

**FROM ISOLATION TO INTERACTION: A SOCIAL NETWORK PERSPECTIVE
ON OLDER TEACHERS' POSITION IN SCHOOL ORGANIZATIONS
AND AGE-RELATED HR PRACTICES.**

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ABSTRACT

Since workforce is greying, increasing pressure has been put on many sectors, including the public sector, to raise legal retirement age. Nevertheless, older workers, and specifically teachers, usually retire much earlier. In the organizational and educational literature, most studies regarding later career have been applying a deficit perspective: reporting on senior teachers' challenges and difficulties. Only a limited amount of studies considers senior teachers' potentials, learning, and further career development. In this present article, we approach late career teachers from a non-deficit perspective. This paper aims to contribute to a better understanding of senior teachers at work, by analysing HR practices that target them. Inspired by a strengths use perspective, we focus on end-of-career teachers' knowledge and expertise exchange and their position within the school's network. In particular, we conducted a comparative mixed-methods case study (interviews, social network analysis) in two secondary schools with a sample of ten end-of-career teachers, four younger teachers, and two principals. The results illustrate that older teachers hold central positions in their workplace and have, in accordance with the socio-emotional selectivity theory, limited but strong bounds with colleagues. Moreover, school principals in both schools seem to benefit from older teachers' organizational knowledge by involving them in decision-making processes. Nevertheless, results show that the principals in the two schools mainly apply remedial measures to deal with changes due to aging. This paper ends with some implications for school principals: Applying a non-deficit developmental approach is key for sustainable HR management in schools across the lifespan.

Keywords: end-of-career teachers, HR practices, mixed-methods case study, social network analysis

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1. INTRODUCTION

Over the last decades, the number of mid-life and older workers across the world has seen a surge (United Nations, 2017; World Health Organization, 2018). A large majority of countries implemented policies to extend the mandatory retirement age in different sectors, including the public sector, as a response to several developments such as the aging of the baby boom generation, increasing life expectancy, and decreasing birth rates during the last thirty years (OECD, 2019; Phillipson, 2013). Making people work longer is seen as a promising solution to cope with the impact of a higher age dependency ratio (the number of younger workers for each retired person) on financial social systems all over Europe (Armstrong-Stassen & Ursel, 2009; Bal & Visser, 2011). However, while the official retirement age in most countries has been raised to 65, many older workers retire earlier than planned. This is especially the case for teachers, compared to other professionals (EACEA, 2012; OECD, 2011), presenting the educational labor market and school organizations with important challenges. Compared with the myriad of studies addressing early career teacher attrition (see Devos, Dupriez, & Paquay, 2012; Kukla-Acevedo, 2009; Lothaire, Dumay, & Dupriez, 2012; Luekens, Lyter, Fox, & Chandler, 2004; März & Kelchtermans, 2020; O'Brien & Christie, 2005), little is known about the factors explaining older teachers' early retirement decision or contributing to their successful aging at work.

Literature on aging employees in general teaches us that this cohort often suffers from age-related stereotypes in the workplace that emphasize their lower motivation, low self-efficacy, low job satisfaction, lack of participation in formal training, and resistance to change (Levy,

2009; Posthuma & Campion, 2009; Raemdonck, Beausaert, Fröhlich, Kochoian, & Meurant, 2014; Warr & Birdi, 1998). As a result of these stereotypes and misconceptions, they often experience difficulties with accessing certain career opportunities, promotions, or specific types of training (Barth, McNaught, & Rizzi, 1993), limiting their organizational success and preventing them from reaching their maximum potential at work (Staudinger, 2015; Von Hippel, Kalokerinos, & Henry, 2012; Zaniboni, 2015). When looking at the scientific literature on older teachers in particular, a similar trend can be identified. The existing studies taking older teachers into account often identified the presence of a deficit perspective: emphasis is placed on the challenges and difficulties they encounter, instead of on their strengths (e.g., Cau-Bareille, 2014; Jaoul & Kovess, 2004; Josten & Vlasblom, 2015). For instance, research has shown that older teachers¹ have a higher risk of suffering from physical or mental issues (such as disabilities or burnout), thus hindering their active engagement in the workplace (Schröder, Higo, & Flynn, 2016). Additionally, older teachers often struggle with the changing educational context - characterized by technological developments and increasing heterogeneity of the student population - for which they often do not feel prepared (Taylor & Sobel, 2001; Wedekind, 2001). Consequently, HR practices and workplace accommodations are centered on lowering expectations and on decreasing burdensome job demands for this particular group of teachers (Schröder, Higo, & Flynn, 2016; Taylor & Urwin, 2001).

Recently, however, we have seen a move within the literature towards a more positive framing of older employees and teachers in particular, taking into account their experience, expertise, and professional knowledge (van Woerkom & Meyers, 2018). Inspired by a strengths use perspective, a number of authors have emphasized that older teachers need to be perceived as resources who need to be developed and deployed in the school (see for instance Els, Mostert,

¹ In this study, we used as synonyms the following terms: older teachers and end-of-career teachers.

& van Woerkom, 2018). Studies informed by organizational psychology, teach us that a strengths use perspective - with a focus on promoting the use of one's personal resources - is as a promising way to foster health and well-being at work (see for instance Bakker & van Woerkom, 2018). According to these authors, raising expectations for older teachers and recognizing their expertise and experience can facilitate successful aging at work, as well as contribute to organizational development (Bakker & van Woerkom, 2018). Also Skaalvik and Skaalvik (2011) refer to teachers' need for social recognition and sense of belonging, or more generally the importance of teachers' social relationships for understanding teacher retention. As Edward-Groves, Grootenboer, Hardy, and Ronnerman (2019) acknowledged, a limited but growing strand of social network research focuses on teachers' professional development, which has for now mainly investigated the central position of middle leaders² as potential vector of teachers' empowerment (see Bryant, Wong, & Adames, 2020)

Measures to facilitate older teachers' empowerment, and by extension the HR practices in schools, still require more systematic research to evaluate their role as well as their impact on the successful aging of older teachers. Joining the recent trend on strengths use, our study starts from the premise that older teachers need to have the opportunity to share their expertise and knowledge with colleagues. Combining the notions of school infrastructure, social network theory, and positioning theory, the aim of this study is to sort out successful aging at work through a strengths use perspective: we focus on older teachers' relationships with other teachers within the social network of their school and how HR measures enable or constrain these relationships. By studying older teachers' social networks, we want to shed another light on the process of successful aging at work. More specifically, the following research questions are central in the article: 1) What are the HR practices enacted in schools to promote older teachers' successful aging? 2) What position do older teachers occupy within the school

² We consider middle leaders as teachers who are head of departments or coordinator of teachers from the same discipline.

network? and 3) How do older teachers position themselves reflexively (in relation to themselves) and interactively (in relation to colleagues)? Based on a mixed-methods design for social network research on teachers (Baker-Doyle, 2015), we studied older teachers' work life in two secondary schools, combining social network data with semi-structured interviews. This study offers new insights regarding successful aging at work, HR practices that focus both on relieving and on leveraging the aging workforce in schools, and the relevance of social relationships for older teachers' professional development as well as for school improvement.

2. THEORETICAL FRAMEWORK

The theoretical framework of this study approaches the phenomenon of older teacher's successful aging at work from a strengths use perspective. Originating from social work and mental health care literature, and more recently emerging in positive occupational health psychology, the strengths use perspective refers to the study of occupational conditions and processes that lead to optimal functioning, to mastery experiences, and to improved performance (Bakker & Derks, 2010, Bakker & van Woerkom, 2018). It studies how positive experiences can be used to counterbalance occupational risks by focusing on employee's strengths. Bakker and van Woerkom (2018) described that there is not one comprehensive theoretical framework explaining the mechanisms of strengths use but that this approach is still likely to lead to higher levels of well-being (Wood, Linley, Maltby, Kashdan & Hurling, 2011), job satisfaction (Harzer & Ruch, 2014), and job performance (Peterson & Seligman, 2004). More specifically, in order to build a comprehensive understanding of older teachers' successful aging at work, we combine the notions of school infrastructure, social network theory, and positioning theory. First, with the notion of school infrastructure we will have access to the kind of workplace conditions within schools leveraging this particular group of teachers. Second, using the lens of social network theory, we will focus on older teachers' position within the school's network of interactions, and in particular, how their expertise is shared within the

school. Third, positioning theory enables us to focus on how older teachers are perceived by themselves as well as by their colleagues.

2.1 SCHOOL INFRASTRUCTURE: LEVERAGING THE OLDER WORKFORCE THROUGH SUPPORT CULTURE, STRUCTURE, AND HR PRACTICES

We focus on school infrastructure, and more particularly the school's support culture, structure, and HR practices to better understand how school organizations focus on relieving and/or leveraging their older teachers.

2.1.1. SUPPORT CULTURE

Koberg and Chusmir (1987, in Devos et al., 2012) defined school culture as a system of shared beliefs that produces social norms and establishes a specific way to function as an organization (see also Schein, 1992, in Kardos, Johnson, Peske, Kauffman, & Liu, 2001). Multiple studies have identified the existence of different types of school cultures (Johnson & Birkeland, 2003; Johnson & Kardos, 2004). More specifically, three different forms of school culture can be identified that are relevant for understanding successful aging at work from a strengths use perspective. First, the *veteran-oriented form* is a culture where the older teachers set up the norms and where teacher autonomy is valued. In this context, there is little room for professional interaction between novice and experienced (and older) teachers. As such, these types of schools lack a mutual benefit from exchanging experiences and skills between teachers. Second, school organizations made up of many early career teachers can be described in terms of a *novice-oriented culture*. The absence of experienced individuals leads to an intensification of exchanges between novice teachers, who will learn the expected organizational behaviors and habits independently. Thus, the first two types of support culture lead to the same conclusion: in both cases, there is little opportunity for knowledge exchange between the two age groups. There is no mutual benefit. Third, the *integrated professional culture* promotes a permanent exchanging culture between each member (novice and experienced) of the teaching

staff. Gaikhorst, Beishuizen, Korstjens, and Volman (2014) added that an integrated professional culture “contributes to teachers' feelings of being supported and their intention to remain in the teaching profession” (p. 25). Also other studies have illustrated the benefits of this integrated culture for teachers’ perceived self-efficacy (Devos et al., 2012) and intrinsic motivation (Minarik, Thornton, & Perreault, 2003). An integrated professional culture is beneficial for all age groups and leads to a higher level of teacher confidence and autonomy.

