



**UNIVERSITY OF GOTHENBURG**  
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## **Shared Language, shared Knowledge?**

Investigating barriers and facilitators to knowledge transfer in a common language context: the case of European Multinational Corporations

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## ABSTRACT

Multinational corporations (MNCs) have over the past decades increasingly expanded to foreign markets, changing the international operating environment and requiring the MNCs to more efficiently transfer knowledge within and between functions in order to stay competitive. Language is a critical factor for knowledge transfer and many MNCs have adopted a common corporate language. It has however been debated to what extent a shared corporate language enables effective communication between various units. This study aims to understand if a shared language is adequate in helping overcome barriers for knowledge transfer and by extension identify and analyse other potential factors that can be barriers or facilitators for knowledge transfer in a setting of a common corporate language. The study has been based on 13 semi-structured interviews and five surveys with respondents within two different MNCs in Sweden and in Singapore. The data has been analysed by using a novel method applied to the field of international business (IB) studies, that of corpus linguistics and the use of a concordance software, AntConc. The use of the concordance software enables the findings of this qualitative study to be data driven. The results confirm that a shared language is not in itself enough to ensure successful knowledge transfer. The findings further show how several barriers and facilitators present in a multilingual setting remains in a monolingual setting. A shared language setting also appears to partially change the dynamics of barriers and facilitators for knowledge transfer as it sheds light on additional barriers and facilitators for knowledge transfer that the contemporary MNC faces.

**Key words:** Shared Language, International Business (IB), Multinational Corporations (MNCs), Knowledge Transfer, Barriers and Facilitators

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## LIST OF ABBREVIATIONS

CL	Corpus Linguistics
IB	International Business
IT	Information Technology
KWIC	Key Words in Context
MNC	Multinational Corporation
R&D	Research and Development
SCE	Singapore Colloquial English

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# 1. INTRODUCTION

## 1.1 BACKGROUND

Over the past decades, multinational corporations (MNCs) have increasingly expanded to foreign markets. This has changed the international operating environment considerably where MNCs need to transfer knowledge more efficiently within and between functions in order to stay competitive in the worldwide market (Bartlett and Ghoshal, 1987; Cohen and Levinthal, 1990). The existence of the firm further depends on its ability to create, develop and transfer capabilities (Kogut and Zander, 1992) but also the ability to create and transfer knowledge and best practices internally comprises an essential competitive advantage for MNCs (Szulanski, 1996; Minbaeva, Pedersen, Björkman, Fey and Park, 2014). However, as MNCs are becoming more complex and increasingly multi-dimensional, knowledge flows within the MNC becomes correspondingly increasingly complex, multi-dimensional as well as multi-directional (Gupta and Govindarajan, 2000), resulting in an increasing need to recognise the importance of knowledge transfer. The transfer of knowledge occurs when knowledge is diffused between different units such as individuals, groups or organisations. No matter how this diffusion of knowledge occurs, language in the context of IB is critical (Argote and Ingram, 2000; Welch and Welch, 2008).

Marschan, Welch and Welch (1997) addressed language as ‘the forgotten factor’ in MNC management. However, in recent years scholars in the field of IB have recognised language as one of the most important functions in corporate activities (Brannen, Piekkari and Tietze, 2014). Language is moreover identified as the base of communication and knowledge creation (Vaara, Tienari, Piekkari and Sääntti, 2005), and plays a critical role in the overall performance of the MNC (Harzing and Feely, 2008). As companies expand their international operations, language demands become an issue arising in inter-unit communication and hence also in knowledge transfer (Welch and Welch, 2008). With regards to this Buckley, Carter, Clegg and Tan (2005) outlined in their study that the more intense the intended knowledge transfer, the more important is a shared language.

To close the gap in communication and knowledge sharing that leads to an eventual knowledge transfer, an increasing number of MNCs have turned to adopting a common corporate language as a part of the corporate strategy (Harzing and Feely, 2008). One of the main driving forces toward language standardisation in the form of a shared corporate

language has been the need for control and coordination (Bartlett and Ghoshal, 1987). In this regards, a common corporate language is not only a common tool used for formal reporting but also a part of the process of communication at all levels throughout the MNC (Marschan et al., 1997). It has nonetheless been debated to what extent a shared corporate language guarantees effective communication between various units, even if it is known that the adoption of a standardised language has lead to significant improvements in communication and acts as a facilitator for knowledge transfer (Welch, Welch and Piekkari, 2005; Harzing and Pudelko, 2014).

## 1.2 PROBLEM DISCUSSION

Despite the pervasiveness of language in corporate activities and processes, the role of language in in IB studies has extensively been neglected or misleadingly paired with culture (Welch and Welch, 2008; Piekkari and Zander 2005). This tendency is particularly noticeable in the knowledge transfer literature, where research on language and its relation to knowledge transfer is scarce. Early literature in studies of language in relation to knowledge transfer treated language as a factor acting as a barrier or facilitator for knowledge transfer. Ghoshal, Korine and Szulanski (1994) found language to be critical for effective communication, Grant (1996) further recognised a shared language to be fundamental for integration of knowledge. Building upon this line of reasoning Kogut and Zander (1992) concluded that a shared language can contribute to enhancement of knowledge transfer, while Marschan-Piekkari, Welch and Welch (1999a) found possession of language skills to be a powerful facilitator for inter-unit communication flows. Welch and Welch (2008) later found language to not only be critical as an active agent but also as an important influencer of the background set of determinants for the transfer of knowledge.

As language is critical in the knowledge transfer process, a need for a more substantial inclusion of language in this field of IB studies has been recognised. The inclusion of the various facets of language in the international knowledge transfer process in both conduct and reporting, as well as to treat language aspects in their own right provides methodological value (Welch and Welch, 2008). Even though shared language and knowledge exchange are essentially relational concepts, existing theoretical approaches have mainly tended to study the exchange actors and the knowledge itself as determinants for knowledge flows separately.

Hitherto, research integrating these two determinants with the relevant properties between them remains scarce (Reiche, Harzing and Pudelko, 2015).

Current studies on language in IB studies have mainly focused on the issues arising and solutions to decide on when companies are moving from a monolingual to a multilingual context (Piekkari and Zander, 2005). However, a shared language is now more often the case in MNCs, which leads some scholars concluding that MNCs no longer face the issue of a multilingual context and hence language as a barrier for knowledge transfer (Harzing and Pudelko, 2014). On one hand, a shared language may occur within a MNC because the members of the corporation are proficient in the native language spoken in their unit (Marschan-Piekkari, Welch and Welch, 1999b). On the other hand, a shared language might be imposed on the company as the need for coordination and control increases when MNCs become more global and the need for communication across units and borders become a critical issue (Marschan-Piekkari et al., 1999b; Welch et al., 2005). This language standardisation is becoming acknowledged as a key step in dealing with the issue of language for MNCs (Welch et al., 2005).

As language diversity has been found to pose a significant barrier to the communication process within the MNC (Marschan et al., 1997), selecting one language as the corporate *lingua franca* (also known as a 'bridge language', 'common language' or 'trade language') has been recognised as a remedy that easily resolves the barrier that language diversity constitutes (Piekkari and Zander, 2005). The trend is now to move towards English as a *lingua franca* also for MNCs not originating from English-speaking nations, no longer requiring the MNCs to face the issue of a multilingual context internally nor externally (Harzing and Pudelko, 2014; Reiche et al., 2015). To use English as the corporate *lingua franca* appears to be the ideal solution (Piekkari and Zander, 2005). But despite the adoption of English as a *lingua franca* the question of effective communication remains (Welch et al., 2005), an important question for the current study as effective communication is critical for knowledge transfer (Ghoshal et al., 1994; Harzing and Feely, 2008). Further, while language standardisation through a common corporate language aims to facilitate communication, it often introduces new types of barriers and distortion (Welch and Welch, 2008). As such, the role of shared language in a common work context has received considerable attention in recent years (Piekkari and Zander, 2005; Reiche et al., 2015).

With the growing perception that a shared language in an MNC mainly generates positive outcomes, this study focuses on a complementary point of view by uncovering how effective a shared language truly is in an organisational context with regards to knowledge transfer. To what extent does a shared language act as a condition for knowledge transfer to occur at all? To that end, this study focuses on the realisation that a shared corporate language does not necessarily guarantee meaningful communication (Marschan et al., 1997), identifying surrounding factors to a successful knowledge transfer within a shared language context.

### 1.3 RESEARCH QUESTION AND STUDY FOCUS

This study contributes to the existing research at the cross-disciplinary intersections of the fields of knowledge management, language studies and international business studies, by examining the link between a shared language and the transfer of knowledge. As knowledge transfer is especially critical in MNCs with high innovation capabilities and high emphasis on future innovation (Cohen and Levinthal, 1990) interviews have been conducted with team members and managers at two European MNCs operating in a highly innovative environment, where a shared corporate language has been adopted. The aim of the study is to understand if a shared language is adequate in helping overcome barriers for knowledge transfer. Other potential factors that can arise as barriers or facilitators for knowledge transfer, in a setting where the language is common to all members involved in the knowledge transfer process, will further be identified and analysed. This is investigated in the new context of a shared language being the condition for knowledge transfer to occur by using a novel method for analysing the data collected, which will give new insights to the phenomenon studied and to the knowledge management literature in particular. Hence, the following research questions have been formulated:

- I. *Does a shared language context contribute to or hinder the transfer of knowledge within and between collaborating teams?*
- II. *What other factors contribute to or hinder the transfer of knowledge in team collaboration with a shared language?*

## 1.4 CHAPTER OUTLINE

This study is divided into six different sections including the introduction, and is structured as follows:

### LITERATURE REVIEW

The literature review outlines previous research that creates the conceptual framework for this study. This section presents the role of a shared language as well as the main concepts and theories in the knowledge management literature, followed by the introduction of the knowledge transfer process and main barriers and facilitators for knowledge transfer.

### METHODOLOGY

The methodology chapter presents the methodological approach used to conduct the study and explains the process of how the empirical data has been prepared, gathered, analysed and presented by applying a concordance software, working towards a data driven qualitative analysis study.

### EMPIRICAL FINDINGS

The empirical findings presents the data gathered from interviews and surveys in both Sweden and Singapore. Barriers and facilitators for knowledge transfer in the setting of a shared language found in the interviews are presented. The findings are data driven, and researcher inference from larger coded topics is supported by selected quotations from the interviews.

### ANALYSIS

The analysis chapter discusses and analyses the empirical findings in relation to the literature review. The analysis creates an understanding from which the research question can be answered.

### CONCLUSION

The conclusion highlights the main findings of the study and presents the answers to the research questions. In addition, managerial implications, study limitations as well as recommendations for future research are presented.

## 2. LITERATURE REVIEW

*In this section the main background concepts and definitions discussed in prior research are presented. The literature review is situated broadly at the intersections of the fields of knowledge management, language studies and international business studies. First, the role of a shared language in a multinational corporation context is presented, followed by the introduction of the knowledge transfer process and main barriers and facilitators for knowledge transfer.*

### 2.1 SHARED LANGUAGE

Language is a multifaceted construct and incorporates different facets such as national, corporate and technical language (Brannen et al., 2014). The significance of national language as well as informal strategic communication has been widely discussed in the literature, while the importance of a firm's informal language as a facilitator or constraint for growth has received little attention (Brannen and Doz, 2012). Corporate language consists of different aspects such as specialised and national language (Fredriksson, Barner-Rasmussen and Piekkari, 2006), where the daily language of companies often result in firm-specific usage of words and acronyms that become clear to those operating within the MNCs, and unclear to outsiders. Further, MNCs have begun to introduce language guidelines for virtual communication including e-mail and video conferencing (Brannen and Doz, 2012).

In addition, language in the field of IB can be studied from an individual- as well as a team-level of analysis (Boxenbaum, 2006), where the former treats language as a skill and a part of an individual's career capital (Piekkari, 2008). Tenzer, Pudelko and Harzing (2014) use the term language diversity in order to describe differences in language proficiency among team members within a MNC. Hinds, Neeley and Crampton (2014) contribute further to this line of research by discussing how language asymmetries can act as a source of power and thus generate intra-group formations.

Brannen et al., (2014) highlight mainly three distinct developments in the language stream in IB studies. First, language is separated from culture. Second, the level of analysis has shifted from the individual level towards including also the organisational level. Last, the merger of dispersed studies about language into one single recognisable, legitimate field of study in the late 1990s and early years of the millennium.

