliseren, dat is het ook nog steeds.* – **4.b – Hoofd Personeelszaken**

Quote 10: *Ja, we hebben natuurlijk wel gedigitaliseerd en geautomatiseerd, dus die doelen zijn gehaald. Het doel wat ik net zei, het verminderen van FTE's niet, dat is niet helemaal gehaald.* – **1.a Directeur P&O**

Quote 11: *Ik vind sowieso, dan heb ik het vanuit de gebruikerskant, want ik ben natuurlijk ook een gebruiker van de ene kant, als ik bijvoorbeeld de belastingpapieren moet invullen en ik moet de jaaropgave hebben, dan kan ik dat thuis gewoon even snel opvragen. Dat vind ik een groot voordeel.* – **4.a – Applicatiebeheerder**

Quote 12: *In handelingen kan ik het wel zeggen, vroeger was het zo, je moest naar de site, je printte het formulier uit, dat is de tweede handeling, dan vulde je in, drie handelingen, dan moest je handtekening, dat is vier, dan de leidinggevende, vijf, de leidinggevende moet het hier naartoe sturen, dus het aantal handelingen is*

gewoon beperkt tot drie denk ik, in plaats van vijftien, en het voorkomt ook dat je constant aan het zoeken bent waar is het formulier. – 6.a – teammanager PSA

Quote 13: *Ja, veel minder en kijk, het werd altijd wel gecorrigeerd natuurlijk, omdat er over gebeld werd en dat soort ballast heb je niet meer. Het gaat eigenlijk niet meer fout en er wordt eigenlijk ook niet meer over gebeld. In die zin is het veel rustiger en stabieler.* – **1.a – Directeur P&O**

Quote 14: *Ja, iedereen heeft gewoon zelf inzage in zeg maar, op welk bureau, digitale bureau, het formulier is. Dus voor iedereen, het is inzichtelijk wie wat moet doen, dus als de teammanager een declaratie nog niet goed heeft gekeurd, dan hoeven ze niet eerst met ons contact op te nemen, nee, ze kunnen dat zelf zien en meteen naar die teammanager gaan, van is er iets niet goed, waarom stuur je het niet door. Dus het is efficiënter en je hebt tijdwinst daardoor.* – **6.b – Salarisadministrateur**

Quote 15: *Ja, want we hebben nu twee functioneel beheerders, daar waar wij er eerst altijd één hadden.* – **1.b – P&O adviseur**

Quote 16: *Met de verzuimmanager, inderdaad vroeger was het zo dan zag je dat er een plan van aanpak gemaakt moest worden dus dan ging je een plan van aanpak printen en die bracht je naar de manager toe en zeg je je moet zorgen zus en zo, eigenlijk kan een manager zien dat die een plan van aanpak moet maken. Dus die moet nu voor zichzelf een knop omdraaien, eigenlijk moet die dagelijks even zijn laptop open gooien en even kijken heb ik things to do. Dat is wel een dingetje dat er bij komt. Waardoor wij meer tijd hebben voor andere dingen.* – **6.a – Teammanager PSA**

Quote 17: *En ja, men moet nu ook meer doen dan dat ze gewend waren, want verzuimmanagement, dat je de casemanager bent van jouw medewerker als leidinggevende. Dat waren ze vroeger ook wel, maar werd er eigenlijk niet zo heel veel gedaan. . . . dus men vindt wel dat men meer moet doen en dat vindt men nadelig ook.* – **2.b – Teamleider PSA**

Quote 18: *Hoor je wat voor een handelingen ik allemaal moet doen. Ik koop eerst al een duurder kaartje, dan moet ik daar een foto van maken, die moet ik naar mezelf toe mailen. Dat is al in plaats van dat je het kaartje even niet en invult en klaar. Dus het kost mij allemaal gewoon heel veel tijd om dat een beetje voor elkaar te krijgen. En dan in [Naam e-HRM technologie], om dan ook nog te vinden waar je dan allemaal precies in moet vullen. Dat lukt mij dus zelf niet eens, daar heb ik een jongere collega voor nodig. En ik weet ook wel dat ik namens een aantal spreek nu, een aantal mensen spreek. En weet je, dan gaat het iedere keer maar om €9,- en dan denk je laat maar. Maar als je dat achteraf allemaal optelt dan denk je ik ben wel gek ook, want het gaat uiteindelijk om best aardig wat geld, ja.* – **4.d – Teacher**