2.1.2. SUPPORT STRUCTURE

According to Gaikhorst, Beishuizen, Zijlstra, and Volman, (2015), the school’s support structure refers to every activity undertaken in order to help teachers exercise their profession and develop professionally, taking into account the school context and its difficulties. More specifically, the literature describes two promising types of support structures: mentoring and knowledge exchange. First, according to Hobson, Ashby, Malderez, and Tomlinson (2009, p. 7), experienced teachers (with more than 10 years of tenure) can fulfil a mentoring role within their school, offering one-on-one support to less experienced colleagues in order to assist the development of the mentee’s expertise. Studies have shown that mentoring relationships are beneficial not only for the mentee, but also for the mentor. For instance, mentoring relationships enhance teacher retention (of both novice and experienced teachers) in the long term (Ingersoll & Kralik, 2004) and contribute to teaching quality (Washburn-Moses, 2010). Second, schools can create opportunities for teachers to share their knowledge, experiences, and expertise in the school network (Gaikhorst, Beishuizen, Roosenboom, & Volman, 2017; Gaikhorst et al, 2015; Hofman & Dijkstra, 2010). The content of these exchanges can vary and cover all aspects of teaching: discussing methods and materials, grading, lesson observation and critiquing, setting and marking of assignments (Salleh & Tan, 2013). Furthermore, Gaikhorst et al. (2014) indicated that a support structure alone is not enough; a support culture needs to be implemented

alongside it in schools to maintain higher levels of teachers' motivation and ensure their professional development.

2.1.3. HR PRACTICES FOR END-OF-CAREER TEACHERS

Besides the school culture and structure, a strengths use perspective towards end-of-career teachers is particularly visible in the school's HR practices. Vrielink, Scheeren, Jettinghoff, and Jacobs (2009) pointed out that the public sector has the largest number of older workers, and at the same time, is the least disposed to adopt practices that prevent teacher attrition and guarantee teaching quality. The authors presented two types of practices that organizations can use to enable the professional development of their employees: remedial and developmental practices. The remedial practices concern every adjustment put in place for older workers in order to relieve the pressure exerted on them (reducing working hours and overtime hours, avoiding difficult tasks, accepting more frequent holidays, having smaller student groups, etc.). On the other hand, the developmental practices are related to initiatives taken to leverage teachers' expertise and strengths in a perspective of sustainable professional development. Here we can think of including career coaching, stimulating career mobility, and assigning certain tasks and responsibilities to older employees.

Vrielink et al. (2009) showed the prevalence of remedial solutions in the educational field. This can be explained by school leaders' stereotypical image of older teachers. Several studies showed how principals consider older teachers as being more reliable and showing more social skills, but at the same time as more reluctant to get involved in new training (Van Dalen, Henkens, & Schippers, 2007; van der Houwen & Moonen, 2014; van der Werf, Volkerink, Heyma, & Bisschop, 2012).

2.2. SOCIAL NETWORK THEORY: OLDER TEACHERS AND THEIR INTERACTIONS

A strengths use perspective towards older teachers is visible not only in the school's infrastructure (culture, structure, HR practices), but also in the social interactions between teachers. As such, drawing upon social network theory, we look at older teachers' aging at work as a social phenomenon, involving interactions with others through which older teachers find a position within the network of the school organization. Social network theory presents a lens for investigating how the configuration of social relations matters for a range of important outcomes (Lemke & Sabelli, 2008). Rather than explaining social phenomena (such as aging at work) by investigating individuals' characteristics, social network theory focuses on the system of social relations within which the phenomenon is embedded (Borgatti & Ofem, 2010). In other words, social network theory foregrounds individuals' attitudes and behaviors as affected by the social structures in which they find themselves (Borgatti & Ofem, 2010; Moolenaar, Daly, Slegers, & Karsten, 2014). Social network theory frames these social structures in terms of nodes and ties (Borgatti & Ofem, 2010). Whereas nodes represent the individual actors within the networks (such as people, groups, or organizations), ties are the relationships between these actors. These ties can refer to friendship relationships, kinship, knowledge exchange, and so forth. As such, a social network could be seen as a map of all the existing relationships between the actors under investigation. Moreover, social networks produce social capital: being part of a relationship provides the actors with a wide range of possible resources such as help, support, or even a sense of well-being (Everett & Borgatti, 2013; Lin, Cook, & Burt, 2001; März & Kelchtermans, 2020; Nardi, Whittaker, & Schwarz, 2000). For instance, the exchange of knowledge within networks has been identified as contributing to the professional development of individual teachers (Datnow, 2012; Little, 2005). Through professional interactions and networks, teachers can learn from each other, transfer information, and get access to knowledge and social support (Coburn, Russell, Kaufman, & Stein, 2012).

With regard to teachers' social networks, previous studies have documented how interpersonal relationships matter for a range of career outcomes (see Moolenaar, Daly, & Slegers, 2012,

Skaalvik and Skaalvik, 2011). Unterbrink et al. (2008), for instance, identified how positive relationships at work are negatively related with exhaustion (Unterbrink et al., 2008). Rodríguez-Mantilla and Fernández-Díaz (2017) furthermore observed how interpersonal relationships with students, supervisors, and coworkers contribute significantly to predicting risks of burnout (see also Van Droogenbroeck, Spruyt & Van Roelen, 2014). Investigating teachers' social networks may offer new insights regarding these beneficial effects.

2.3. POSITIONING THEORY: PERCEPTIONS REGARDING THE END PHASE OF A TEACHER'S CAREER

Whereas social network theory enables the entangling of the social relationships in which older teachers find themselves, positioning theory helps to explain how teachers perceive themselves (as themselves and towards their colleagues). In particular, using discursive analysis, it provides a precise view of individuals' relationships through different themes such as their interests, and the way they see their colleagues, students, and the profession (Tirado & Galvez, 2008). Interaction approach theorists Harré and Van Langenhove (1999) defined *positioning* as a dynamic relational process within a conversation, where individuals adopt a position and give one to their interlocutor. The central question of this theory is that there are two simultaneous positionings at the core of this dynamic process, a reflexive and an interactive one. The reflexive positioning refers to the expression of the self. The interactive positioning happens at the very same moment and characterizes the contextualized aspect of their relationships. It refers to the way individuals perceive their colleagues and their positioning with regard to these colleagues. Positioning theory enables the creation of a more complex image of teachers in the last phase of their career, given the information they and their colleagues provide through their speech.

In conclusion, our theoretical framework will allow us to get in-depth comprehension of older teachers' successful aging at work, through a focus on the school functioning and its managerial

context. It will also permit us to get a better understanding of older teachers' position within this context, how they perceive themselves, and how their colleagues perceive them.

3. METHODOLOGY

Guided by our theoretical framework, we formulated the following research questions:

RQ1: What are the HR practices enacted in schools to promote older teachers' successful aging? (Support culture, support structure, and HR practices)

RQ2: What position do older teachers occupy within the school network? (Social network theory)

RQ3: How do older teachers position themselves reflexively (in terms of themselves) and interactively (in relation to colleagues)? How do their colleagues position themselves towards older teachers? (Positioning theory)

3.1. CONTEXT OF THE STUDY: OLDER TEACHERS IN BELGIAN SCHOOLS

Since 1989, as a federal state, Belgium has established several levels of political power with legislative power over matters that are distinct to each of them (Lafontaine, 2006). The educational system in Belgium as it is currently designed corresponds to a lifelong career-based model (OECD, 2005), where Belgian teachers enter the profession after completing a degree program for primary or secondary education that lasts three years, managed by university colleges. Universities manage teacher training for upper secondary education in a training model, so that these prospective teachers first study their subject area for four years, with an additional year combining field-based learning and academic coursework.

The first specificity of the Belgian context is that there is no federal minister of education; responsibility for the practical organization is assigned to the three federal regions or linguistic communities (French-, Flemish-, and German-speaking communities). Very few educational matters are legally defined at the federal level except for minimum conditions for diplomas, compulsory age to start school, and teachers' retirement conditions, for example. Within the

communities, education is organized in three educational networks: 1) community education (equivalent of state education in other countries), 2) official subsidized education (organized by the municipal and provincial authorities), and 3) free subsidized education (organized by private organizations or people, such as the Catholic Church).

The second specificity is that Belgium has a highly developed tradition of school autonomy. Within each community and educational network, the schooling system is traditionally managed by ‘organizing bodies’ or *pouvoirs organisateurs*, which have a high degree of freedom in the areas of teaching methods and management of human resources. In this decentralized context, the federated government does not prescribe any specific HR policies with regard to end-of-career teachers. As a result, *pouvoirs organisateurs* have a lot of autonomy in deciding how to manage and professionally develop their teaching staff.

In this article, we will focus on the French-speaking community (FWB). We conducted a document analysis at the FWB level to identify the various legal requirements and reviewed both printed and electronic (computer-based and Internet-transmitted) material (Corbin & Strauss, 2008) to gain understanding about career endings in the public sector and, more specifically, in the teaching profession, within the FWB. Our analysis shows the existence of twenty circular letters generated within the FWB (the most recent is Circular No. 7198, ratified on June 27, 2019). The vast majority of them deal with retirement conditions and officially abolish early retirement pathways for teachers born after January 1, 1957. There are four possible pathways in order to benefit from early retirement, ranging from total withdrawal from service for candidates with 20 years of service (Types 1 and 2) to a deferred part-time solution (Types 3 and 4) accompanied with a grant to financially compensate for the periods no longer worked. In each case, teachers must be 55 years old or over and be eligible for pension entitlement.

While *organizing bodies* enjoy a certain autonomy within the legal framework, we found that school principals have only limited scope to manage their educational staff. The decree of February 2nd, 2007 regulated the status of a school principal. A wide range of tasks are entrusted to school leaders to ensure the smooth running of a school. They include managing the material aspects of the school, but above all leading a team: resolving conflicts (which inevitably arise in a social organization), transmitting the impetus for reforms, and guaranteeing a positive climate that will offer pupils the best possible learning conditions (FWB, 2019). To face these different challenges, principals are asked to complete mandatory training with six modules (for a total of 120 hours) before taking up their duties or during the first years of their term of office. These modules focus on the relational aspects of the profession, the mastery of legislative and regulatory matters, the administrative, logistical and financial management of a school organization, and pedagogical skills.