Scholars within the field of IB have outlined the impact of language on knowledge transfer, where language diversity greatly affects this process. Brannen (2004), discuss knowledge transfer across distance where meaning of a certain message easily can be shifted when the information is transferred across borders. However, in recent years MNCs have adopted English as lingua franca and as discussed by Boxenbaum (2006) this critical aspect becomes a less problematic concern.

### *2.1.1 SHARED LANGUAGE AND COMMUNICATION*

In recent years, an increasing number of non-English-speaking MNCs have adopted English as their corporate language (Harzing and Feely, 2008), i.e. lingua franca. One of the main driving forces toward language standardisation has been the need for control and coordination of dispersed activities (Bartlett and Ghoshal, 1987). In this regards, a common corporate language is not only a common tool used for formal reporting but also a part of the process of communication at all levels throughout the MNC (Marschan et al., 1997).

Lingua franca, as a bridging or common trade language, was initially considered as a neutral form of communication without cultural or political influence (Brannen et al., 2014). Today, several of the world's leading economies use English as the official language (Tietze, 2004). Nonetheless, there has been other lingua franca before English, e.g. French in diplomacy, German in medicine and Latin in scholarship (Brannen et al., 2014).

The members of diverse units may share a language either because they are proficient in the native language that is spoken in respective division or they may share a common corporate language that is defined by the MNC (Marschan-Piekkari et al., 1999a). The decision to mandate English as a shared corporate language has lead to significant improvements in communication, coordination and control as well as efficiency (Harzing and Pudelko, 2014; Neeley, 2013). As discussed by Welch et al., (2005) the adoption of e.g. English as a common corporate language may strengthen power relationships in multilingual situations and is often intended to operate as an integrative measure. However, the use of a shared language does not necessarily improve communication, and may in fact lead to disintegrative patterns of communications (Welch et al., 2005; Piekkari and Zander, 2005). Further, Marschan et al., (1997:591) pointed out that “a shared corporate language does not necessarily ensure that meaningful communication occurs”.

## 2.2 KNOWLEDGE

### 2.2.1 KNOWLEDGE AND INFORMATION

The terms 'knowledge' and 'information' seems to have been used interchangeably in the literature in the field of knowledge management, which in turn might create confusion for those who try to understand what each term signifies (Wilson, 2002). Yet, the two concepts can easily be distinguished. As discussed by Zander and Kogut (1995) information is a factual statement that is based on data, while knowledge is context specific and based on information. Roberts (2001:100) separates knowledge, information and data as a way of refining the definition of knowledge. Data is defined as “a series of observations, measurements, or facts”. Information is defined as “data that have been arranged into a meaningful pattern”, whereas knowledge is defined as “the application and productive use of information”. There is no simple linear hierarchy of process between these three concepts, rather, knowledge is a prerequisite for the generation and utilisation of data (Alavi and Leidner 2001) since it involves understanding gained through experience, familiarity or learning (Roberts, 2001).

As elaborated by Wilson (2002:2) knowledge is defined as 'what we know' and involves “the mental process of comprehension, understanding and learning that goes in the mind and only in the mind”, as well as the interaction with the world outside the mind, and interaction with others. Once we express what we know either orally, graphically or by written text, these messages do not carry knowledge itself, instead it constitutes information, which a knowing mind may assimilate, understand, comprehend and incorporate into its own knowledge structures (Wilson, 2002). These structures are not the same for the person sending the message as it is for the receiver, because each person's knowledge structures are 'biographically determined' (Schutz, 1967). The knowledge built from the messages can thus never be identical for the recipient and the knowledge base from which the messages were sent (Wilson, 2002).

The collection of messages, such as e-mails or collection of papers in a journal may be regarded as information resources that can be managed. However, knowledge can never be managed, except by the individual knower (Schutz, 1967). In addition, what we know may only be revealed when we need to employ the knowledge to achieve something. In this connection, much of what we have learnt is hidden, and may only surface when needed (Wilson, 2002).



### 2.2.2 TACIT AND EXPLICIT KNOWLEDGE

Knowledge is mainly divided into two different specific types, namely tacit and explicit knowledge (Nonaka and Takeuchi, 1995; Grant, 1996; Zack, 1999), where the distinction between the two lies in how easily knowledge can be transferred (Grant, 1996). Grant (1996) identified tacit knowledge as 'knowing how' and explicit knowledge as 'knowing about'. Explicit knowledge is the more easily transferable form of knowledge, and can mainly be found in databases or guidelines. Tacit knowledge on the other hand is deeply rooted in routines and actions, which makes it difficult to capture and diffuse (von Krogh, Roos and Kleine, 1998). Roberts (2001) further argues that there is a dependence on the possession of relevant tacit knowledge in order to decode explicit knowledge.

Winter (1987) has identified four different dimensions of knowledge, namely tacit or articulable, observable or not observable in use, complex or simple, dependent or independent of a system. Zander and Kogut (1995) elaborate on these dimensions and develops in total five constructs to characterise the knowledge of the firm on three different levels; the individual, the group and the organisational level. The five constructs are codifiability, techability, complexity, system dependence and product observability. The five constructs are all ways to by different modes measure the level of ease for transferability of knowledge. The construct of codifiability captures the degree to which the knowledge can be encoded, despite the level of ease of understanding from the recipient (Zander and Kogut, 1995). The logic and mechanisms of transferability differs between the two separate knowledge forms of explicit and tacit knowledge. Explicit knowledge is revealed by communication and is the more codifiable knowledge form of the two, while tacit knowledge cannot be codified and is revealed only through its application (Grant, 1996). Techability captures the extent to which knowledge can be integrated into the skill set of an individual (Zander and Kogut, 1995). Limited investment in training and development could result in low knowledge and skills, thus hindering further learning (Minbaeva et al., 2014). Complexity refers to the variations in combining multiple types of knowledge, the complexity is higher if more types of knowledge is combined and vice versa. System Dependence is referring to the level of capability dependency on multiple different experienced people. Hence, the first four constructs directly follow the logic of the Winter (1987) framework, while product observability is added as to capture to which degree technology is common to a network of competitors in an industry (Zander and Kogut, 1995).

## 2.3 KNOWLEDGE TRANSFER

### *2.3.1 DEFINITION OF KNOWLEDGE TRANSFER AND KNOWLEDGE SHARING*

Knowledge sharing is the process where people mutually exchange their knowledge (Truch, Higgs, Bartram and Brown, 2002) and is a critical stage in the process of knowledge transfer (Nonaka and Takeuchi, 1991). According to Argote and Ingram (2000) knowledge sharing involves the exchange of knowledge at the individual level, knowledge transfer on the other hand goes beyond this and includes transfer of knowledge also at higher organisational levels, such as group, product line, department or division. They further define the transfer of knowledge as the process through which one unit is affected by the experience of another. This unit could be e.g. a group, department or division. They argue that knowledge can be transferred either explicitly by moving a knowledge reservoir from one unit to another or implicitly by modifying a knowledge reservoir through communication and training. Simon (1991:125) argues that “an organisation can only learn in two ways, either by the learning of its members or by ingesting new members who have knowledge the organisation didn’t previously have”. Since an organisation’s knowledge is embedded in individual members (Argote and Ingram, 2000) the important question as raised by Cohen (1998:25) is “how to convert individual knowledge to organisational knowledge”.

### *2.3.2 MODES OF KNOWLEDGE CREATION AND TRANSFER*

According to Nonaka and Takeuchi (1995), knowledge is created through the interaction between tacit and explicit knowledge, rather than from tacit or explicit knowledge alone. They distinguish four modes of knowledge transfer by which knowledge can be created, these are: (1) Socialisation: from tacit knowledge to tacit knowledge; (2) Externalisation: from tacit knowledge to explicit knowledge; (3) Combination: from explicit knowledge to explicit knowledge; (4) Internalisation: from explicit knowledge to tacit knowledge. Tacit knowledge can be created through the first mode, that of socialisation, e.g. through team meetings and discussions, which is the process where individuals within the organisation share experiences. This requires some form of shared experiences embedded in a specific context because without this context, the mere information makes little sense. In the second mode of knowledge transfer, externalisation, tacit knowledge is converted into explicit knowledge. This process is characterised by dialogue or collective reflection. The third mode of

knowledge transfer, combination, is the transfer of explicit knowledge between team members, such as documents, databases and telephone conferences. The fourth mode, internalisation, is the process through which explicit knowledge is made tacit. This process consists of documents and is referred to as the process of 'learning by doing'. In this line of research Darr, Argote and Epple (1995) focus on the role of transfer mechanisms and outline that a high level of transfer mechanisms use such as regular communication, personal acquaintances and meetings facilitates the transfer of knowledge.

### *2.3.3 INTERNATIONAL KNOWLEDGE TRANSFER PROCESS*

The key element of knowledge transfer is not the specific knowledge itself, but rather the transfer process and how the receiver makes use of this knowledge (Minbaeva et al., 2014). Szulanski (1996) views knowledge transfer as a four-step process consisting of initiation, implementation, ramp-up and integration. The first two stages lead up to the transfer where knowledge flows from the sender while the latter two begins when the knowledge is transferred to the recipient. The concept and process of knowledge transfer hence incorporates all stages from identification of relevant knowledge to the transmission of knowledge to the final utilisation of the knowledge by the receiver (Minbaeva et al., 2014).

The initiation of knowledge transfer may start when a need and the existence of knowledge that meets that need coincides within an organisation. If a decision is made to proceed from this stage, the implementation stage is entered and knowledge begins to flow between the sending and receiving unit. Social ties specific to the transfer are built during the implementation stage but are likely to diminish in the next stage of the knowledge transfer process, the ramp-up stage. In this next stage, the recipient starts using the knowledge transferred and the ramp-up stage is characterised by identification of problems and adaptation of the knowledge to match the performance expectations of the receiving unit. The last stage in the Szulanski (1996) model is the integration of knowledge, which begins when the recipient achieves the desirable performance with the knowledge transferred. In this integration stage, the knowledge becomes gradually routinised and integrated into the operations and eventually an integral part of the norms, behaviour and common understanding of the receiving unit.

## 2.4 BARRIERS AND FACILITATORS TO KNOWLEDGE TRANSFER

Szulanski (1996) finds that the three most important barriers to knowledge transfer are lack of absorptive capacity, causal ambiguity and an arduous relationship between source and recipient. Successful knowledge creation, retention and transfer are dependent upon the three mechanisms of ability, motivation and opportunity (Argote, McEvily and Reagans, 2003). Ability for knowledge transfer can be enhanced for individuals and groups by training, experience and prior knowledge (Cohen and Levinthal, 1990). Motivation for knowledge transfer can be created by monetary rewards, or more importantly, social rewards where tight ties within units or between different units create norms of reciprocity or cooperation. Opportunity for knowledge transfer can arise with social relationships (Argote et al., 2003). The three mechanisms of ability, motivation and opportunity are somewhat interlinked but hold some distinct characteristics.

The ability to identify, assimilate and apply new knowledge to commercial ends is dependent upon prior knowledge on the individual and the organisational level (Cohen and Levinthal, 1990). The integration of new knowledge is also quicker and less costly the higher the relevant experience and prior knowledge on the individual and organisational level (Zander and Kogut, 1995). Ability for knowledge transfer is dependent upon knowledge common to all members of a group or organisation and the set of common knowledge forms the base that allows for integration of new knowledge (Cohen and Levinthal, 1990; Grant, 1996; Argote et al., 2003). It is thus common that knowledge fails to be made full use of due to that the knowledge is uniquely possessed by only one member of the group (Argote et al., 2003). On the other hand, if members of a group hold collective accumulated experiences, the transfer of knowledge is facilitated (Zander and Kogut, 1995). Prior related knowledge and accumulated experience on both the individual and joint level are hence facilitators and can serve to reduce both cost and time of knowledge transfer.

Minbaeva et al. (2014) recognises the absorptive capacity of a firm to be an organisation-level construct that resides within employees. The absorptive capacity is proposed to be the most significant factor for the success of internal knowledge transfer in MNCs (Gupta and Govindarajan, 2000). According to Cohen and Levinthal (1990) the absorptive capacity differs between organisations because of two reasons. First, the extent of prior related knowledge and second, the extent of inter-unit homophily of the receiving and the sending

unit. Absorptive capacity should be viewed as comprised of both the individual employee's ability and motivation. Ability and motivation are important drivers for successful knowledge absorption as the ability forms the potential absorptive capacity while motivation determines the realised absorptive capacity. The two drivers are however insufficient on their own as ability without motivation would mean high potential but no realised absorptive capacity and motivation without ability would mean no potential absorptive capacity to realise (Minbaeva et al., 2014).