Quote 19: *Nou, bij een update is het in wat mindere mate belastend, maar vooral natuurlijk als je dus een heel ander programma krijgt. Wij hadden hier vroeger, of tenminste vroeger, tot een jaar of drie, vier geleden, een leerlingvolgsysteem, en daarvoor in de plaats is een ander leerlingvolgsysteem gekomen, van een ander software bedrijf, wat weer anders in elkaar zit, veel gecompliceerder is, veel meer mogelijkheden heeft. Ja, en dan moet je weer.* – **3.b – Teacher**

Quote 20: *Oh, heel veel. Even kijken, vroeger gaven we aan [company] meer dan een miljoen uit en nu is het nog geen twee ton.* – **1.b – P&O adviseur**

Quote 21: *Wij hadden dat systeem niet in handen, dus toen wij met [Naam e-HRM technologie] gingen werken, konden wij gaan kijken, he, deze medewerker heeft een aanstelling van vijf dagen, die claimt BAPO, maar hij betaalt niet voor zijn BAPO, dus met andere woorden, het is nooit geformaliseerd en die hebben jaren lang vier dagen gewerkt, vijf dagen betaald en geen rooie cent voor betaald. Dus dat soort foutjes konden we er uit halen en dat ging om veel medewerkers. Dus er ging heel veel mis.* – **3.c – Hoofd HR**

Quote 22: *Ja, dat vertelde ik net, dat je veel meer aan de voorkant meedenkt, wat wil je dan precies, daar heb je dan ook veel meer tijd voor.* – **4.b – Hoofd Personeelszaken**

Quote 23: *Nee, ik denk de software zelf niet. Misschien wel, zie ik het over het hoofd. Maar de software niet, maar wel het zelf voeren van de salarisadministratie, dwingt je gewoon om kennis te krijgen en daarbij is de software een middel, het is niet een doel op zich.* – **3.c – Hoofd HR**

Quote 24: *Je merkt wel dat je hebt te maken met veranderende arbeidswetgeving, pensioenen gaan misschien anders, kijk, bij [Naam medewerker], die wordt ook een soort, ja bijna geen salaris is ook hetzelfde, je moet ook gewoon, sommige mensen vragen ook gewoon advies, van goh, zou ik misschien half kunnen werken en dan pensioen en zo, je wordt bijna een soort adviseurs.* – **6.a Teammanager PSA**

Quote 25: *Ja beter, dat vind ik een raar woord, professioneler, ik weet niet of het beter is, maar wel in ieder geval professioneler.* – **3.a Directeur VSO**

Quote 26: *Ja, maar dat wordt wel ondersteund door [Naam e-HRM technologie leverancier], dus het is niet zo dat we dat zelfstandig, dat we daar zelfstandig iets mee gedaan hebben, het is wel door de netwerkbijeenkomsten van [Naam e-HRM technologie leverancier] dat de contacten gemaakt zijn en contacten gelegd worden.* – **3.c Hoofd HR**

Quote 27: *Er van uitgaan dat mensen het toch niet goed doen en daarom veel controle hebben, dus dat is echt wel een visie waar we het over hebben. Dat beïnvloed ook wel de relatie die je onderling hebt, omdat je daar met elkaar professioneel discussie hebt, maar ook wel van mening verschilt, mijn college van financiën zit daar bijvoorbeeld heel anders in.* – **1.a – Directeur P&O**

Quote 28: *Elke keer als je discussie hebt met de managers die ik adviseer, is het ja, het levert voordeel op voor P&O, maar niet voor ons. Wij zijn dure administratieve krachten geworden, ja, die discussie die verlies ik, die ga ik ook maar niet meer aan.* – **1.b – P&O adviseur**

Quote 29: *Nou, zeker in sommige gevallen. Als mensen declaraties indienen die niet kloppen, dan was het eerder van ja, dan kreeg je terug van personeelszaken van het klopt niet, dus het mocht niet van personeelszaken, dat was dan de gedachte die er leeft. Maar nu is het dus zo, de directeur keurt af, dus wij zeggen dan, wij geven jou het advies om dit af te keuren daar en daar om, nu komt dus de directeur bij die persoon en die zegt joh, ik weet niet wat je aan het doen bent, dit ga ik niet vergoeden. Dus ja, dat maakt het anders.* – **4.b – Hoofd Personeelszaken**