In conclusion, while the principals do not respond to all the job demands, they do follow the directives of the organizing bodies to which they belong. The ones we studied do not have any formalized HR practices, nor have they developed a vision of professional development. In the absence of policy responses, this area is left to the freedom and sensitivity of the principal.

3.2. EXPLORATORY MULTIPLE CASE STUDY

As we aimed to obtain an in-depth understanding of older teachers' successful aging from a strengths use perspective, we opted for a multiple case study design combining quantitative network data and qualitative data (Bryman, 2008; Guetterman & Fetters, 2018; Yin, 2014).

In particular, two secondary schools were selected during the 2017-2018 school year: Castro and Eureka (pseudonyms). Both schools are located in Brussels, Belgium and belong to the network of free subsidized schools. More specifically, they are Catholic schools³, which means

³ On average, 60.9% of secondary students attend Catholic schools in Belgium (FWB, 2019).

that they are publicly funded but organized by an organization affiliated to the Catholic Church. The two schools provide all levels of general and vocational secondary education.

3.3. DATA COLLECTION

Multiple sources of data were collected⁴ through social network questionnaires, semi-structured interviews, and document analysis (both at FWB and school levels). We decided to conduct an interview with the principals of both schools prior to the study with the aim of keeping track of any documents at the school level attesting to a HR vision in terms of the professional development of teachers of all ages.

In a next step, we gathered quantitative social network data to visualize and describe older teachers' position within the school network. Specifically, we combined a whole and ego social network approach. We used a *whole network approach* to obtain an overall description of the schools' networks and to allow us to analyze patterns of interactions and structural features such as centrality and betweenness (Borgatti, Everett, & Johnson, 2013). Our *egocentric analysis* focused on the structure and content of the relationships between an individual, called ego (here: older teacher), and a set of alters (Wellman, 1993). By collecting data on the ego level, we were able to map and examine ties within an existing bounded network reported by the older teachers (Baker-Doyle, 2011, 2015; Crossley, Bellotti, Edwards, Everett, Koskinen, & Tranmer, 2015). Data collection for the social network analysis was done through *questionnaires*. A total of 85 teachers in Castro (83.3%) and 46 teachers in Eureka (76.6% response rate) responded favorably to the questionnaire. All of the teachers from each school were asked to identify a minimum of five other actors with whom they exchanged advice and expertise during the course of one school year. This enabled us to identify the position of older teachers within the school's network and the types of expertise they shared during their

⁴ The authors gratefully acknowledge the contribution of Raquel Leroy and Julyana Karaoglan in the collection and first analysis of the data.

interactions (i.e., didactics, administrative tasks, class management, planning, use of material resources, teaching content; see Moolenaar, 2012).

Moreover, in-depth semi-structured interviews were purposefully conducted with - on the one hand - older teachers aged between 55 and 65 years old ($N = 6$ older teachers per school, see Table 1). The selection of these participants was based on the results of the whole network visualizations and their different positions in the network based on their centrality and betweenness indices. We also interviewed younger colleagues⁵ ($N = 1$ younger teacher per school) to capture their perceptions regarding their older colleagues and to understand older teachers' positions within the teaching staff. Moreover, the school principals were interviewed about their perceptions of older teachers and the HR practices targeting this age group.

<Insert Table 1 around here>

The selection of participants depended also on the teachers' willingness to be part of the study. We faced two types of difficulties in recruiting participants. The first was having to accept refusals from teachers who were highly influential. For instance, the two most central teachers in Eureka did not want to be involved in the study (ID86 and ID94). The second difficulty was in approaching peripheral teachers, as they either had some form of mistrust regarding the study or simply were not in the school for a number of reasons (medical issues, absence during data collection, etc.). One religion teacher in Castro (ID120) responded six months after data collection because he was working at five different schools and did not have a mailbox in Castro, for example.

The interviews lasted between 60 and 90 minutes and consisted of three sets of questions. First, we asked questions regarding their final career phase in terms of challenges and incentives, their perceptions of themselves as an older teacher, and their future as a teacher. It further helped us to understand their reflexive and interactive positioning as an older teacher (in their

⁵ With younger colleagues, we refer to those colleagues who are not at the end of their career stage in teaching.

discourse). The second set of questions focused on their interactions and actual position within the social structure of the school. Older teachers were asked to describe their exchanges with other colleagues using the visualizations of their whole school and egocentric network. It documented their position and identified the social capital shared within the school organization. The third set of questions was related to their perceptions of the school structure and culture and HR practices enacted at their school. Similar interview questions about older teachers were asked to one younger colleague at each of the two schools. Both of the younger colleagues were selected based upon their position in the network, as relatively well connected with other colleagues, older ones in particular. These interviews mattered in our investigation, as positioning theory allows us to better understand perceptions regarding older teachers, the place they occupy within school teams from younger colleagues' points of view.

Finally, in order to understand the school's HR policy and practices targeting older teachers, semi-structured interviews were conducted with the school principals. These interviews lasted between 60-90 minutes. In addition, school documents on HR policy were collected, such as the school's human resource plan and the school's vision for teachers' successful aging, to have insights on the school's organizational structure and culture.

3.4. DATA ANALYSIS

In order to answer our second research question, we visualized the different networks, using Gephi software (v. 0.9.2). *Whole network* visualizations were built according to two conceptions of centralization. The first dealt with the degree of centralization, termed *degree centrality*, and quantified the number of ties between network members. This means that the more an individual maintains contacts with their colleagues, the larger the dot representing that individual is in the visualization (Figures 3 and 5). The second conception corresponded to the centralization between individuals, named *betweenness centrality*, and identified individuals who influence the information flux within the network (Figures 4 and 6). The larger the dot

within the network visualization, the more influential the person is (in terms of exchanges) within the network structure. Finally, in order to differentiate teachers at the end of their professional career from other teachers in the school, we opted for different grey and black scales: black for the older teachers, dark grey for those aged between 24 and 54, and light grey for the early career teachers.

Then, to answer our first and third research question, a total of 16 interviews were analyzed. The interviews were audiotaped, transcribed verbatim, and interpretively coded. 'Content analysis' was used for the data analysis, through a process of reducing data, showing data, drawing conclusions, and verifying them (Huberman & Miles, 1991). After reading the transcripts individually, codes were generated, which were then discussed with the co-authors and modified based on consensus. We divided the transcribed protocols into text fragments and coded them through strategies of open and axial coding (Strauss & Corbin, 1990). More specifically, we started by assigning initial codes to the data, labelling the issues addressed in the text fragment (open coding). We grouped the open codes (by comparison and identifying relationships among them) to generate specific categories and themes derived from the theoretical framework (axial coding). From this, we developed a coding structure and then further refined the list of codes as additional transcripts were coded and discussed (see Appendix A for the coding scheme).

After coding the data, we performed a vertical analysis for each individual participant, followed by a horizontal analysis (within-case analysis), comparing the findings for the different actors within the schools for systematic similarities and differences (Huberman & Miles, 1991). We then conducted a cross-case analysis that consisted of comparing the data from the two schools.

4. RESULTS

The objective of this section is to present results from a three-entry-points analysis to describe and explain the process of older teachers' successful aging within the two selected schools.

First, based on the document analysis, at both the FWB and school levels, and interviews, we will describe in what way the school organizations focus on relieving (i.e., deficit) and/or leveraging older teachers. This will serve to characterize the two schools in light of theoretical insights in terms of their support culture and structure as well as their HR practices. Second, we will present the findings of the social network analysis (SNA), which aims to describe social interactions based on two centralization criteria (degree and betweenness centrality). Third, in order to contextualize the social position of teachers at the end of their careers, as measured by the SNA, we will analyze the interviews in relation to older teachers' positioning and sense of belonging.

4.1. HR PRACTICES UNDERTAKEN IN THE SCHOOLS

Data from the FWB documents analysis showed that the FWB does not provide schools with specific decrees concerning teachers' professional development and the federal government also does not prescribe any specific HR policies with regard to end-of-career teachers. This was confirmed by the fact that after discussing this with the two school principals, no formalized documents were found regarding this issue. As a result, the two school organizations (and school leaders) experienced a lot of autonomy in deciding how to manage and conduct professional development for their teaching staff. Although the two selected schools had different characteristics as far as size and school configuration, their profiles regarding the human resource management seemed to be similar: rather traditional practices, punctuated by the daily functioning and management of secondary schools. We have made a distinction between remedial and developmental practices supported by the experiences of teachers and principals.

4.1.1. REMEDIAL PRACTICES

In line with the collected data, remedial HR policy was observed to predominate in both schools. Three anchored practices were illustrative of the lack of developmental measures and

the general tendency to encourage reduced work hours. First, the results showed that older teachers often continue to perform a full teaching schedule while being assigned ‘softened’ hours, which involve less grading or taking care of fewer pupils, for instance. Second, school principals talked about considering work tasks other than teaching, with the aim of relieving their older colleagues from professional difficulties. In most cases, teachers are offered a coordinator role⁶. Existing only in secondary education, this role consists of dedicating a small number of hours to curriculum alignment, program coordination, and conflict management.

Well, I'm trying to give additional responsibilities, but it's not easy, it can't be done for everyone. I'm giving this position of coordinator to people who have a little more experience and who want to have hours of coordination. (Patrick, Castro principal, lines 678-681)

Third, teachers talked about reducing work hours by requesting leave for personal convenience. This practice seemed to be both very common and well-established among teachers. School principals confirmed that as the teaching career is horizontal and no other career positions are available, teachers often use that strategy at their end of career. This is a possible remnant of previous legislation providing teachers the opportunity to leave the profession at 58 years old and/or to obtain a part-time contract at 55 years old with no impact on their salary. This procedure has been withdrawn since 2015.