According to Argote and Ingram (2000) knowledge is embedded in three basic elements of the organisation, namely members, tools and tasks. Members are the main component of the organisation, while tools are the technological component including both hardware and software, and tasks are related to the organisation's goals, intentions and purposes. By combining these three elements, sub-networks will be created where knowledge can be embedded. In this regard, the member-member network is the organisation's social network, the task-task network relates to the tasks or routines used by the organisation, and the tool-tool network is the combination of technologies that the organisation uses.

#### *2.4.1 SOCIAL RELATIONS*

Over the past years, the importance of social relations for effective knowledge transfer has emerged as an important theme in the knowledge management literature (Argote et al., 2003). According to Kogut and Zander (1992) firms are social communities that specialise in the creation and transfer of knowledge, where the boundaries of the firm are not set by transaction costs and risks of opportunistic behaviour, but instead out of the firm's network position (Tsai, 2001) as well as the firm's efficiency in creating and transferring knowledge internally, relative to the ability of the market (Gupta and Govindarajan, 2000).

Nahapiet and Ghoshal (1998) identified three distinct dimensions of social capital that affect the transfer of knowledge. These are: Structural, Relational and Cognitive. The first dimension, namely the structural embeddedness concerns social interactions and describes the overall linkages between people or units. The most important facets of this dimension are the presence of network ties (Scott, 1991), network configuration in terms of density and connectivity (Krackhardt, 1992) as well as an appropriable organisation (Coleman, 1988). In this line of research, Inkpen and Tsang (2005) examined how network stability and the extent

to which a firm is centralised affects the transfer of knowledge, whereas a highly unstable network characterised by high employee turnover limits the creation of social capital. They found that close and stable social ties together with decentralised organisational structures facilitated the transfer of knowledge. By decentralising authority to members of the network, they can take own initiatives and determine how to make the best use of the knowledge they possess. Maskell and Malmberg (1999) discuss how connectivity affects the transfer of knowledge and highlights that the more tacit the knowledge involved, the more important spatial proximity is between the team members taking part in the exchange.

The second dimension, relational embeddedness, describes personal relationships between actors (Granovetter, 1992). Nahapiet and Ghoshal (1998) argue that trust between team members constitutes a social capital resource, and is a critical factor affecting intra-firm knowledge transfer and creation (Doz, 1996). Since it takes time to build trust, the level of network stability influences the knowledge transfer process (Granovetter, 1985). Further, Powell, Koput and Smith-Doerr, (1996) argue that trust plays a central role in the willingness of network members to share the knowledge they possess. When social relationships between team members are embedded with trust, actors may be more willing to share valuable knowledge (Dyer and Singh, 1998).

The third dimension of social capital, which Nahapiet and Ghoshal (1998) label the cognitive dimension is embodied in attributes like a shared code or a shared paradigm that facilitates a common understanding among different actors. When organisation members have the same perceptions, they can avoid misunderstandings in their communication and the knowledge transfer is thus more likely to be successful (Tsai and Ghoshal, 1998). This is also emphasised by Grant (1996) who discusses the importance of common knowledge in terms of a shared language and a shared meaning for effective knowledge transfer. Inkpen and Tsang (2005) addressed shared culture as an important construct of the cognitive dimension. Shared culture refers to the degree to which norms of behaviour govern relationships. To create knowledge, an organisation needs a vision that synchronises the entire organisation (Nonaka, Toyama and Konno, 2000). According to Tsai and Ghoshal (1998) a shared vision may hold together a loosely coupled network and thus promote the integration of an organisation.

In addition, trust, openness and explicitly stated values by top management were found to be important constructs for knowledge transfer. In this regards, explicitly stated values need to

be visible in everyday managerial actions and communicated throughout the firm. Managers can increase the participation in interaction between team members by implementing mentoring programs, and thus motivate seniors to share their knowledge with juniors and newcomers. Another way of encouraging employees to share knowledge is through the implementation of different incentive systems or via different social events and training programs (von Krogh, 1998).

#### *2.4.2 TECHNOLOGY*

Knowledge can be embedded in the tools and technology of an organisation (Argote and Ingram, 2000), and knowledge embedded in technology is found to transfer more readily than knowledge not embedded in technology (Zander and Kogut, 1995). Szulanski (2000) further discusses that the speed of knowledge transfer can be enhanced by easy access to technology. For the technology to ease and increase the speed of knowledge transfer both internally and externally, knowledge must be made explicit enough to be embedded in the technology (Szulanski, 2000). Moreover, the higher the technological sophistication, the higher the opportunity for knowledge to be embedded in technology. If knowledge is managed to be embedded in technology, the depreciation of knowledge may be lower than if knowledge is embedded in individuals or other aspects of the organisation (Darr et al., 1995). To embed knowledge in technology is not only a way to transfer and preserve the knowledge internally, but it also serves to facilitate the transfer of knowledge to and from external parties (Szulanski, 2000). Technological opportunity can thus also act as an incentive for the firm to build absorptive capacity as greater technological opportunity implies a higher level of external information flows into the firm (Cohen and Levinthal, 1990). People are however key in the knowledge transfer process as it is the people that take in the data, process it, sort it, categorise it, store it and use it to build knowledge (Allee, 1997).

Technology enables a variety of ways in which to transfer knowledge, such as e-mail, groupware, Internet, intranet, video conferencing (Bender and Fish, 2000), long standing tools such as databases and digital archives, as well as newer interactive social media tools such as blogs, online communities and social networking sites. These different tools can be used to fulfil different needs for employees during different stages of a work process with regards to knowledge transfer (Yuan, Zhao, Liao and Chi, 2013). First, e-mail and Internet has made it possible for professionals to draw on the latest thinking of their peers, independent on their

location (McDermot, 1999). E-mail, instant messaging, telephone and video conferencing have been identified as the four most popular communication tools. These four tools are complementary and often used in parallel within organisations (Yuan et al., 2013). Second, social media tools can improve knowledge sharing efficiency by enabling expertise holders to satisfy multiple expert-seeking requests with one single post. Social media can thereby more effectively, in comparison to for example databases, help (1) increase people's awareness of each other's expertise, (2) motivate contribution through frequent, timely feedback and reciprocal exchange, as well as (3) effectively support development and perpetuation of social capital. Social media has however been found to be used as a complement rather than a substitute to older technologies, possibly due to the rich resources stored in the older technologies such as long-standing databases (Yuan et al., 2013). Information technology is thus an essential tool and enabler for knowledge transfer (Bender and Fish, 2000) and as different forms of technology can enable different actions, Yuan et al. (2013) suggests that media multiplexity facilitates great flexibility in fulfilling the knowledge-sharing needs of the organisation.

Technology reinforces norms about documenting, information sharing and using ideas amongst peers as professionals tend to communicate through technology with people they work with daily (McDermot, 1999). Norms can also play an important role in the adoption and usage of technology and more sophisticated technology might have to stand aside for less sophisticated technology due to social norms in a group. Even though different technologies can be complementary, rivalry may arise between different generations of technology tools such as for example social media tools and long-standing databases. As a result, segregation of resources as well as user groups by division, business unit or team can appear. In turn, this segregation can create knowledge silos causing not only real barriers for knowledge transfer but also reducing social capital across the organisation. An important role is played by the management in the migration of new technology to reduce these knowledge silos, as new technology availability does not automatically mean full adoption of the technology. Awareness of the value of older technology and concerted efforts for migration of new technology are thus key to prevent potential knowledge silos and avert difficulties for knowledge sharing (Yuan et al., 2013).

New possibilities offered by IT tend to increasingly overshadow the process of sending people to transfer knowledge, not least due to the possibility to thereby reduce the high costs



induced from sending expatriates on cross-border assignments (Bender and Fish, 2000). But although tools provide consistency and enables large-scale knowledge transfer of explicit knowledge for the organisation, they lack the flexibility and sensitivity of people to be able to transfer tacit knowledge (Argote and Ingram, 2000). It has been indicated that even with technological opportunity, people are still sent on global assignment as it is of critical importance to maintain face-to-face contact (Bender and Fish, 2000). IT advancements have greatly enabled for the people in organisations to transfer information and knowledge (Elliott and O'Dell, 1999), but technology can never fully substitute for the rich interactivity, communication and learning that is associated with personal dialogue (Fahey and Prusak, 1998) as technology is only an enabler and not a driver of knowledge management (Martiny, 1998). An important challenge is therefore to design IT tools that not only make information available for members of a community, but that also help members to think together (McDermot, 1999).

## 2.5 CONCEPTUAL FRAMEWORK

Previous research on knowledge transfer has identified several potential barriers and facilitators for the knowledge transfer to occur in a satisfactory manner. These are summarised in Table 1 below with the larger topics presented in the left column and the actual barriers and facilitators sorted by these topics in the right column. These factors identified outside a shared language context will be used as a framework in assessing the role of a shared language on knowledge transfer, and lay as a foundation for this study when investigating further barriers and facilitators in a shared language context.

**Table 1.** Conceptual framework derived from the intersection of academic literatures from knowledge management, language studies and international business studies: barriers and facilitators for knowledge transfer.

Barriers and Facilitators for Knowledge Transfer	
Larger topics	Factors
Language	Shared language
Motivation and Ability	Social rewards
	Monetary rewards
	Relevant experience and prior knowledge
Network	Trust
	Physical distance
	Employee turnover
	Shared understanding
Organisational Culture	Shared vision
	Shared culture
Technology	Software training
	Technology rivalry

*Source: Table compiled by authors*

### 3. METHODOLOGY

*This section presents the interview framework used to collect the empirical data. It describes the techniques applied to the analysis of the data findings by applying a concordance software, working towards a data driven qualitative analysis study.*

#### 3.1 RESEARCH APPROACH

As language in the context of IB is a dynamic, living entity and as capturing the nuances in the responses received from the interviewees was identified as important in this study, a qualitative approach was adopted. A qualitative research framework and method provides an in-depth perspective to the phenomenon of study (Bryman and Bell, 2011). Questions were designed to broadly answer 'how' and 'why' a shared language is important for knowledge transfer and if not, why? A qualitative approach would also capture language in its full complexity (Bryman and Bell, 2011), where language has this far been studied either as object or process of change in organisational contexts. In the initial stage a theoretical framework was created in order to attain a good understanding of the topic, and meanwhile serve as a guideline (Blumer, 1954) when constructing the interview questionnaire. As discussed by Miles and Huberman (1994) it is important that the theoretical framework is neither too loose nor too structured since this might lead to insufficient data collection. Therefore, an abductive approach has been adopted, which is based on redirections in the research process, a combination of inductive and deductive reasoning (Dubois and Gadde, 2002).

The semi-structured face-to-face interviewing is a frequently employed qualitative method. Based on conversations between respondents and researchers, this constitutes the primary form of data collection, where the style of interviews can vary depending on the subject studied (Crouch and McKenzie 2006). As the aim of this study is to understand if a shared language is adequate in helping overcome barriers for knowledge transfer and to potentially identify other factors that could serve as barriers or facilitators to knowledge transfer, the most suitable gathering of data was identified to be semi-structured interviews. Semi-structured interviews allow more specific issues to be addressed while at the same time leaving the interviewee with latitude to reply and interviewers with a certain degree of flexibility (Bryman and Bell, 2011). This approach was therefore chosen, as the focus of the study was already fairly clear prior to conducting the interviews but depended on the

interviewees to elaborate. A qualitative approach in research design provided the opportunity to find new barriers and facilitators that respondents considered important for knowledge transfer to be successful.

### 3.2 RESEARCH UNITS AND RESPONDENTS

In order to study the phenomenon of whether a common language was enough for the effective transfer of knowledge, we decided to focus on an MNC process that in an explicit manner reached outside one single organisation. The use of different research units at the broader level can serve to increase confidence in the study if findings across the settings are consistent despite the divergent specific characteristics of the settings (Yin, 2011). The use of two research units hence offered to strengthen the findings of the study and to perhaps contribute towards more generalisable findings across different settings and industries.

Two European MNCs with global operations agreed and were chosen to participate in this study. The companies are interesting research units for this study due to their leading positions in their different industries. Their leading positions can be derived from high organisational innovativeness that enables them to stay competitive in their respective industry. Both industries are characterised by strong global competitiveness and heavy investments in Research and Development (R&D). The strive towards continuous innovation and to remain competitive has been recognised in both MNCs, and hence extensive knowledge transfer is a common element in both research units. The MNCs are also known to have a strong corporate language use, where English has been adopted as lingua franca and is an important language of communication both within and across teams.