Quote 30: *Ik denk dat die een verdieping heeft gehad, ik denk dat mensen het wel prettig vinden dat er objectief dezelfde vragen worden gesteld. Ik denk dat dat wel iets meer vertrouwen heeft gegeven.* – **3.a – Directeur VSO**

Quote 31: *Dus je geeft mensen minder vrijheid, ze moeten dingen zeg maar. Ten eerste moeten ze dingen en daarnaast hebben we ook een controlemiddel.* – **5.a – Administrateur-Adviseur**

Quote 32: *Ik vind het helder en ik vind personeelszaken heel benaderbaar. Wat ik net al eerder over vertelde, heel benaderbaar. Dus prima, want het is een mooie aanvulling op de applicatie.* – **3.b – Leerkracht**

Quote 33: *Ja, dat vind ik ook best wel lullig eigenlijk, want de administratie zegt echt wel tegen mij dat moet u even digitaal doen hoor en dan denk ik, ik weet niet hoe. Als je dan zegt ik weet niet hoe, dan moet je dus iemand die dus even tijd heeft op dat moment, vaak is dat een jongere collega, even zeggen van hoe gaan we dit doen. Hoe krijg ik dat terug.* – **4.d – Leerkracht**

Quote 34: *Ik heb ook wel eens het gevoel dat ik een klein beetje informatie, wat ik normaal gesproken in tien minuten op papier had geschreven met pen en papier, dat ik nu anderhalf uur zit te klikken en te zoeken en te*

doen, om dat kleine beetje informatie ergens weg te zetten. Dat vind ik heel frustrerend soms. Heeft trouwens ook te maken met dat je sommige software ook niet regelmatig gebruikt. – **3.b – Leerkracht**

Quote 35: *Als het uit de lucht raakt, als het systeem uit de lucht raakt, ben je meteen onthand. Dus, in het geval van [Naam e-HRM technologie], als [Naam e-HRM technologie] uit de lucht is, dan kan ik mijn medewerkers naar huis sturen, omdat wij, niet alleen [Naam e-HRM technologie], maar wij zijn zo geautomatiseerd, dat als internet er uit ligt, of [Naam e-HRM technologie] ligt er uit, [Naam e-HRM technologie] is toch wel, dat staat continu aan, daar doen we alles mee. Als dat er uit is, kun je naar huis gaan.* – **3.c – Hoofd HR**

Quote 36: *Vroeger zat ik regelmatig bij het bestuur voor klachten en dat hoef ik nu niet meer te doen. Men heeft nu wel vertrouwen in het team, maar ook in het systeem.* – **2.b – Teamleider PSA**

Quote 37: *Nou, ja, het is geen waardeoordeel eigenlijk. Ik vind het gesprek is wel wat verzakelijkt, maar daar mee zeg ik niet dat dat niet goed is, want we zijn hier om zakelijke redenen in feite, we werken hier. Maar dat is mijn constatering.* – **3.b – Leerkracht**

Quote 38: *Nou ja, ik denk dat we toen 30% niet deden of dat het er gewoon niet van kwam, en omdat dat ook niet inzichtelijk was, viel dat ook niet op, want PZ moest dat min of meer controleren in het dossiers of is het wel gevoerd of niet gevoerd. En als het gevoerd was, dan was het soms nog heel, de een die schreef op een kantje vier zinnen en de ander die maakte een uitgebreid verslag. Dus die willekeur was er.* – **3.a – Directeur VSO**

Quote 39: *Dat vinden zij goed, dan hebben zij stuurinformatie, zij kunnen daar iets mee. En zij zijn dan ook meer in control, dat is hun rol.* – **4.b – Hoofd Personeelszaken**

Appendix 15: School and respondents

School	Respondent	Job title
1	a	HR Director
	b	HR Advisor
	c	Timetable responsible
2	a	HR-consultant
	b	Team leader PSA
3	a	Head master SSE
	b	Teacher
	c	Head of HR
4	a	Application manager
	b	Head of HR
	c	Administrative manager
	d	Teacher
5	a	Administrator-Advisor
	b	Administrator-Advisor
6	a	Team manager PSA
	b	Salary administrator
	c	HR Advisor