Now it's also important to know that the early retirement policy allow older teachers a gradual departure, and so there are quite a few teachers who choose to leave gradually. We have here a teacher who decided to work part-time this year and who is leaving us definitively next year. She was able to plan her departure. (Joanna, Eureka principal, lines 32-36)

In many situations, our school principals generally opted for a listening strategy, trying to offer the best solutions based on older teachers’ demands. These ad-hoc solutions provided by principals showed a lack of pro-active policy. ‘*Laisser-faire*’⁷ was a common strategy used in

⁶ This role can also be considered as a developmental measure because it allows the teacher who wants this position to acquire a strategic position in the organization and develop their skills. Nevertheless, this solution is mainly provided in response to a problematic situation and not proactively given to a teacher.

⁷ Leaving the situation as it is.

response to a problematic situation, and in general, teachers did not report the existence of practices to promote older teachers' personal development.

You have to be a good listener. Depending on the person, you have to try to assign 'softer hours' that will require less grading such as coordination hours or things like that, which also empower the teacher and make him/her feel better. (Patrick, Castro principal, lines 20-22)

4.1.2. *DEVELOPMENTAL PRACTICES*

The presence of developmental practices was very limited, although the data did show indications of some practices to support the professional development of older teachers. The analysis showed how the principal at Eureka, for instance, gave special attention to the staff's comfort in improving teaching conditions. The principal listened to teachers' desiderata and responded to specific needs at the material level, in particular (for instance, financing pedagogical projects, renovating the teaching lounge, etc.), bearing in mind the benefits this could bring to the school itself. At Castro, the principal explained that he was willing to be primarily an information source concerning professional development. Through e-mails or informal discussions, he notifies the staff that several projects for career development are at their disposal.

If they want to implement new projects, I will support them right away. It's going to be good for the school because even artistic skills developed externally are going to make an effect here anyway. (Joanna, Eureka principal, lines 581-583)

Yes, as soon as I receive job offers, pedagogical assignments or things like that, I forward the information to the teachers. So, I make them aware of everything that can be done. For teachers who want to stop teaching and do something else, I keep them informed. (Patrick, Castro principal, lines 308-311)

Despite the desire to inform teaching staff, both principals have very little means to act and implement consistent measures for a support structure. From the teachers' viewpoint, the arrangements that promote career development either do not exist at all, or are relatively superficial and intended to increase well-being rather than stimulate the desire to learn and develop. From the principals' perspective, a developmental measure is not easy to implement

within secondary schools. It needs to be considered in terms of the ratio of teaching periods, the Total Number of Teachers' Periods of work. This ratio limits the number of hours allocated to a certain course based on the number of students in the school as of January 15th and the number of students attending that course. Therefore, the implementation of a developmental activity induces an organizational sacrifice. If the teacher engaging in the developmental activity wishes to keep their salary, the imbalance that the measure creates must be passed on to another colleague. The colleague will have to take care of the extra number of students in order not to lose these teaching periods. Penalties for schools are foreseen in case of non-compliance with this mandated ratio. In other words, implementing a developmental measure has become almost impossible. This explains why the management focused on optimization of the material teaching conditions and actors on a reduction of work hours that implied a reduction of wages.

The principal may not be able to 'organizationally' afford it. Because the teaching periods are checked all the time. He has to consider how the system works. He cannot say: next year, you and you will only be working 16 hours in the classrooms and 4 hours will be dedicated to taking care of the young teachers. He may really want to do this but it costs him too much. He just can't afford it... We will have to put 28 students in a class for instance. He is the first person to know what it is feasible, but here we are, sometimes the ministry imposes strict and straightforward rules to the principals, which delineate their actions. (Daphni, Castro teacher, 59, part-time 50%, lines 678-687)

We furthermore found evidence of a particular strengths use perspective in both schools, benefiting from teachers' experience and expertise. School principals mentioned the use of older teachers (as resources) for the good of the school's social capital. School principals considered older teachers as key persons who fulfill the role of 'pillars' among the teaching staff. They facilitate the transmission of information by welcoming and mentoring new colleagues and by supporting the others. Considering their organizational knowledge, their accumulated professional expertise and experiences from former training, older teachers are encouraged to advise others on the internal functioning of the school. They are considered as

valuable for the decision process given their profound knowledge of the school, in this way influencing the organizational culture.

We [as principals] can make changes and they [older teachers] are open to it, but it must be done in consultation with them, respecting the culture of the school because they have worked here for 30 years and have ensured today's school reputation. It exists thanks to them and this must be considered. (Patrick, Castro principal, lines 194-198)

[Older teachers are] ... the guarantors of the school's culture. They are people with professional experience, with uh... It all comes into play, life experience and professional experience. They really are assets. (Patrick, Castro principal, lines 414-417)

School principals expressed that they maintain a strategic view of older teachers, considered as key persons and as resources for the good of the school organization. Considering older teachers as potential allies facilitates the implementation of organizational changes within the school team. The use of older teachers' expertise in this case serves a strategic purpose and corresponds to the principal's interest in further investing in the functioning of the school organization. However, the data do not allow us to say that this is used to further develop older teachers or to stimulate interactions between teachers.

4.2. POSITION OF OLDER TEACHERS WITHIN THEIR SCHOOLS

In order to put into perspective the results obtained concerning HR practices, we will present the data collected from the social network analysis, completed with the interview data. As indicated in the Methods section, two indices were used to investigate how teachers are positioned within the school network, as shown in Table 2. First, *degree centrality* was measured as the number of direct ties that are linked with a node. In other words, the more ties actors have, the more popular they are. This means that a person maintaining numerous contacts with other nodes within the network fulfills an active and central role. Two separate metrics quantify degree centrality: the in-degree measures incoming ties and the out-degree is given by the out-going ties. For instance, if actors receive many ties, they have a higher in-degree score and are thus prominent. If actors have a high out-degree score, they are able to exchange with many others and to make others aware of their opinion, and are, in this case, influential actors.

At the other end, peripheral nodes maintain fewer or no relations with other nodes and are, by definition, at the margins. As Table 3 shows, the average degree centrality is almost similar at both schools, with teachers connected with three to four of their peers, on average. As shown in Figures 1 and 2, the whole network analysis focuses on degree centrality and shows how popular a teacher is within the network. In this case, the figures indicate that for both schools, older teachers (black nodes) are not the most central persons in the school. For example, neither Alex, Jean, and Daphni in Castro nor Fred, Lola, and Xavier in Eureka are frequently nominated by their peers for sharing professional advice. However, if we take a closer look at the network visualizations, some older teachers are well connected to their colleagues anyway, and are not isolated nor in the margins of their professional networks, for example, Rosa in Castro, and Salma and Joanna in Eureka. This is also confirmed in Table 3.

<Insert Table 3 here> <Insert Figure 1> <Insert Figure 2 around here>

The second indicator used is *betweenness centrality*, which examines how many times a node appears between the others in the network, and on the shortest paths for seeking information. This measures the capacity of an actor to have control over the information flowing between others (Newman, 2005). Actors with high betweenness centrality are then considered as bridges or brokers (Burt, 2005; Fernandez & Gould, 1994), connecting people and facilitating interactions and communication between the individuals whom they link. The nodes then occupy a structural position by acting as an information vector. Table 3 shows that a majority of older teachers have above-average scores for betweenness centrality, strengthening the idea that older teachers play an active and structural role in their professional environment. In Figure 3, most of the older teachers in Castro do not have an active and influential role within their network, as the top three most influential teachers are between 24 and 54 years old. On the other hand, Eureka's most influential teacher (node 86) is an older teacher (Figure 4) who gives three different type of courses and was nominated by 15 peer colleagues as the most relevant person

to get professional advice from. This was furthermore confirmed by teachers during the interviews.

And then now that he [Patrick] is a principal, he is obviously and mostly relying on (uh) the older teachers.... (Daphni, Castro teacher, 59, part-time 50%, lines 67-69)

Well, some of the people at the end of their careers, we see them a bit as mentors compared to others. They are like the dinosaurs in the school and so it is clear that there are still some people of reference. (Eric, Eureka teacher, 59, part-time 50%, lines 47-51)

<Insert Figure 3> <Insert Figure 4 around here>

As Figures 5 and 6 show, we observed one phenomenon in both schools: teachers gather by discipline in a mixed-age subgroup. It means that a mathematics teacher is more likely to exchange information with a mathematics teacher and by extension, they will create subgroups of mathematics teachers belonging to various age categories. These discipline-based subgroups or cliques are denser than the entire network. Some older teachers are clearly located on the margins even if they have the same domain of expertise (see nodes 57, 42, 26, 74). Castro principal and several teachers mentioned this phenomenon in their school during the interview.

It is also important to know that teachers are grouped by subject. Science teachers stay together, French language teachers too. Small groups are formed. (Patrick, Castro principal, lines 361-363)

A core of Latin teachers? There are five of us, but it doesn't work because it's a matter of personality. Many of us are very individualistic and it doesn't work well.... (Elise, Castro teacher, 56, part-time 80%, lines 519-520)

<Insert Figure 5> <Insert Figure 6 around here>

4.3. OLDER TEACHERS' POSITIONING

The third entry point of our analysis, in accordance with positioning theory, deals with older teachers' positioning from their own and their colleagues' point of view. As mentioned before, positioning refers to an individual's self-perception with regard to their profession and colleagues. With this in mind, the following excerpts provide nuance to the group formations

observed in the social network data and highlight the potential generation gap and negative perceptions regarding older teachers that exist in the two schools.

It depends on which ones, but generally, they [older teachers] don't communicate with young people unless they get to work with each other in a course. So they're, uh, a little reluctant and a little cold. They don't necessarily welcome newcomers, they don't necessarily go to them when there's a problem or something, They're really in their corner and in their group. Except if we make the step towards them, then yes, they are nice, they talk but generally they stay between them....(Inge, Eureka teacher, 28, full-time contract, lines 26-31)

Well, I've never been to these people to ask them for anything. I've never asked them for help. I've never asked them for advice, because I've never felt welcome. (Marcus, Castro teacher, 44, full-time contract, lines 297-302)

After hearing the younger colleagues' points of view, we observed that distance, even mistrust, was visible between teachers from the different age cohorts. Negative perceptions can lead to interactions that are not always cordial, or sometimes even poorly developed. Older teachers approached this with a certain fatalism and resignation. The way a secondary school operates does not allow the entire teaching staff to meet, given the complexity of the timetables.