### 3.3 DATA COLLECTION METHOD

Rather than maximising the number of interviews, the focus was on obtaining a relevant sample to increase confidence of the study based on three different factors; first the fundamental criteria of a shared language and central role of knowledge transfer, second, potential depth and scope of data and third, composition of the research units (Yin, 2011). A total of 40 individuals working at all levels in the MNCs were approached. Due to respondent availability and coordinated time schedules, the finalised response rate was 13 for interviews

and five for written surveys. In total, three criteria were developed for the selection of respondents for this study. First, all respondents had to match the criteria of working within a team with a shared language, preferably with collaboration with other internal as well as external teams working in the same corporate language in order to track where there is a need for knowledge transfer or where current extensive knowledge transfer is apparent. Second, as the study depended on respondents to extensively elaborate, the desired depth and scope of data demanded each interviewee to set aside at least 45 minutes, preferably 60 minutes, for the interviewee to be a relevant sample unit for a face-to-face interview. Last, the diversity of respondents in terms of experience and hierarchic level within the MNC was crucial to obtain different views on the topic.

The 13 face-to-face interviews each lasted between 45 and 70 minutes and were conducted in participants' offices. For one of the two MNCs, interviews were conducted on their site in Sweden. For the second MNC, interviews were conducted in Sweden and in Singapore on the company's respective sites. The contact was initiated with one person at each of the two research units and these contact persons then provided a list of people who could be interested in participating in our study. We contacted these persons and eventually conducted interviews with the participants that were relevant for our study, identified by Yin (2011) as purposive sampling.

As the first scheduled interviews were conducted, we learned from interviewees about other potential respondents within the MNCs, a phenomenon known as snowball sampling (Yin, 2011). A few selected respondents out of the snowball sampled potential interviewees were decided to finalise interviews with, only if they fulfilled our fundamental criteria and were relevant respondents for the study. The initial purposive sample was thereby completed by a purposive snowball sample to strengthen the study as a larger sample generally can generate greater confidence in the findings of the study (Yin, 2011), resulting in the 13 interviews and five surveys.

Some of the interview persons fulfilled the criteria to be a suitable respondent for the study but did not have the time to participate in a full interview. These respondents were given the opportunity to fill out a task summary survey. The purpose of the task summary survey was to retrieve information on how the respondents worked across departments with each other. This

included questions such as them describing their main task processes<sup>1</sup>, which applications they used, and if possible, for them to list in detail the type of information and knowledge they need, and from whom, in order to complete their task. In addition, they were also asked to describe if they had an end-receiver of their packaged information. This last question is in understanding that working as a team, information flows between team members and what is an 'end product' for one individual, is the 'start-package' for another team member. The surveys thereby acted as complementary data to the interviews.

The interviews were conducted with both team members and managers within the two MNCs, offering diversity among respondents. The profiles of the interviewees covered not only different hierarchical levels but also different levels of experience within the respective roles and MNCs, providing a nuanced sample, which makes appearing patterns more generalisable. The diverse sample served to offer different views on the topic, with interviewees within the same unit potentially confirming or contradicting the views of other interviewees within that unit, protecting against undesirable bias (Yin, 2011).

### 3.4 INTERVIEW PROTOCOL AND PROCESS

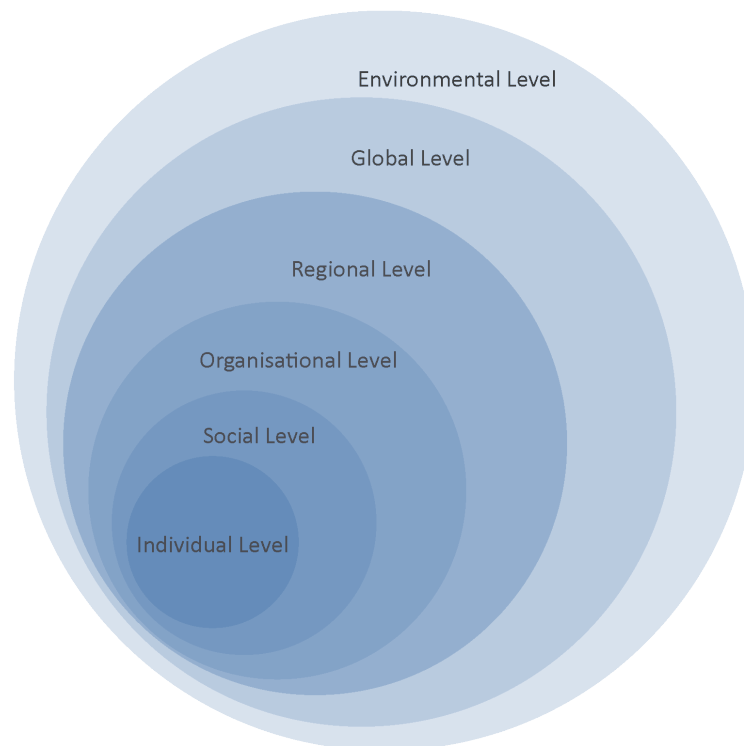
The interviews were conducted in a semi-structured manner with the support of an interview guide (see Appendix 1). The interview questions were designed to address different levels of analysis (Figure 1), namely 1) the individual level 2) the social level, 3) the organisational level, 4) the regional level, 5) the global level, and finally 6) the environmental level (Cordeiro-Nilsson 2009). The individual level includes background questions covering the participants' current role and experience within the company. The social level incorporates questions regarding the social dynamics within the organisation, in terms of how information is transferred within and across MNCs. The organisational level brings up questions including organisational practices as well as corporate culture. The regional level puts emphasis on the input and output of work flow across organisations, either within the country or to the European region per se. The global level on the other hand, discusses input and output of workflows across organisations on a global scale. Lastly, the environmental level deliberates how to create sustainable business practices in the long term. The interview framework was

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<sup>1</sup>Due to that the task summary survey is closely related to the daily tasks of the respondents, it has been requested from the respondents and their corporations that the survey format will not be attached as an appendix to this study for reasons of confidentiality.

designed to capture as broad perspectives as possible from the respondents. What is presented in findings in this study will be filtered and focused to insights pertaining to the research questions.

**Figure 1.** Interview framework focused on different levels radiating outwards from the individual- to the environmental level.



*Source: Compiled by authors, adapted from Cordeiro-Nilsson (2009).*

The aim of the interview guide was to create a thorough framework, containing a list of relevant questions and topics to be studied. The questions were asked in an open format, which allows the participants to express their thoughts in their own words and at the same time permits adequate answers to complex issues. In addition, this would increase the chance of obtaining information that could be of importance for our study, information that we would not otherwise come across. The respondents were also given the possibility to raise new insights that were not covered by the interview guide. We did as other qualitative researchers encouraged, which is to keep as informal an atmosphere as possible during the interview sessions and inspire the participants to speak of issues most salient to them (Cordeiro-Nilsson, 2009; Tong, Sainsbury and Craig, 2007). It was often that we did not share the same mother tongue when interviewing in Singapore. In such cases, we re-worded our questions if they

were not clearly understood by the participants, and likewise tried to get them to expand upon concepts that were not fully understood by us.

All interviews were recorded and transcribed shortly after the interviews took place, with the reason being to ensure that the interviewees' answers were captured in their own terms as well as to minimise the risk of lost information (Bryman and Bell, 2011). All interviews, except the written surveys, were transcribed according to the Gothenburg Transcription Standard (GTS) version 6.4 (Nivre et al, 2004). According to Nivre et al. (2004), the level of detail in the transcriptions featuring spoken language can vary according to the needs of the study. In this case, Standard Orthography was used for all words, without special features marking for example intonation of spoken language.

Even if English was used as lingua franca in the MNCs, it was not all the time that the participants chose to answer in English, especially those with home offices in Sweden. The interviews were thus conducted in both Swedish and English. As discussed by Welch and Piekkari (2006), the dynamics within the interview itself are likely to be influenced by the language used for the interview. Data quality could potentially be reduced if using the corporate language instead of the native language of the interviewee as the interview language. What was important to our study is the participants' perspectives of a common language in the specific context, and the need to transfer knowledge.

## 3.5 DATA ANALYSIS

### *3.5.1 CORPUS LINGUISTICS: A WAY OF MANAGING TEXTUAL DATA IN INTERNATIONAL BUSINESS STUDIES*

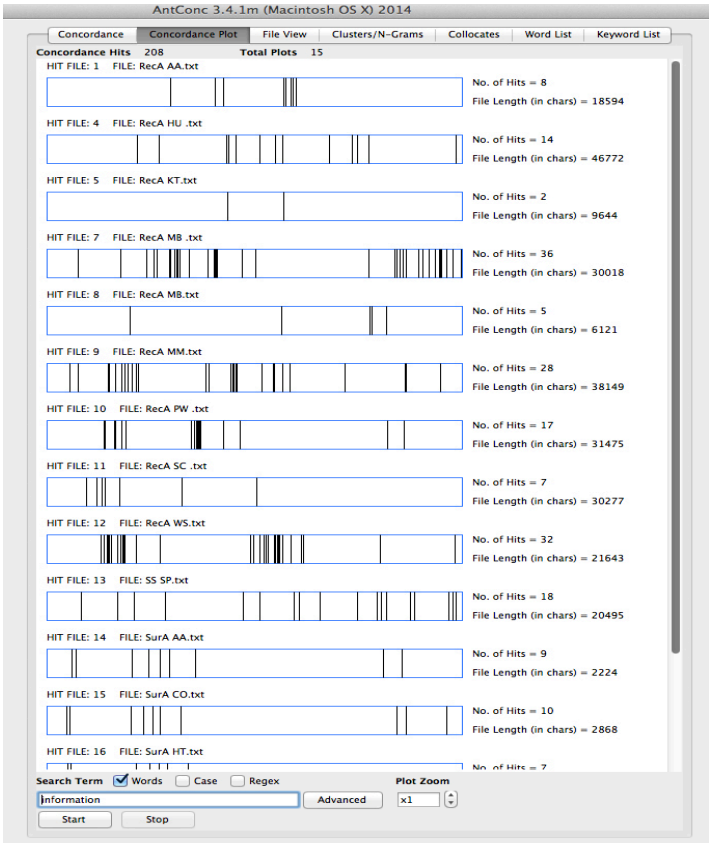
In the tradition of language studies, Corpus Linguistics (CL) characteristically involves working with large amounts of textual data. It could be described as an early data mining technique that began in the 1950s, working towards today's big data analytics. In the 1950s the corpus (a large collection of texts into a database) was central to theoretical developments in linguistics and it was considered cutting edge in contemporary research (Nida 1960; Harris 1951; Shannon, 1948; Yule 1944). It was further useful in the analysis of relationships among words used in different contexts for different purposes.



Although the data collected for this study is not as characteristically large as that used by corpus linguists, what this method offers as discussed by Baker et al. (2008) is a reasonably high degree of objectivity. In addition, *word frequency* lists generated by a concordance are used when presenting the findings of this study as to illustrate topics of salient interest to the participants. This enables the researcher to approach the texts relatively free from any preconceived or existing notions regarding their linguistic or semantic/pragmatic content (Baker et al., 2008).

The concordance software program AntConc version 3.4.3 (Laurence, 2014) was used in this study to analyse the corpus data. Apart from giving an overview of the corpus data, a concordance program like AntConc will also be able to indicate which words were used most frequently by which respondent in a *Concordance Plot*, so that immediate location of data is available. A screenshot of AntConc search results for the word information on a Concordance Plot, indicating which transcript contains the most salient use of the word and where in the text the word occurs is presented below (see Figure 2), this figure is further described in section 4.5.

**Figure 2.** Concordance plot: a screenshot of AntConc search results for the word 'information'.



Corpus-based analysis does not merely involve getting a computer to objectively count and sort linguistic patterns along with applying statistical algorithms onto textual data. The subjective researcher is involved at almost every stage of the analysis and has to decide what texts should go in the corpus and what is to be analysed (Baker et al. 2008). CL approaches can improve the objectivity of critical discourse analysis research, which will result in a valid set of findings (Baker, 2012).

Language studies have often taken language to either be a cognitive representation, or of social behaviour of the community. CL straddles both, which then gives the advantage of perspective that even linguistics as a field lacks in their studies of language in use (Barlow, 2011). It is accepted that CL is not a theory-rich field, but has a rather heavy empiricist orientation (Stubbs 2006; Gries 2010). This data-oriented bent makes it a good tool for specifically the field of IB studies that tends towards the preference for empirical studies.

### *3.5.2 CONCORDANCE PROGRAM ANALYSIS*

As part of the methodology of managing data in CL, the concordance AntConc was used as a means to gain insights into our interview data as a collected set of corpora. A concordance is an orderly list of occurrences of an individual word or a phrase that indicates its frequency of use, and in what context/s the word/s are used in a defined set of collected texts that together make up a corpus database (Sinclair, 1991; Trask, 1999). Recurring patterns and co-occurring words in the interview corpora can give insight into what the participants consider as important when talking about knowledge transfer (Erman, Lewis and Fant, 2013).

A simple concordancer creates a list of words it locates in a corpus of original texts, displayed in the centre of the page and shown with parts of the contexts in which they occur. This is also known as a Key Words In Context (KWIC) concordance. But some concordance software are also able to produce a full concordance comprising all the words and other linguistic elements of the corpus. There are numerous parameters to look for when using a concordancer such as speed, the size of the corpus the software can handle, the languages supported, the amount and quality of the documentation. There are several known concordances available both as freeware and licensed software, for different platforms (Lamy and Klarskov Mortensen, 2012) and it is for the reason of ease of use and freeware / shareware availability that we chose to use AntConc version 3.4.3 (Laurence, 2014).

A concordance program in this study is used for two basic purposes. The first is to generate a word frequency list that retrieves and ranks all content words in the data. This will show the most salient topics of interest in accordance to what the participants have said. This word frequency list is generic, and so it retrieves both Swedish and English words from the corpus. The second use for the program is the *word collocation* function that allowed us to search the collected interviews for all instances of a given word. In this case, we took the most salient content words, the ones that occurred with most frequency in the corpus, and did a word collocation search for the given word.

What we have as result is a *KWIC concordance*. The use of AntConc, allows for the keywords to be retrieved as a neatly lined up table of examples that can be used in illustration of our findings to answer our research questions. This list can then be sorted in a variety of ways in order to get a clearer picture of how those words were used, by whom, and in what context. A larger corpus contextual search is also available, and some examples of screenshots of the software will be found in the following chapter. It is for this reason that the interview data had to be transcribed in a systematic manner, in accordance to the Gothenburg Transcription Standard 4.0 (Nivre et al. 2004). The systematic transcription of the interviews allows for a more efficient search and retrieve function of the AntConc program.

## 4. EMPIRICAL FINDINGS

*The empirical findings from interviews and surveys are presented in this chapter in as a systematic manner as enabled through the use of a concordance software, in order to provide some counter-balance to the small research unit sample of two multinational corporations. The findings are data driven, and researcher inference from larger coded topics is supported by selected quotations from the interviews to provide a more comprehensive, cross-sectional picture of the topic discussed.*

The corpus contained a total of 4242 word types and 59190 word tokens<sup>2</sup>, generating a total of 71 standard A4 pages of word frequency list, with a total of 110 pages of transcript data. Table 2 shows a sample of the top 10% the most frequent words detected from the AntConc concordance program. The advantage of the word frequency list is that it gives an ordered overview to what the respondents most often talked about in their interviews and in the surveys. In language in use, it is generally the category of nouns (i.e. content words) and transitive verbs (i.e. words that indicate a material action) that reveal context and actors in any social activity (Kardos, 2010; Halliday and Matthiessen, 2013). Looking at the top 10% occurring nouns and transitive verbs in the entire corpora, the word frequency list generated by the concordance program uncovers the most salient topics of interest as used by the respondents themselves. In this sense, the advantage of the use of a concordance program such as AntConc, allows for corpus driven results in our qualitative research methodology.

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<sup>2</sup> An example of the difference between *type* and *token* is given by the Stanford Encyclopedia of Philosophy, an internet resource at <http://plato.stanford.edu/entries/types-tokens/>, accessed 20 April 2016. The sentence in Gertrude Stein's poem *Sacred Emily* reads: Rose is a rose is a rose is a rose. In one understanding, the sentence counts three different words; in another understanding, it may count ten different words. The first understanding is what is embodied by the sense of *type* (abstract, unique). The second understanding is what is embodied by *tokens* (concrete particulars). It is generally the case that there are many more *tokens* than there are *types*, the former being more abstract.

**Table 2.** A sample of the top 10% of the 4242 word types in the corpora: most salient topics from interviews and surveys

place	freq	word	place	freq	word	place	freq	word	place	freq	word
40	208	information	144	67	business	198	44	tools	258	33	management
43	201	company	145	67	europe	201	43	communication	259	33	participant
44	196	people	151	65	important	204	43	input	260	33	projects
51	183	work	155	64	project	206	43	language	261	33	teams
65	155	time	157	62	level	207	43	meetings	263	33	transfer
110	96	system	164	59	product	210	42	culture	264	32	market
111	93	sap	166	58	person	212	42	job	267	32	tool
113	91	activity	170	56	colleagues	213	42	platform	270	31	leadership
117	89	talk	172	55	years	214	42	task	277	30	lead
119	87	team	179	51	organisation	215	41	change	280	30	region
128	80	supplier	180	50	understand	222	39	software	287	28	boss
129	79	use	181	49	article	225	38	common	288	28	department
130	78	course	188	47	problem	226	38	communicate	292	28	manager
131	78	knowledge	190	47	talking	233	37	role	293	28	question
140	70	data	195	45	share	238	36	process	294	28	training

Source: Table compiled by authors

Using the coding paradigm in grounded theory (Corbin and Strauss, 2014; 1990), the topics of interest findings in the concordance software results were then further cross-referenced with each other (or axially coded<sup>3</sup>) and grouped into larger concepts. The topic *information* encompasses several related topics such as:

information - company - people - work - activity - talk - team - knowledge - europe - person - colleagues - communication - meetings - role

The facets to information relate to organisational interaction modes and processes that forms a semantic network of words that make up part of another concept, that of *communication*, which also has its own semantic network of words such as:

time - system - sap - activity - use - data - share - tools - input - platform - software - communicate - process - transfer – training

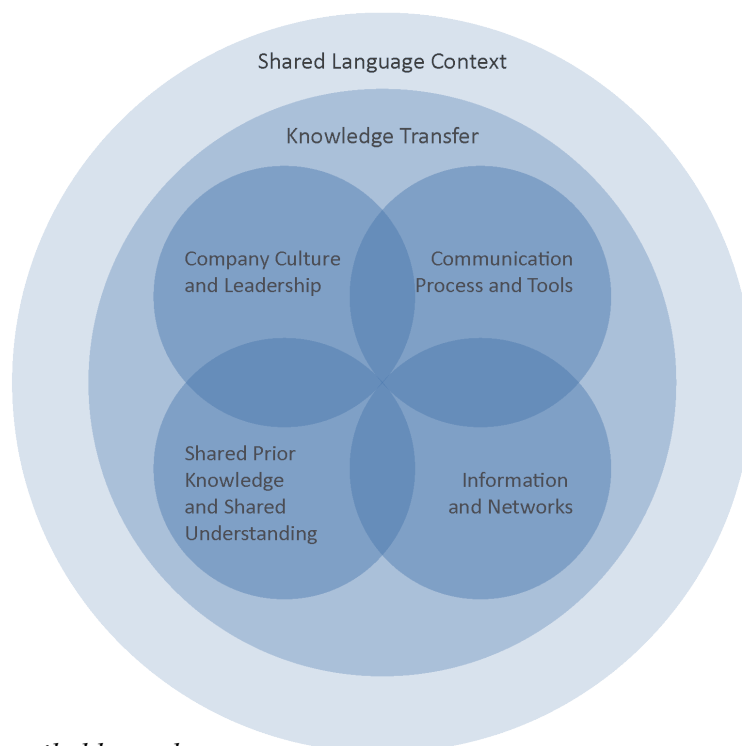
These axially coded topics may also overlap due to that what is an important topic of interest for one concept such as information can also be important as a topic for communication.

<sup>3</sup> Axial coding in Grounded Theory is the process of relating codes (in this case, salient topics found in the top 10% of the word frequency list) to each other, via a combination of inductive and deductive thinking. The basic framework of generic relationships is understood, according to Corbin and Strauss (2014, 1990). They proposed a coding paradigm that includes topics related to (a) the phenomenon under study, (b) the context related to the phenomenon, (c) the actions and interactions directed at managing the phenomenon under study and (d) the consequences of (c) related to the phenomenon.

Five overarching salient concepts derived from a network of related topics were identified from the retrieved data and lay as a foundation when structuring our empirical findings and discussion. In particular, the top 10% salient topics can be grouped into larger categories of respondent concerns when it comes to the efficient transfer of knowledge.

The five larger concepts forming the salient topics that will be presented in this section are (1) Shared Language, (2) Company Culture and Leadership, (3) Communication Process and Tools, (4) Shared Prior Knowledge and Shared Understanding (5) Information and Networks as potential barriers or facilitators for knowledge transfer. This structure is illustrated in Figure 3.

**Figure 3.** Barriers and facilitators for knowledge transfer in a shared language context.



*Source: Figure compiled by authors.*

In the following sections, the screenshots are examples of how the concordancer works in retrieved search results. A qualitative analysis discussion will follow the findings from the concordancer results, and go into greater detail around the larger concepts in relation to the research questions of this study.

## 4.1 SHARED LANGUAGE

The word 'language' appeared as the 206<sup>th</sup> most frequent word in the sample (see table 2), recurring 43 times. Other words that were frequently appearing in the concordance software results and related to the salient topic of a shared language were information, company, people, work, activity and talk. Together this semantic network of words assists in making sense of the data collected.

Figure 4 shows a sample screenshot of a concordance plot retrieved from the AntConc program, indicating the frequency of word occurrence distributed across the corpora. The concordance plot reveals that 7 of 18 respondents spoke about language in their responses. Appendix 2 shows an example screenshot of the collocates to the word language. This collocates table shows the top most frequently co-occurring words with the word language in the corpus. Figure 5 shows a sample screenshot of a KWIC concordance result sorted 3-Left and 3-Right to the word language. These findings indicate how language is spoken about or discussed by the respondents. From the above findings retrieved it can be seen that **company** or **corporate language** and **common** or the **same language** are prominent themes when respondents speak of language.

**Figure 4.** Concordance plot: screenshot of AntConc search results for the word 'language'.

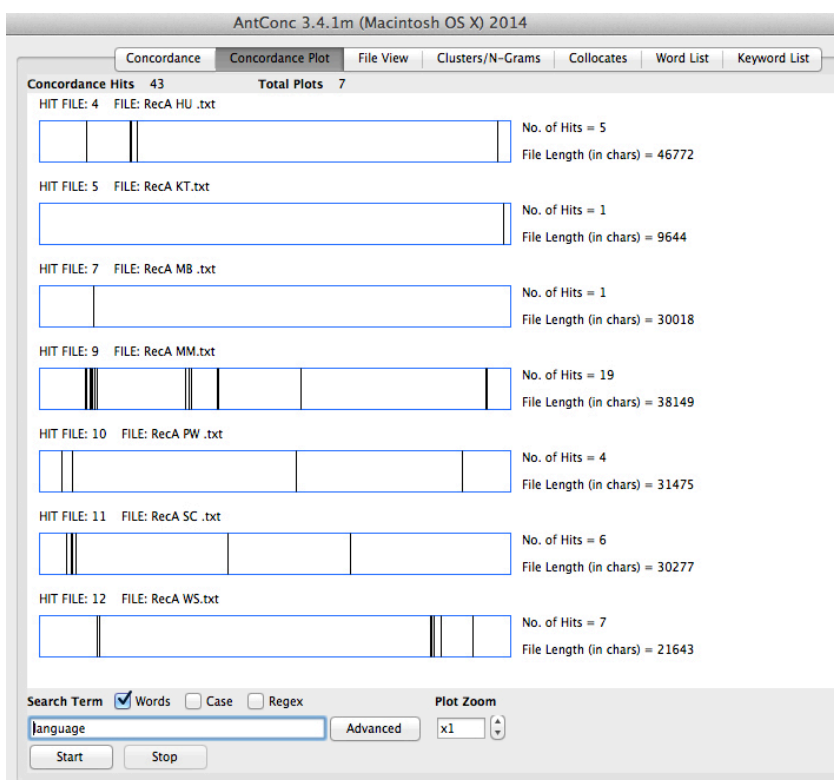


Figure 5. Concordance result: screenshot of AntConc search result for the word 'language'.