And I mean, in a secondary school, it is certain that we will stay with people who are in our field of expertise, in our subject matter and sometimes only in our degree program. There's nothing negative about this, that's the way it is. (Daphni, Castro teacher, 59, part-time 50%, lines 498-502)

Many of us are very individualistic and it just doesn't add up. Anyway, that's the way it is. (Elise, Castro teacher, 56, part-time 80%, lines 519-520)

Furthermore, as illustrated by the few observed central positions, some older teachers felt that they were gradually becoming isolated from the other members of the educational staff. The same conclusion was drawn when reporting the centrality indices. Some older teachers reported a growing generation gap between them and their younger colleagues or between them and their students. This gap became more important with increased age. Teachers expressed their frustration in relation to students' general aptitudes and level of engagement compared to previous generations.

It's not the career that's in question, but it is this context with young people, you become grandpas for them. (Jean, Castro teacher, 55, full-time contract, lines 405-408)

This isolated position might also be a result of their lack of knowledge about the school's daily functioning due to reduced work hours. The part-time job combined with the perceived generation gap makes their perception of their isolated positioning even bigger. Consequently, older teachers reported difficulties integrating into informally constructed groups of teachers that have their own implicit rules and routines.

I think that indeed, over the years, the number of people I talk to has decreased. Why? It is a large school and I spent less time in it than others. I don't have the opportunity to meet new teachers and I also tend to interact with the same "direct" colleagues for many years now. (Eric, Eureka teacher, 58, part-time contract 50%, lines 61-71)

Furthermore, the data from document analysis showed us older teachers' possibility of choosing a part-time work schedule. The reasons to opt for this reduction in work hours varied, and we will cite some examples given in the interviews. The first example illustrates a teacher - Salma - who is completely satisfied with this situation and is gradually preparing for retirement. She has already reduced her work hours and at first sight, she indicated feeling more relaxed. Nevertheless, this professional situation is noteworthy, because although she is gradually leaving the profession, she still has a certain love for the profession and would even be willing to continue teaching. However, she emphasized that she prefers to end her career in a positive way and came up with examples of teachers who have found a new source of growth after their work life ended.

I'm actually waiting for the Ministry of Education to decide if I can leave. I have worked enough months to be able to retire this year. So, we'll see, I'm waiting for the answer. If it is positive, this is very good since I made the request a long time ago. If it is negative, I feel quite capable of working part time for a year and still enjoy doing it. (Salma, Eureka teacher, 59, full-time contract, lines 1150-1153)

On the contrary, another teacher - Elise - opted for a part-time contract (i.e., early retirement type 4) and the distribution of work days does not suit her. She is experiencing physical constraints, while officially she is obliged to continue working for eight more years to meet the

conditions to retire. In this case, there is no choice other than quitting and/or claiming a place in a school closer to home.

It's really (uh) annoying. Because it is true that there have been changes that didn't concern me, but I feel that there is physical and mental wear. At sixty, it's going to be complicated. Because there is this physical wear and therefore, (uh), make the effort until sixty, yes, yes, but after sixty, I don't know if I want to do... Why? Because I'm also a perfectionist. I know that there are some things I would like to renew and that we should innovate. (Elise, Castro teacher, 56, part-time 80%, lines 332-338)

Despite the reported difficulties, some teachers still cultivated the need to develop themselves continually and continued to embrace the teaching profession. They did not feel tired from their daily work practice. The school environment met their expectations and needs in terms of material resources and they experienced parental involvement and strong support from the school principal.

Personally, I have everything I need here. I have my office, I have my computers, I have my interactive white board. When I ask for something useful here, it's yes. I'm fine. Pure happiness. (Muhammad, Castro teacher, 62, full-time contract, lines 212-214)

Many older teachers showed strong engagement and dedication and referred to their active participation in school internal and external educational activities. They were participating in projects that connect teachers such as think tank or discussion groups, and this seems to have helped them thrive throughout their career, anchoring them in the educational team. These teachers also maintained a high degree of work motivation. This is explained through their engagement with the teaching profession, to which they feel totally dedicated, and which fills them with joy because of the social contact with students and colleagues.

I think about it [teaching profession] even outside working hours. I could not consider doing a job in which I wouldn't get involved, in which I wouldn't feel concerned. It is a great moment of fulfilment because what it really means to me, the whole relational side with the students. So, yes, it's a very important part of my life. (Xavier, Eureka teacher, 55, part-time 50%, lines 18-23)

Besides these positive considerations concerning the teaching profession, some older teachers did not see themselves as being in the final phase of their career and demonstrated a certain

willingness to renew their work practices to keep themselves updated regarding curriculum changes and teaching materials. Naturally curious or not, the majority of the older teachers are willing to find new topics and to adjust the course content in order to bring some change. Some adopt a proactive attitude and seek for continual improvement. They do not necessarily wish to attain a certain comfort level after all these years of service. For these actors, novelty and innovation are the real driving forces.

5. DISCUSSION

Given the current relevance of the topic both within literature as well as in practice, this article sought to offer insights regarding practices that focus on the aging workforce in secondary schools, and regarding the importance of social relationships for older teachers' professional development. Inspired by a strengths use perspective, we focused on older teachers' interactions within the school organization and how their expertise is used as a resource within the school and further developed through what we called 'developmental HR practices'. We would like to start this discussion with a general reflection on the insights that social network research can provide for the understanding of successful aging at work. Social network analysis allowed us to map informal interactions between older teachers and their colleagues. In other words, it highlighted the position older teachers held within their school and whether they were still active actors or had become peripheral ones. It also enabled us to identify resourceful teachers within the educational staff.

In the next paragraphs, we will frame and position our results according to the existing literature. More specifically, we will structure our discussion based on the three identified themes: HR practices, school network characteristics, and older teachers' positioning.

5.1. PROMINENCE OF REMEDIAL PRACTICES

The document analysis, at both the FWB and school levels, and the interviews allowed us to highlight human resource practices. The presented observations allow to answer our first research question and suggest that there is a focus on so-called ‘relief’ measures as defined by Vrielink et al. (2009). There is little room for developmental measures, due to a plateaued profession, although some information about potential training programs is nevertheless disseminated within the team by the school principals. The possibility of implementing these developmental measures is relatively limited because they involve an organizational cost or are hindered by ministerial directives. If the principal wants to “make an effort” for a specific teacher, this has an immediate impact on the workload of another colleague. Principals often find themselves stuck in a difficult situation, as they do not have the means to implement significant adjustments. The educational system is designed in such a horizontal way that it does not offer a variety of functions within the teaching profession. Several observations therefore converge towards a more superficial form of ‘supportive’ structure (Gaikhorst et al., 2015), targeting essentially well-being, comfort and improvement of teaching conditions, beyond school principals’ active listening and their particular attention to their staff. The school management does its best to act under these conditions, but within the two institutions, there is no formal plan for mentoring and the exchange of expertise is not necessarily valued. Early stages of an integrated culture were identified through the high levels of autonomy granted by school management. That said, there is currently no action being taken either to initiate a collaborative and integrated culture or to individualize the measures adopted in both schools, to take into account a vision of continued professional development and the diversity of teachers within the schools.

5.2. NETWORK POSITIONS OF OLDER TEACHERS

Combining information collected through network questionnaires and interviews, the contrasted observations in the two schools enable to answer our second research question.

First, visualizations and centrality measurements showed that older teachers do not necessarily have most of the contacts and are not always popular among their peers, but some do occupy important positions in terms of influence and control of information in the school networks. These strategic positions within the network echo the notion of brokerage, which Burt (2005) defined as a position benefiting from social capital advantage and manifesting the team's recognition of expertise. Nevertheless, it must be noted that these brokering positions held by some older teachers are not reflected in the current educational literature. It is worth noting that older teachers occupy an important place in the school as intermediaries who disseminate information to the entire educational team and take part in the school's decision-making process. Measures taken that tend to change the organizational culture are often the result of a consultation with them. Principals opt for a strategic and instrumental vision when using the accumulated resources of the older teachers. These teachers serve to enrich the principals' interests and the internal functioning of the school, thus strengthening their position as pillars of the school, preserving the history and philosophy of the organization.

Second, some older teachers' discourse and position also testify to a growing distance between different generations of teachers. Some older teachers are rather negative with regard to these difficult interpersonal exchanges between these groups. This distance can lead to problems of isolation and can cause what Erikson (2006, as cited in Van Waes, Van den Bossche, Moolenaar, De Maeyer, & Van Petegem, 2015) has called a phenomenon of *arrested development*, in which stagnation of development is observed. Behaviors become routines, occurring in a stable, small, and homogeneous networks. It can also lead to limited career opportunities and untapped expertise at the teacher staff level.

As organizations increasingly value the relational expertise (know-who) of employees, and do not rely solely on employees' know-what and know-how (e.g., Borgatti & Cross, 2003), school principals could then acknowledge or even formalize the broker position certain teachers

occupy in the school staff. These broker teachers could enhance the connectedness of the network - which we know is important for innovation (see also Daly, Finnigan, Moolenaar, & Che, 2014; Moolenaar, Daly, Cornellissen, et al., 2014). This brokerage position would also be valuable for linking brokers to newcomers, as such contributing to an integrated school culture. In this way, principals may also be willing to create opportunities for teachers to exchange and invest in social capital, preventing isolation issues for older teachers. This would also give newcomers immediate insight into the schools' network, enhancing their enculturation and socialization process. Raising teachers' network awareness might therefore be an important point of attention for strengthening the networks (Moolenaar et al., 2014).

5.3. NEGATIVE AGE-RELATED PERCEPTIONS WITHIN SCHOOL STAFF AND VARIOUS SELF-PERCEPTIONS

Regarding the third research question, the findings identified rather negative perceptions towards end-of-career teachers. As evidenced by some of the testimonies collected and by the existing literature, many preconceptions about aging exist within the occupational field (Posthuma & Campion, 2009) and restrict communication between different age categories of workers. The implementation of a collaborative and supportive culture within institutions should be considered at the political level, given the positive outcomes this generates. Given the difficulty of certain civil service jobs, everyone will benefit from developing an organization geared towards intergenerational knowledge-sharing and intergenerational learning (see Geeraerts, Vanhoof & Van den Bossche, 2016; Jungmann, Wegger, Lieberman, Ries, & Schmidt, 2020; Salas & Paoletti, 2019). This would help maintain various actors in their jobs for a longer period of time.