Concordance Hits 43		Clusters/N-Grams	Collocates	Word List	Keyword
Hit	KWIC				
1	ow some key elements/ and make it in a language	language	language and abbreviations/ it is very hard that t		
2	so I have the experience that actually language	language	language and character sets and stuff like this bu		
3	ter for me since I am learning another language	language	language and common tools across the important el		
4	that team mates may get confused. [CC2] Language	language	language and English which is a roman language/ la		
5	tion that tries to establish a common language	language	language \$B: maybe we already touched upon the in		
6	t over all when we all meet the common language.	language	language / but basically of interest for you would		
7	any as you know English is the company language	language	language but however we also have our own mother t		
8	st for you would be that our corporate language	language	language but then we have such a big understand		
9	19 or 20 people \$E: And the corporate language	language	language/ but you can think differently/ you might		
10	English? \$M: Basically the corporate language	language	language do you communicate? Is it mainly English?		
11	are using a really grammatical correct language	language	language do you use? \$H: That is a really good qu		
12	different teas I will use a different language	language	language do you use in order to communicate? \$M:		
13	se of our different culture, different language	language	language is basically a medium for you to communic		
14	/ and when he says please speak farmer language	language	language is English / but of course speaking the l		
15	n my team/ we are trying to use farmer language,	language	language is English/ however because both my colle		
16	marily it is English/ just the formal language	language	language is English / one of the things that helps		
17	r of information communication is good language	language	language is? /English? \$W: Yes, primarily it is E		
18	eter will not talk to me in his or her language	language	language is not that relevant/ what is more releva		
19	due to the difference between the home language	language	language is very important not only when we dealin		
20	ak farmer language this means speak in language	language	language is very important / if let us say today I		
21	entation and start to use our internal language	language	language/ language is basically a medium for you t		
22	the/ hmm/ when you measuring language/ language	language	language/ latin language/ so I see when we are tal		
23	glish which is a roman language/ latin language,	language	language levels is not always on requested level/		
24	ends on the/ hmm/ when you measuring language,	language	language of your discussion partner always helps /		
25	nd it/ because it I close to my mother language,	language	language or some from a different / because of we		
26	e same language our country the nation language	language	language our country the nation language but howev		
27	gues/ I came from Bulgaria originally / language	language	language/ our vice president is a Swedish person a		
28	language and English which is a roman language,	language	language skills regardless of which language you a		
29	locker people / we also speak the same language	language	language/ so I see when we are talking to our Russ		
30	advantage to be able to speak the same language,	language	language/ so that helps \$E: And in your work do y		
31	ause sometimes/ you can speak the same language,	language	language so we have to find common ground and that		
32	this shows that, we can speak the same language	language	language so whenever we step into the office we st		
33	l meet the common language, the shared language	language	Language switch [CC3]Conflation of roles for supp		
34	ave you are talking the same technical language	language	language/ that create some kind of common communic		
35	s English / but of course speaking the language	language	language that even a farmer can understand/ so thi		
36	allowed so that is an issue / then the language	language	language that they understand/ so instead of abbre		
37	able to speak Swedish but usually the language	language	language that we have \$M: And now over to the inf		
38	have this fast online chatting / then language	language	language that we use is English because our boss f		
39	ork in a team, what is the team , what language	language	language, the shared language is English / one of		
40	opment and manufacturing \$B: And which language	language	language this means speak in language that even a		
41	municate with your colleagues in which language	language	language wise it is an issue / I remember the time		
42	od language skills regardless of which language	language	language you are using / on one hand that is true		
			language you know when you talk about a < technica		

The two research units investigated are MNCs operating in a global business environment, with geographically dispersed teams. In order to enable communication between the teams English has been adopted as the **corporate language** at respective sites. As one team member puts it:

Language is basically a medium for you to communicate / I think that it is an advantage to be able to speak the same language / that creates some kind of common communication platform to discuss subjects (TM9).



Further, even though you speak the **same language**, the presentation or style of speaking the certain language can differ between individuals, as discussed by one respondent:

Everyone have to speak English but there are two different ways of presenting English in Sweden / in Germany even in Singapore / in Singapore we are so famous for calling ourself Singlish<sup>4</sup> / Singapore's style of speaking English / it is a very local English that we speak / if you are from Singapore then you obviously understand what that person tries to tell you / but if you try to speak Singlish with the European then they probably would wondering what you are trying to say (TM9).

## 4.2 COMPANY CULTURE AND LEADERSHIP

'Culture' was the 210<sup>th</sup> most frequent word from the sample and reoccurs 42 times in the data. The frequently occurring words in the study related to the salient topic of company culture and leadership can be seen as highlighted in blue in Table 3 below.

**Table 3.** Top 10% word frequency list, cross-coded in a semantic web, pertaining to the broader topics of 'company culture' and 'leadership' highlighted.

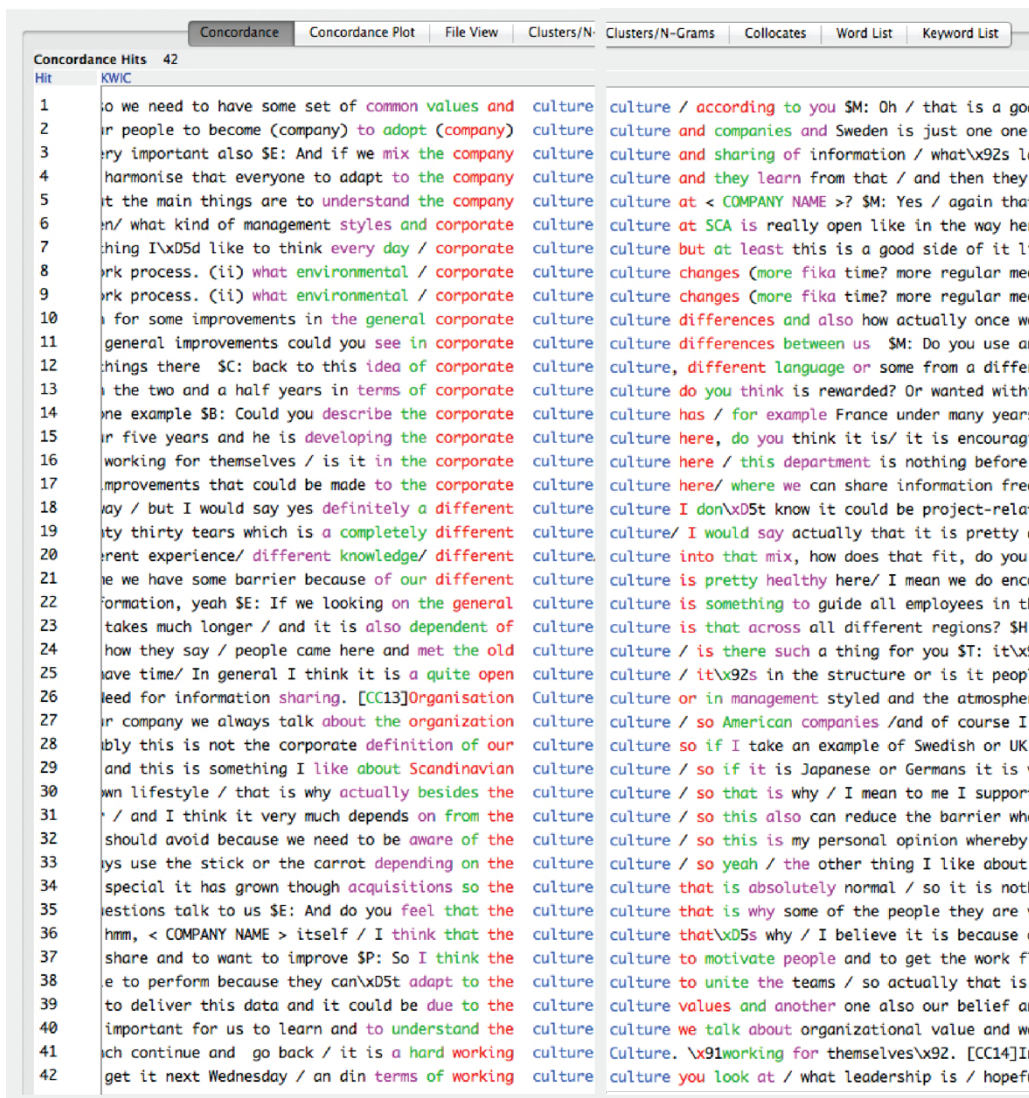
place	freq	word	place	freq	word	place	freq	word	place	freq	word
40	208	information	144	67	business	198	44	tools	258	33	management
43	201	company	145	67	europe	201	43	communication	259	33	participant
44	196	people	151	65	important	204	43	input	260	33	projects
51	183	work	155	64	project	206	43	language	261	33	teams
65	155	time	157	62	level	207	43	meetings	263	33	transfer
110	96	system	164	59	product	210	42	culture	264	32	market
111	93	sap	166	58	person	212	42	job	267	32	tool
113	91	activity	170	56	colleagues	213	42	platform	270	31	leadership
117	89	talk	172	55	years	214	42	task	277	30	lead
119	87	team	179	51	organisation	215	41	change	280	30	region
128	80	supplier	180	50	understand	222	39	software	287	28	boss
129	79	use	181	49	article	225	38	common	288	28	department
130	78	course	188	47	problem	226	38	communicate	292	28	manager
131	78	knowledge	190	47	talking	233	37	role	293	28	question
140	70	data	195	45	share	238	36	process	294	28	training

*Source: Table compiled by authors*

<sup>4</sup> Singlish is known as Singapore Colloquial English (SCE) (Alsagoff and Ho, 1998; Deterding, 2007). This localised SCE differs in sentence construct and vocabulary from Standard Singapore English (SSE), with borrowings from the other languages found in Singapore from Mandarin, Malay to Tamil. SCE is considered as part of the evolving world Englishes from the region of Southeast-Asia and to that extent, it can be esoteric in grammar and use of words (Deterding and Kirkpatrick, 2006).

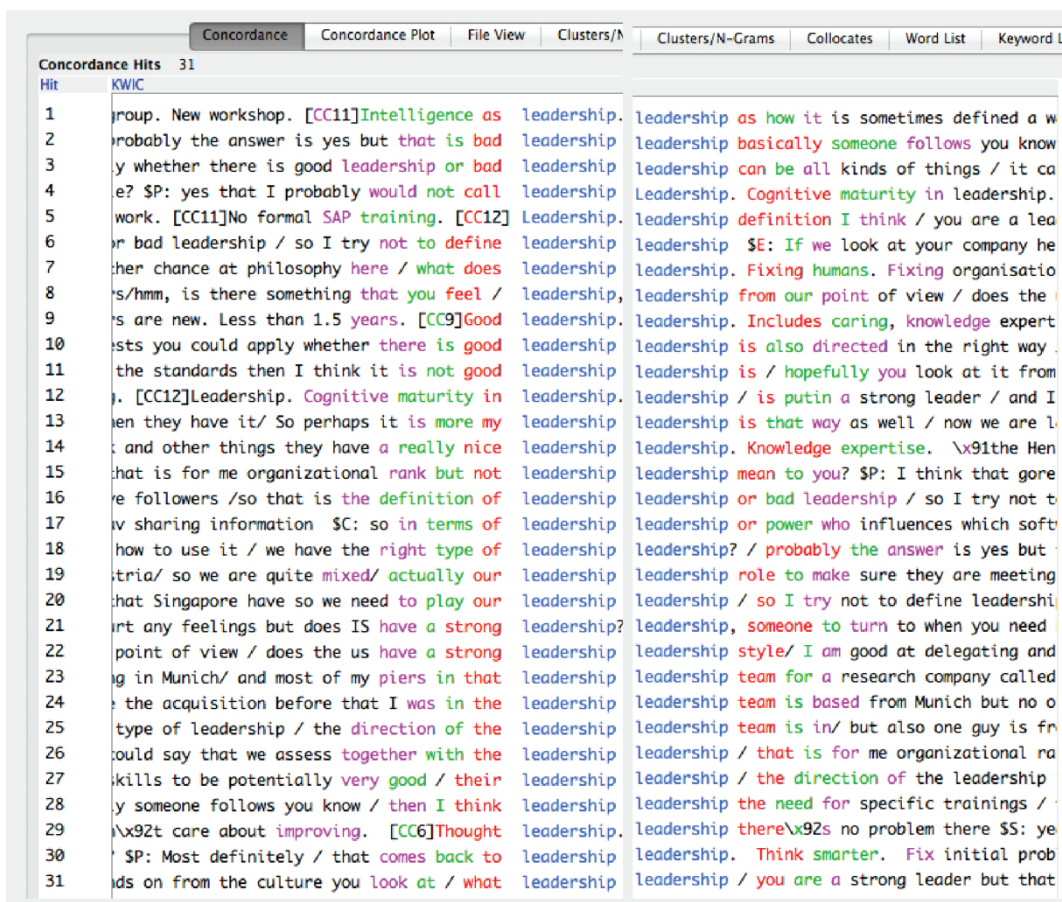
Appendix 3 shows a screenshot of a concordance plot retrieved from the AntConc program and shows that 12 of 18 respondents spoke about culture in their answers. The collocate result to the word culture can be found in Appendix 4 and shows the top most frequently co-occurring words with the word culture in the corpus. Figure 6 shows a sample screenshot of a concordance sorted 3-Left and 3-Right to the word culture. It can from these findings combined be derived that **corporate/company culture**, **culture changes**, **common values** and **different culture** are prominent themes when respondents speak of culture.

**Figure 6.** Concordance result: screenshot of AntConc search result for the word 'culture'.



Furthermore, the word 'lead\*'<sup>5</sup> was discussed by 7 out of 18 respondents, as can be seen in Appendix 5. 'Leadership' was the 270<sup>th</sup> most frequent word from the sample, occurring 31 times in the data as shown in Table 3. The collocates table in Appendix 6 shows the top most frequently co-occurring words with the word leadership in the corpus. Figure 7 shows a sample screenshot of a concordance sorted 3-Left and 3-Right to the word leadership and it can be seen that **good leadership**, **strong leadership** and **leadership style** are prominent themes.

**Figure 7.** Concordance result: screenshot of AntConc search result for the word 'leadership'.



<sup>5</sup> By using the asterisk \* the researcher can widen the scope of the search. For example by entering go\* as a search word, the string search will retrieve words such as go, goes, going and gold (Müller and Waibel, n.d.).

#### 4.2.1 COMPANY CULTURE

**Company culture** was identified by several of the employees as an important determinant for effective knowledge transfer to occur within the company and as a result also for the employees to be able to move along with the business issues. As one respondent discussed about culture as a barrier for knowledge transfer:

...barrier is to me an obstacle to the knowledge exchange / if let's say today you and me we have some barrier because of our different culture / because if we come from a different area we hold different values and sometimes we have different opinions / so in this way we build our invisible barrier / this is the obstacle for us to exchange the knowledge and when you cannot interact and when you cannot exchange the knowledge definitely you cannot move along with the business issues (M4).

Nonetheless, **cultural change** is difficult as company culture can be sticky and cause the business to not be able to cope with industry changes, as identified by several of the respondents and demonstrated by the quotation:

Our heritage is that we are good in being reactive / we should perhaps be faster in doing it our self when we see that / but perhaps we are not brave enough as a company /.../ I mean that it is quite slow business / and now we are selling products where competition is changing rapidly / a bit of heritage that we are a bit slow (M2).

The stickiness in company culture is found to be something that resides and persists within employees. This was explained by one respondent:

Because I have seen it so many times that people are comfortable doing what they have / and I see the resistance to change / the structures / the past /.../ people came here and met the old culture and they learnt from that / and then they keep doing the same ways / you have the cultural artefacts / if you have the same reporting from year to year to year you do the same things (TM5).

As the cultural stickiness is closely related to the individual behaviour in the organisation, it is also the management of people in the organisation that can serve to reduce the stickiness in the corporate culture. Cultural change can enhance motivation for employees and moving people across groups and divisions can be a way of reducing the cultural stickiness, as one interviewee narrates:

The corporate culture has actually been the same / the things are the same / these people leaving us actually this summer so it is new / four people at the same time but before that the system was the same / the people are almost the same / I actually think it might sound strange but we have new guys in our group operation / and the energy

is so much higher now / that is a big change for my start here until now / the energy and the environment is so much more / it is good it is better (TM1).

Several interviewees in the study found company culture to be important to align the work efforts by people in the organisation. To create **common values**, shared goals and meanings it is important to bring the work efforts of employees together, and initiatives are taken to do this, as demonstrated by the quote below.

...we try to define a lot of initiatives / they try to ship the company in one single direction at the business level or local level / you have to try align yourself with these initiatives so you are able to keep the focus /.../ through the years we have a lot of acquisitions where you bring different people with different backgrounds / from different industries / different experiences / different knowledge / different cultures / I would say actually that it is pretty difficult to make everyone think the same / I think what the corporate people try to do is to set up certain directions so that people at the local country level could try to align to the same hub / and try to moving in the same directions (TM9).

To not have a company culture and work together towards common goals were by the respondents identified as an important barrier in critical situations, but no less important in the day- to-day work. This was explained by a manager as follows:

...some people are driving their own agenda and want to be successful / and have their own targets that they want to protect / but if we have a real challenge / we have quality issue or a customer that is really threatening us / or a competitor threatening us / then we all come together and doing it really good and work really good together / but we have a hard time to get that common drive into the daily work / in a crisis situation you get that happen / but not in daily work (M2).

This was also highlighted by one of the team members:

...but also in our group / sometimes I get the feeling that everyone works a bit for themselves / maybe we can work more with each other / maybe we can help you know (TM4).

Defining why the organisation exists was another factor identified as important to promote the company culture and get all people in the organisation to move in the same direction and working together.

I have to have a shared purpose so why are you here why do we exist as a company / that is quite often that I think that would help to relate back /.../ I think like most organisations we are too careful in actually defining it why we exist /.../ and I would like us to have more of that / because once again I think it could facilitate what is the

overarching objective / it could facilitate decision making but also input into decisions (M3).

The corporate culture is however not a single culture residing within the organisation, but several **different cultures** might co-exist within the overarching corporate culture. It is important to recognise the cultural differences between people to be able to work together and communicate, as a manager respondent explained:

I recognise that differentiation is very important as we have different beliefs, different values and also have different principles / so it is very important for us to learn and to understand the culture differences and also how actually once we recognise the differences then we know that we will reduce the barrier / so this is very important that for example our company we always talk about the organisation culture we talk about organisational value and we talk about the collaboration, about the collaborative model within the team but one thing is that how to actually make the people aware of the differences is very important also (M4).

Further, some people can have the right skill set to accomplish certain tasks that are expected of them, but if their values are not a fit with the corporate culture it can cause the individual performance not to reach the desired level. To not be able to adapt to a strong established corporate culture can have severe consequences for the individual in performance. One respondent reflected as follows:

...as an organisation you are a mini country you have to unite your employees /.../ my personal opinion is that the company tries to make our people to become the company, to adopt the company culture / so this is my personal opinion whereby because we want to harmonise that everyone to adapt to the company culture that is why some of the people they are very good in the past record in their profession but when they join this company they are not able to perform because they cannot adapt to the culture (M4).

Barriers to move along with business issues might also arise and cause imbalances when the company culture stated by management is not the same culture and behaviour that is rewarded by management, as discussed below:

We want to be quite structured and work according certain processes / and we would like to be harmonised and do things in a quite structured and planned way / but behaviour that is rewarded is quite often someone that have taken a shortcut / being a risk taker and being a bit of entrepreneur and sometimes I do not see the balance / because we try to be structured (M2).

The vertical communication was discussed to be critical in increasing the awareness of corporate objectives, strategies and vision at the level of the employees and as a result aligning the practices across the organisation. This was raised by one team member as shown below:

Today if you have some strategies or visions that only happens at the top and if this information is not carried down to the bottom then you have the bottom triangle move around in all directions / and top people would think / numbers would say that we are really good but in the reality people are not sure what to do / so that kind of vertical communication is important / that provide you a channel to understand / and align your local strategies with the global strategies (TM9).

#### 4.2.2 LEADERSHIP

**Good leadership** is important for the company culture to be put in place, note by several respondents and specifically highlighted by one team member:

...he is developing the corporate culture here / this department was nothing before he came here / no structure at all and nobody cared about us as I understood it / he definitely has his 2020 strategy clear / he moves from milestone to milestone / develop these in this organisation extremely professionally / he is also extremely intelligent it is almost frightening / but we should work more with standardising our behaviour / and also educating / for each new tool there should be an education for the whole group / a new workshop (TM3).

The respondent further expressed that good leadership, intelligence and knowledge expertise can act also as a motivation and training for the employees:

...the previous boss knew everything about purchasing and it is like reading the law books and you have all these paragraphs here but also knowing the history about these paragraphs / this preparatory work / and people who know all that they are very skilled / they also know how to use the things / and the current boss is even sharper than this previous boss / he knows what and why and that is extremely important / many people do not know why and how to use it / so that is why I am very impressed by him and I learn a lot from him (TM3).

Consequently, lack of knowledge expertise of leaders can be a barrier and it is important to have leaders that are involved in the work and have knowledge expertise, as one team member expresses:

We are a small unit and I have my boss / he has time for us in that sense, he does / but at the same time he does not hold so much knowledge about the details / so often if

you want to discuss something you have to discuss it with the group (TM6, *our translation*).

**Strong leadership** is found to be necessary to motivate and encourage employees and different motivations and rewards should be used in different contexts, this is shown in the following statement:

In order to encourage the people to motivate the people we need to really move the people to find their level findings that is also very important /.../ I mean for information in Asia we obviously use the monetary to reward the people but we also have to consider other like self actualise or fulfilment that might be another motivation factor that we should consider (M4).

The **leadership style** and how you motivate employees might also be dependent on culture, the combination of how and who you communicate with can be of importance and be different depending on the situation, as discussed by one team member:

...you can always use the stick or the carrot depending on the culture so if I take an example of Swedish or UK colleagues you can always come with a reward / so you can always say look this is the delivery or the benefits of the project that we are trying to do and if you deliver this is what we will win / now there are other cultures where this approach will not work where you have to say ok if you do not deliver by this and this date I will come to your boss / and this actually work very well if this is really a task that their boss agrees that they should do and they will provide you the data that you need so this is more the stick than the carrot (TM8).

The leadership style and managing of employees was by the interviewees further identified to be dependent upon the generation of the employee, as outlined in the following example by one manager:

The new generation 1990 is starting to come and join the society and join to the corporate world / we have some challenge to manage those 1990 generation / we call this generation the strawberry generation / in order to get a strawberry very sweet and nice /.../ you need to take care of it /.../ they have been trained not to follow / they have been taught since primary or secondary or in university to have their own opinions /.../ but when they come to the corporate there is a set of the rules, guidance, process and procedure to follow /.../ When it comes to the management style when I manage a team and I know that this is the 1990 generation, we need to use a different style / I cannot instruct you that “You have to do this” / I will be more challenging and instead of instructing I will ask “In order to do this job, how long do you think you will need?” They say “Ok maybe one week” then I say “Ok one week then we might have a challenge because we have to do this, how can we improve from one week to three days?” / We have to use a different way of communication (M4).



### 4.3 COMMUNICATION PROCESS AND TOOLS

The word 'communication' was the 201<sup>th</sup> most frequent word from the sample and reoccurs 43 times in the data. Frequently occurring words in the data related to the topic of communication process and tools are presented and highlighted in Table 4 below.