We can also observe in this research that older teachers intentionally share their knowledge and are active within the school team. This finding contradicts a branch of the educational and aging literature in general that often reduces older workers to 'needy agents', centering HR measures

on lowering professional expectations, focusing on their difficulties and demands in the workplace (Talbot, Rackliff, Nicolle, Maguire, & Mallaband, 2016) or even suggesting that there is an ‘ontological precariousness⁸’ among the older workforce (Lain, Airey, Loretto & Vickerstaff, 2019). Heckhausen, Wrosch, and Schultz (2010) brought a more positive perspective by considering older workers as agents of their own change or as engaging control strategies (see also Kooij, Nijssen, Bal, & van der Kruijssen, 2020). They are indeed able to influence certain organizational condition policies, by asking for more integrated forms of management. In addition, some of the results contradict stereotypical beliefs about older workers and echo the growing interest in developmental HR practices, strengths use management and supportive structures within schools (Bakker & van Woerkom, 2018). With regard to the diverse perceptions of older teachers, these practices should be aligned with the mapped positions and encourage tailored interventions to respond to the diversity of profiles within school teams.

6. LIMITATIONS AND FUTURE RESEARCH

Because the ambition of this study was to get in-depth comprehension of successful aging at work through a strengths use perspective in the teaching profession, we did not aim for empirical generalizability. This study was conducted in two French-speaking secondary schools in Brussels. The extent of generalizability to other Belgian secondary schools and school networks therefore cannot be determined or must be supported by further studies. For instance, our findings support the argument that HR practices are not aligned with the position of older teachers within the schools’ network and their apparent influence in it. However, these two schools may apply certain measures that others do not, as the FWB does not formalize any professional development plan or HR policies regarding this question. These measures are also

⁸ A form of negative vulnerability or insecurity experienced by the individual.

not necessarily used in less privileged environments or in schools that follow other pedagogical objectives.

Moreover, the two schools differ in terms of school size, which could explain the amount of social interactions. As Lee and Loeb (2000) identified, school size and the amount of social interactions within a school are negatively correlated, meaning that smaller schools seem to facilitate personalized social interactions among school members. The literature, furthermore, has shown that the spatial configuration of the workplace shapes the formation and the structure of intra-organizational networks between teachers (Sailer & Penn, 2009). Wineman, Kabo, and Davis (2009) found that collaboration networks are driven by the distance between actors as well as between office locations. In this case, Castro is characterized by a more decentralized configuration, as it has three different locations while Eureka has only one location. This might have impacted our results. Further studies should then compare schools with the same characteristics in terms of school size, student population, size of the educational staff, and urban or rural location, and so forth. The distinctive functioning of secondary schools also results in typical network shapes and facilitates the formation of cliques, which Spillane (2005) already observed. It might then be relevant to investigate other levels of the educational system, such as primary schools, to see if other school environments create different networks.

Moreover, this study presents only a one-time measurement of the schools' social structure, whereas the literature agrees that social networks are dynamic and change over time (Kilduff & Tsai, 2003). It is then imperative to understand how patterns of social relationships both shape and are shaped by the schools' social contexts. Qualitative studies have particularly highlighted the social complexity and power plays that occur in social networks as they change over time (e.g., Baker-Doyle, 2011; Daly & Finnigan, 2011). It is then important for further research to develop a longitudinal approach with multiple time points to track teachers' professional development (Richter, Kunter, Klusmann, Lüdtke, & Baumert, 2014), in order to

observe changes in terms of expertise fluxes and positions within school teams. Several measurements will also help with identifying teachers, and workers in general, who may be at risk of isolation in the professional context.

From a practical point of view, it is relevant for school principals to consider expertise in order to better understand the potential of its staff. The qualitative assessments in this study contribute to an in-depth understanding of these individual differences, as does recent research on profiling of successful agers with person-centered approaches (see Thrasher, Zabel, Bramble, & Baltes, 2017; Taneva & Arnold, 2018). Future research could also use multi-source survey studies to move beyond traditional cross-sectional designs and to provide in-depth study of the experience of successful aging at work (Zacher, Kooij, & Beier, 2018)

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Table 1

Overview of the Interview Participants ($N = 16$)

School	ID	Name	Age	Function	Discipline(s)	Contract
Castro	5	Elise	56	Teacher	Latin	Part-time 80%
	6	Muhammad	62	Teacher	ICT	Full-time
	55	Alex	61	Teacher	French	Full-time
	77	Marcus	44	Teacher	Physical education	Full-time
	79	Rosa	60	Teacher	French	Full-time
	101	Patrick	45	Principal	-	Full-time
	115	Jean	55	Teacher	Chemistry	Full-time
	117	Daphni	59	Teacher	Ancient Greek	Part-time 50%
Eureka	4	John	59	Teacher	ICT	Part-time 80%
	7	Fred	57	Teacher	Secretarial educ.- Internship	Full-time
	15	Inge	28	Teacher	Dutch	Full-time
	21	Lola	55	Teacher	Dutch/English	Full-time
	24	Salma	59	Teacher	Arts and Technology	Full-time
	25	Eric	59	Teacher	Management/ Economy	Part-time 50%
	99	Xavier	55	Teacher	French	Part-time 50%
	102	Joanna	44	Principal	-	Full-time

Table 2

Two Indices Used in the Network Analysis of the Two Schools

School	Name	Age	Degree centrality		Betweenness centrality	Network Characteristics
			In-degree	Out-degree		
Castro	Elise (ID5)	56	4.00	6.00	341.11	Integrated
	Muhammad (ID6)	62	3.00	4.00	272.75	Integrated
	Alex (ID55)	61	5.00	0	0	Isolated
	Marcus (ID77)	44	9.00	5.00	573.40	Central, influential
	Rosa (ID79)	60	5.00	5.00	595.81	Central, influential
	Patrick (ID101)	45	8.00	0	0	Isolated
	Jean (ID115)	55	4.00	1.00	0	Isolated
	Daphni (ID117)	59	0	3.00	0	Isolated
	ID23	36	10.00	5.00	695.88	Mainly consulted
	ID17	41	8.00	11.00	1428.94	Most influential and main advice giver
Mean (school)			2.99	2.99	164.44	
Eureka	John (ID4)	59	5.00	6.00	529.75	Central, influential
	Fred (ID7)	57	5.00	0	0	Isolated
	Inge (ID15)	28	4.00	4.00	108.66	Isolated
	Lola (ID22)	55	2.00	5.00	311.79	Integrated
	Salma (ID24)	59	9.00	8.00	625.79	Central, influential
	Eric (ID25)	59	5.00	5.00	506.90	Central, influential
	Xavier (ID99)	55	4.00	0	0	Isolated
	Joanna (ID102)	44	8.00	0	0	Isolated
	ID 94*	54	23.00	5	759.24	Mainly consulted
	ID 43	34	6.00	12.00	708.69	Main advice giver
	ID 86	58	6.00	9.00	1034.25	Most influential
Mean (school)			3.45	3.45	119.74	

* Vice-Principal

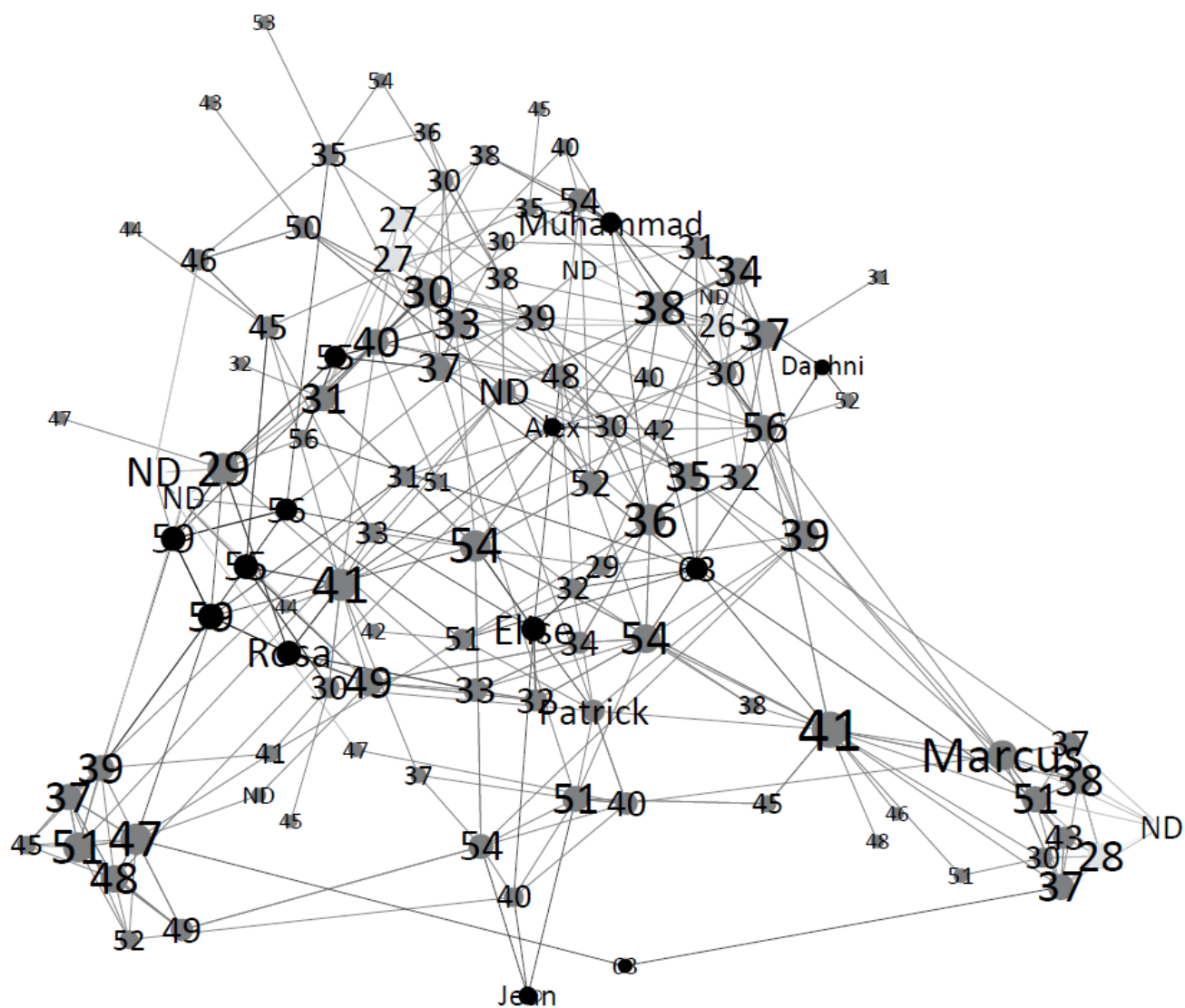


Figure 1 - Teachers Network of the Sampled School Castro Showing Degree Centrality

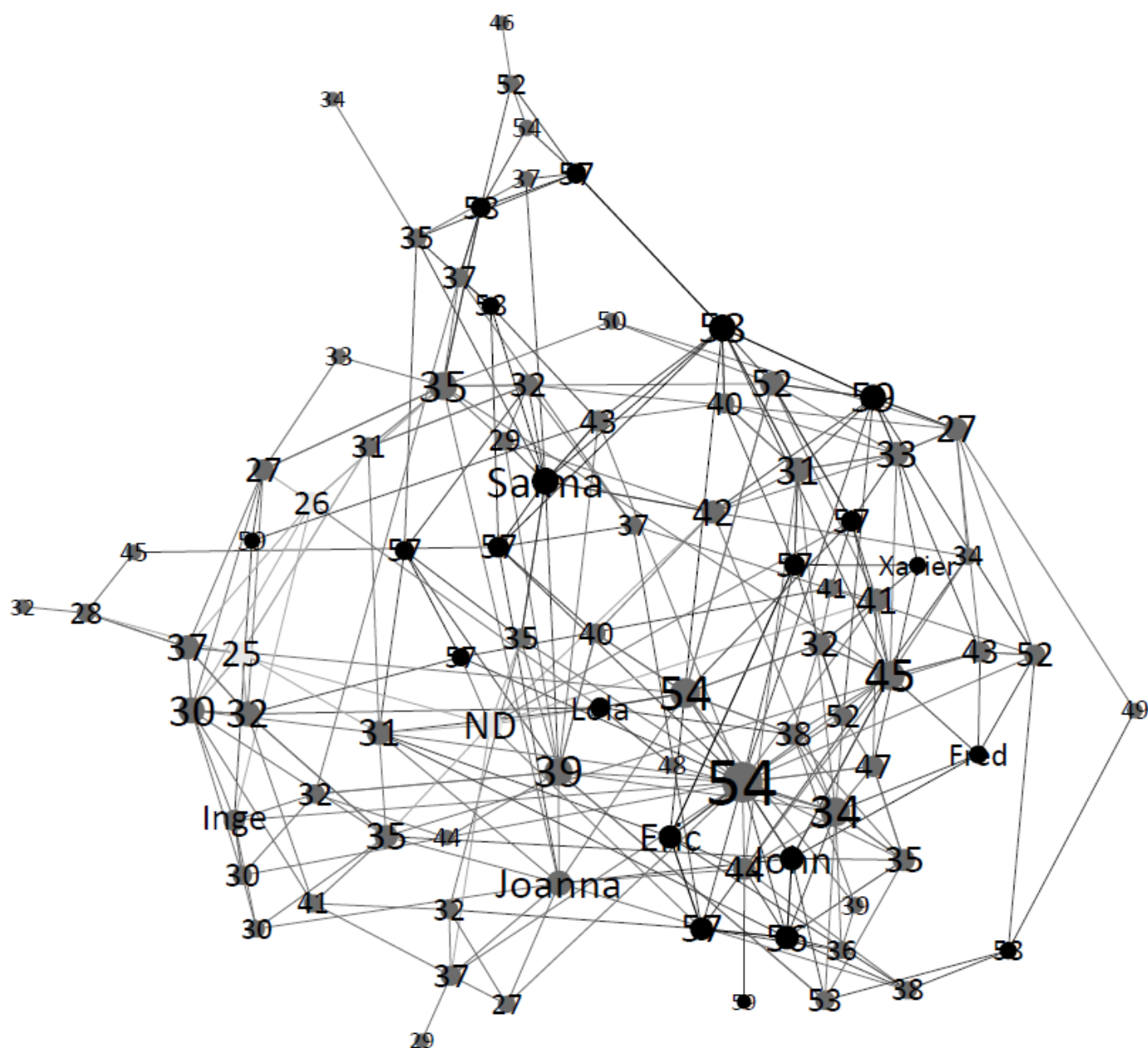


Figure 2 - Teachers Network of the Sampled School Eureka Showing Degree Centrality

Note. The colors of the nodes indicates their ages, the green nodes are aged between 55 and 65 years old. The blue nodes are between 27 and 54 years old and red ones, between 21 and 26. The size indicated the centrality degree of nodes, i.e. how popular a teacher is within his/her network.

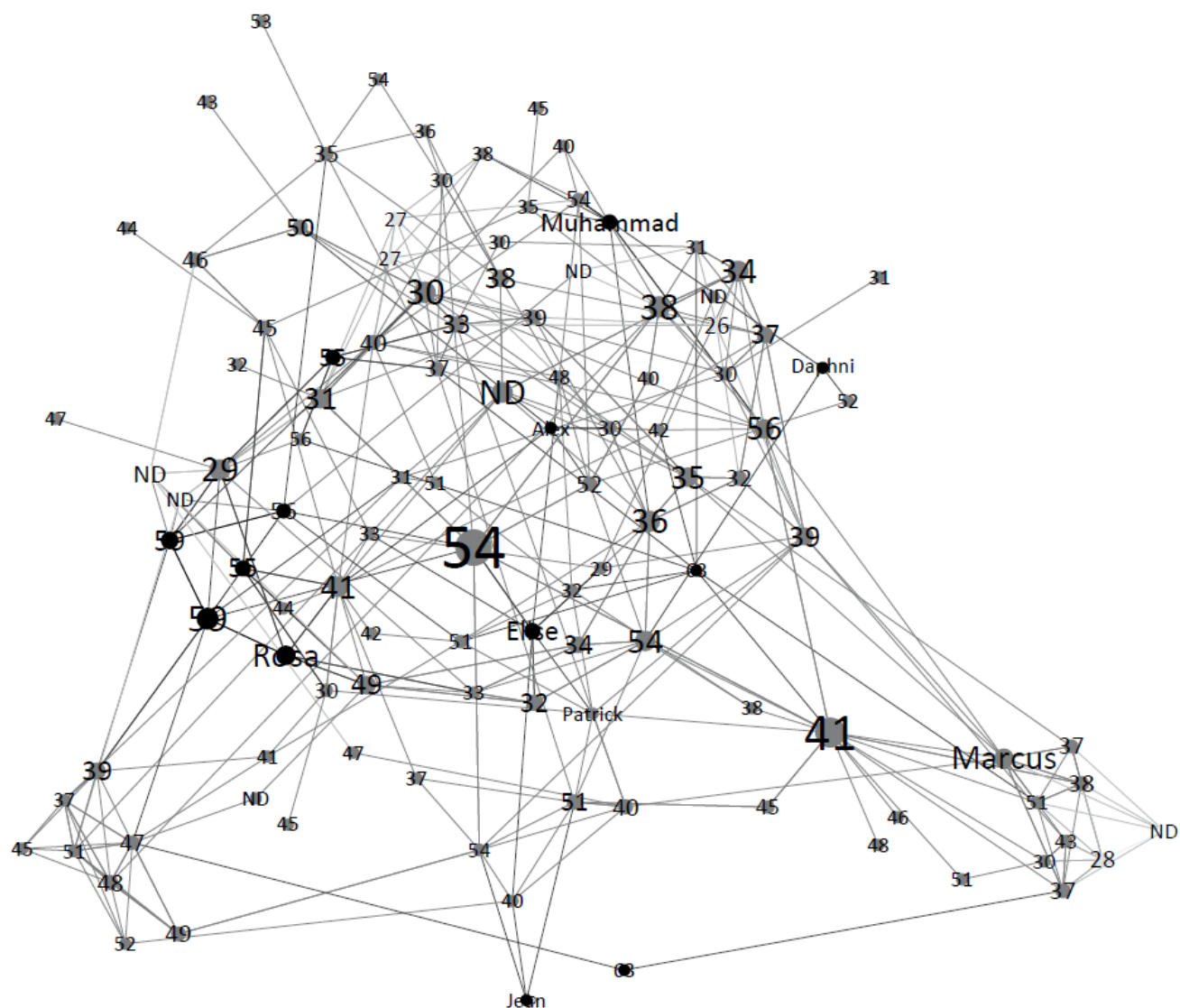


Figure 3 - Teachers network of the sampled school Castro.

Note: The size indicates the betweenness centrality of the nodes, i.e., how active and influential a teacher is within his network

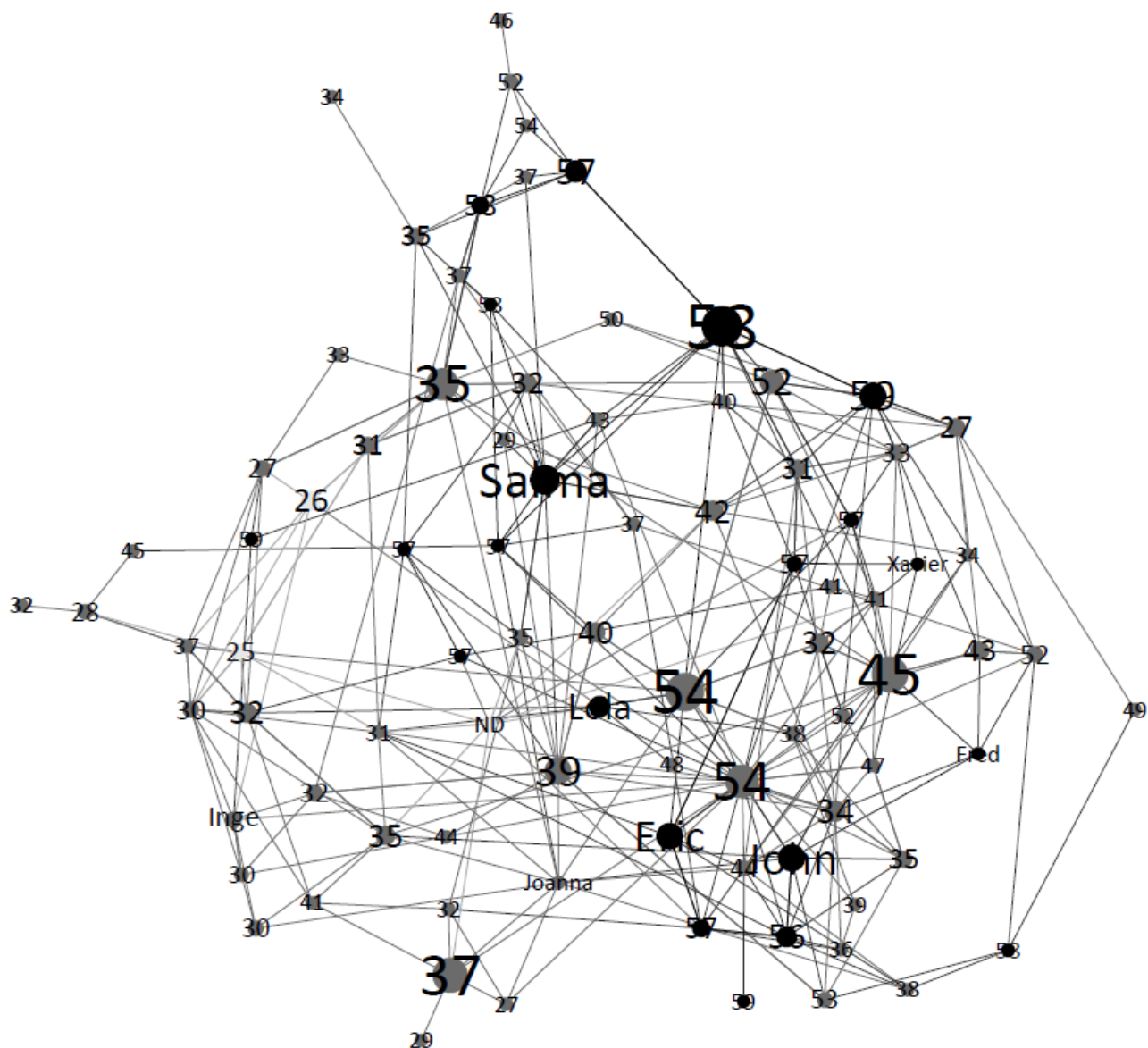


Figure 4 - Teachers network of the sampled school Eureka.

Note: The size indicates the betweenness centrality of the nodes, i.e., how active and influential a teacher is within his network

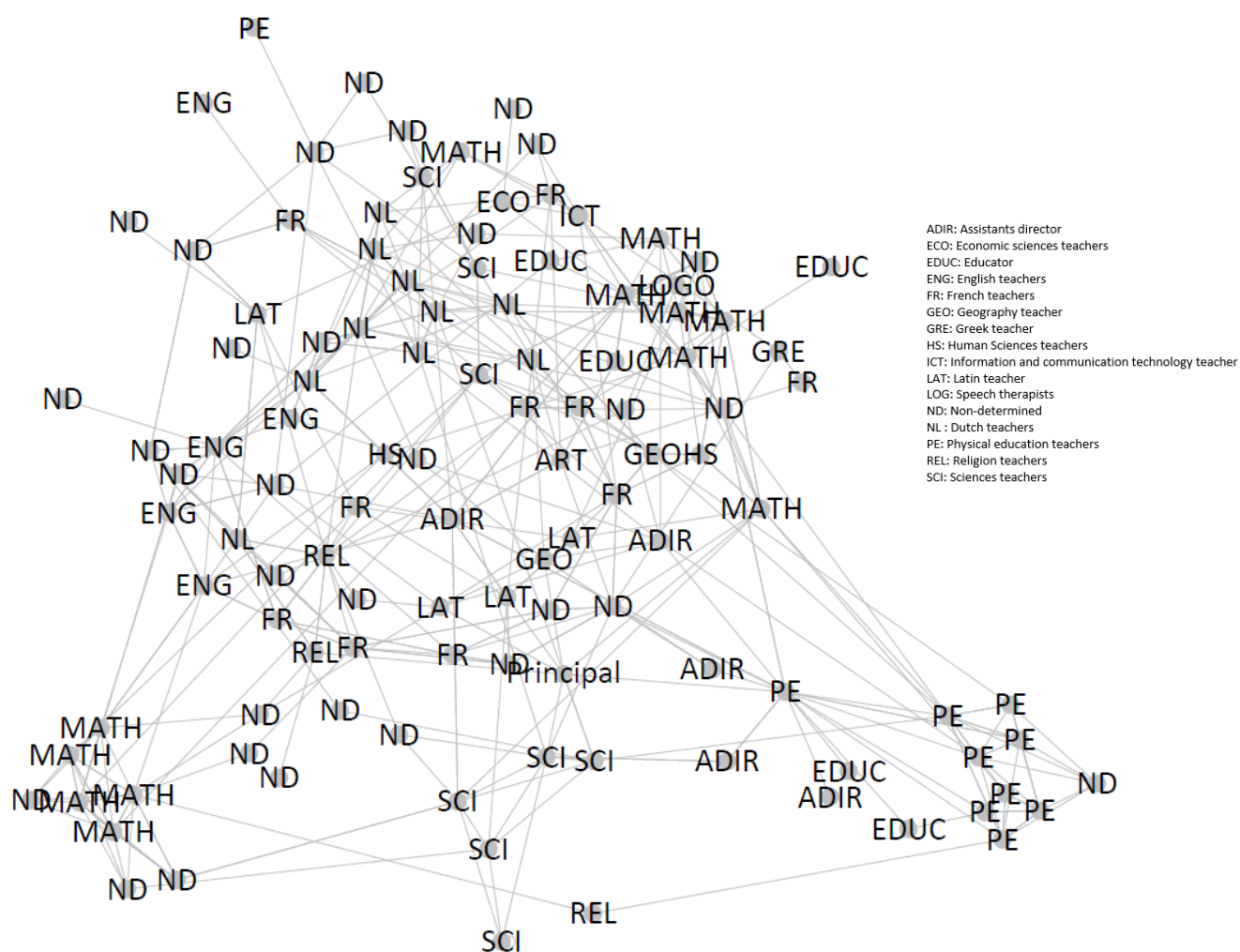


Figure 5 - Castro Teacher's Network Sorted By Disciplines.

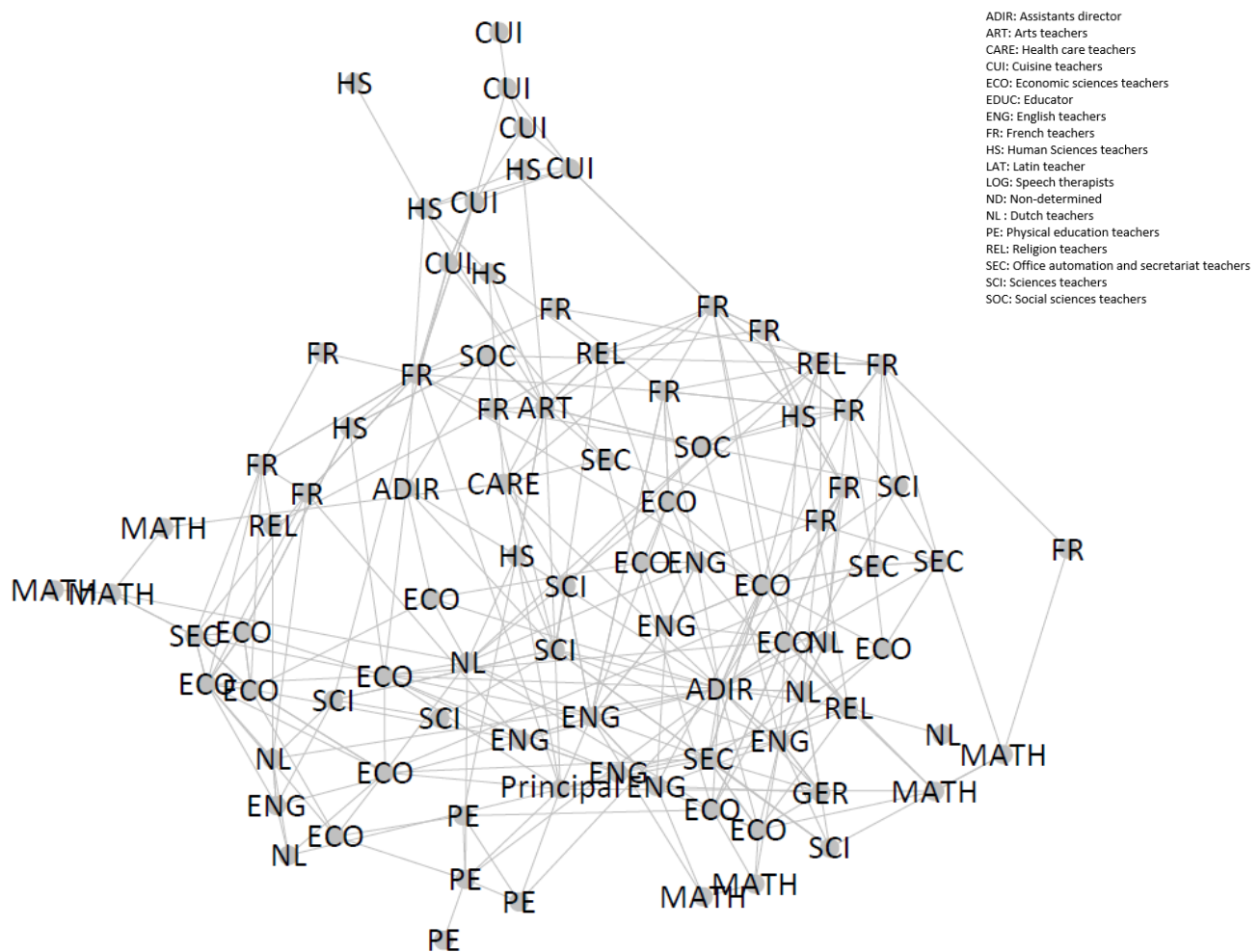


Figure 6 - Eureka Teacher's Network Sorted By Disciplines