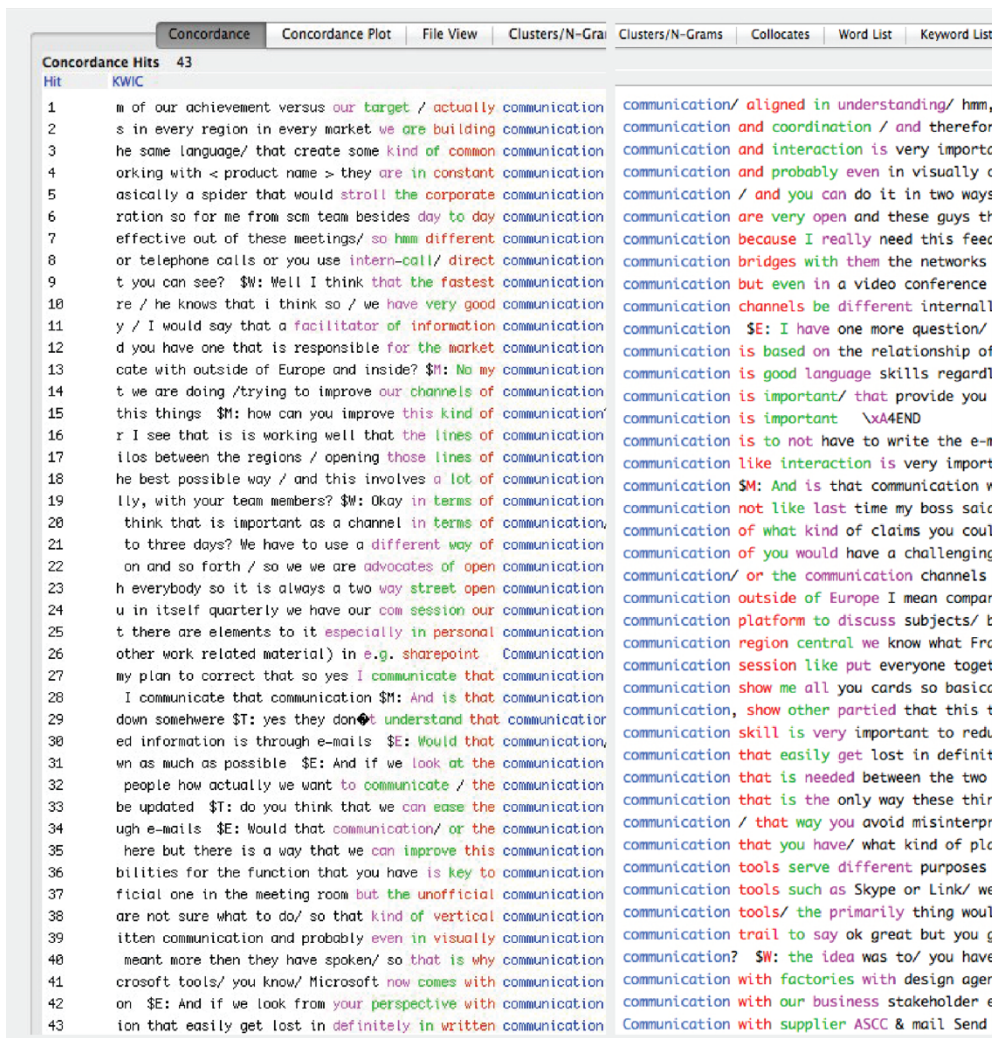
**Table 4.** Top 10% word frequency list, cross-coded in a semantic web, pertaining to the broader topics of 'communication process' and 'tools' highlighted.

place	freq	word	place	freq	word	place	freq	word	place	freq	word
40	208	information	144	67	business	198	44	tools	258	33	management
43	201	company	145	67	europe	201	43	communication	259	33	participant
44	196	people	151	65	important	204	43	input	260	33	projects
51	183	work	155	64	project	206	43	language	261	33	teams
65	155	time	157	62	level	207	43	meetings	263	33	transfer
110	96	system	164	59	product	210	42	culture	264	32	market
111	93	sap	166	58	person	212	42	job	267	32	tool
113	91	activity	170	56	colleagues	213	42	platform	270	31	leadership
117	89	talk	172	55	years	214	42	task	277	30	lead
119	87	team	179	51	organisation	215	41	change	280	30	region
128	80	supplier	180	50	understand	222	39	software	287	28	boss
129	79	use	181	49	article	225	38	common	288	28	department
130	78	course	188	47	problem	226	38	communicate	292	28	manager
131	78	knowledge	190	47	talking	233	37	role	293	28	question
140	70	data	195	45	share	238	36	process	294	28	training

*Source: Table compiled by authors*

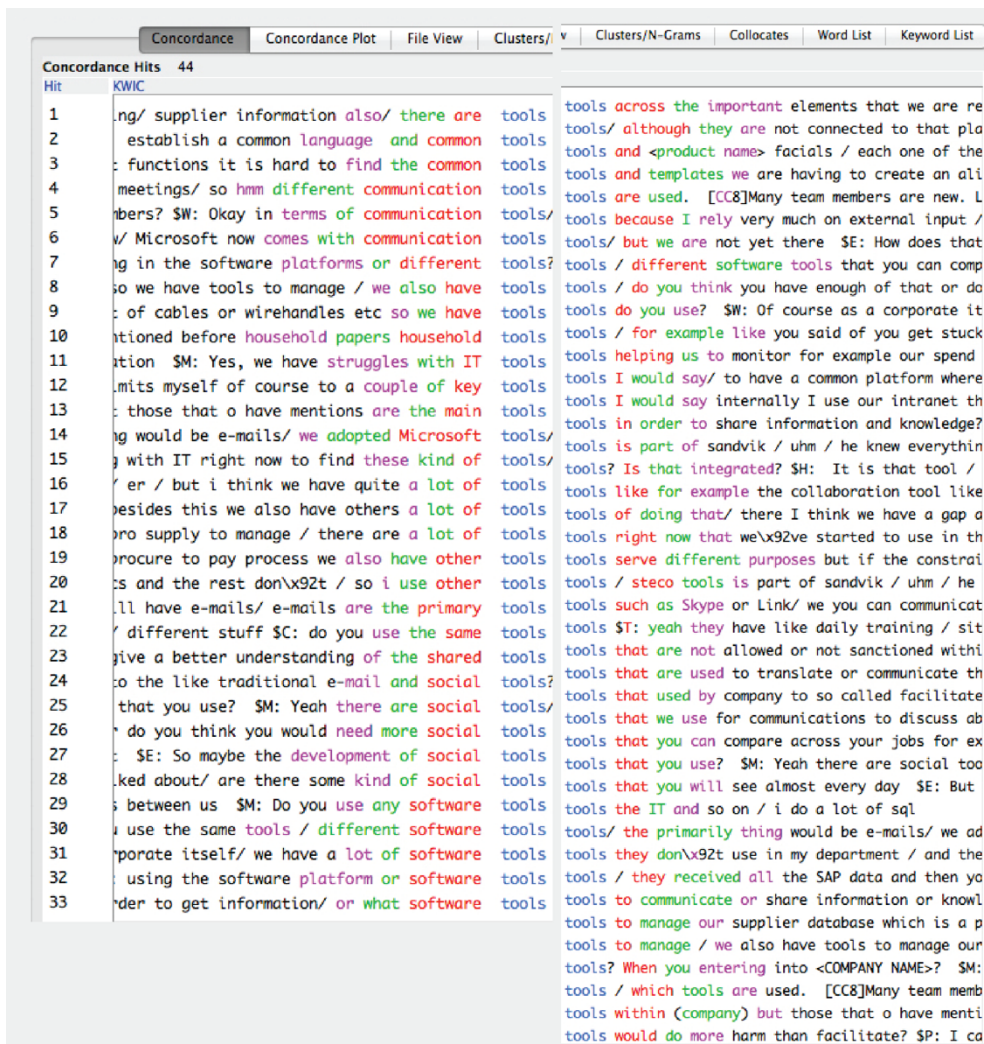
Appendix 7 shows a screenshot of a concordance plot retrieved from the AntConc program and reveals that 10 of 18 respondents spoke about communication in their responses. The collocates table in Appendix 8 shows the top most frequently co-occurring words with the word communication in the corpus. Figure 8 shows a sample screenshot of a concordance sorted 3-Left and 3-Right to the word communication. The most prominent themes appearing from the concordance findings in relation to communication are **communication skill**, **communication channels**, **communication tools** and **communication platform**.

**Figure 8.** Concordance result: screenshot of AntConc search result for the word 'communication'.



The word 'tools' was discussed by 9 out of 18 respondents and was the 267<sup>th</sup> most frequent word from the sample, occurring 32 times in the data as can be seen in Appendix 9. Appendix 10 further shows an example screenshot of the collocates to the to the word tools. Figure 9 shows the concordance sorted 3-Left and 3-Right to the word tools. **IT tools, different tools, common or shared tools, software tools, social tools, and tools to manage** are apparent concepts from the above findings with regards to tools.

**Figure 9.** Concordance result: screenshot of AntConc search result for the word 'tools'.



#### 4.3.1 COMMUNICATION AND CULTURE

The **communication skill** and what we communicate with regards to the communication process can depend on our different cultures or backgrounds. The following explanation was given by one of the respondents:

The communication skill is very important to reduce the barrier /.../ we also have to understand that within the team itself some of the people in Asia we will share what I am cooking or how my kids study or what I have learnt or what we can / we will share more about like our family our parents our so called our friends all this compared to Europe (M4).

Different cultures or backgrounds can also influence how we communicate and engage in the communication process. As one of the respondents, used to a Swedish culture where you talk and make sure you come together to get to a decision, put it with regards to the American, German and Italian culture:

...you notice that they are more straight-forward / if it is something they do not like / they are more aggressive and say that it cannot be like this, it is wrong / I guess that could be a good thing because then you know that it may not be such a good idea / or rather if they misunderstand something they are more reactive / which is different to Sweden for example (TM6).

Another respondent further elaborated upon this topic:

...for example my American colleagues gives me always the impression that they have quite a lot of workload and they try to answer as fast as they can / let us say a one line e-mail so you have ten questions in your e-mail and they answer with one line / it is a way of work it is giving the impression that they are quite under pressure most of the time let us say / but they do answer in a way that fits my needs so that is absolutely fine / it is how they work (TM8).

This team member further stresses the importance of timeliness of communication. The example provided below demonstrates how timeliness and speed of knowledge transfer can also depend on culture.

...as an example last year I contacted our Mexican colleagues from I needed some statistics about e-commerce for a report I was making and it took me like two and a half months to get five fields of data / just a comparison it takes much longer / and it is also dependent on culture / so if it is Japanese or Germans it is very time oriented so if they come with a deadline let us say tomorrow at two o'clock I can almost be sure that ninety nine percent I will get the data within that time frame / Latin American colleagues they are a bit more relaxed in terms of deadlines / so if they say yes you will get it by the end of the week you might get it next Wednesday / and in terms of working culture that is absolutely normal /.../ but in an American company let us say if you say at the end of this week it really has to be at the end of the week even if you have to work on the weekend (TM8).

#### 4.3.2 MEETINGS

The respondents are using different **communication channels**, where the most common ways of communication are via e-mail, phone or through meetings. It is also common that communication take place in a more informal manner, during coffee breaks or approaching a person in his/her workplace. This is apparent from the two quotations below:

The day-to-day conversations would be happening during the meetings / or during the breaks where you catch up with your colleagues on informal pieces / but most of the business related information is through e-mails (TM9).

...communication and interaction is very important besides the official one in the meeting room but also the unofficial communication and interaction is very important to break the barrier (M4).

As pointed out by several respondents, the exchange of complex and tacit knowledge requires frequent and close interactions, in this connection face-to-face meetings are extremely important for the MNCs investigated. As one team member puts it:

Face-to-face meetings are always the most direct / and most effective way of communicating /.../ different communication tools serve different purposes (TM9).

The majority of the respondents have meetings regularly, however one team member is not involved in any regular team meetings. This team member found this problematic and recognised the need of more frequent meetings:

We have no regular meetings in our department / it could be worth to have meetings more often /.../ we should have more discussions together / that is a good thing (TM2).

Another respondent pointed out the importance of calculating the value and cost of each meeting and that even if meetings are necessary there is an upper limit for their efficient frequency. The respondent expressed as follows:

Of course one could have many more meetings / but then nobody would be able to do their job / so it is always a balance / I mean how much do we need to talk to each other in order to do what we need to do (M1).

When team members are geographically dispersed and unable to relocate, the MNCs are using virtual communication, where team members meet through IT rather than through face-to-face contact. As outlined by one manager:

We have invested in video conferencing and in online conferences just to remove the need for travel / and that I think is a really good thing to do / that is a positive environmental aspect (M3).

At the same time, this manager recognises the value of having face-to-face meetings in order to build trust between team members:

...but there are elements to it / especially in personal communication that easily get lost in definitely in written communication and probably even in visually communication /.../ sometimes it is good to establish the first contact face-to-face and then you can more easily move into other which of course could be one solution (M3).

Physical distance can affect the communication process as face-to-face meetings might not be possible and the timeliness of interaction can be interrupted by high physical distance. High physical distance can hence be a barrier for the timeliness of communication and knowledge transfer, as discussed by one employee situated in Singapore:

I think distance it always the barrier when it comes to information sharing / if your colleague would be sitting next to you, you could probably just pop up and say hi I have something to discuss with you / and then discuss / but if the person is not right here / then you obviously need to send an e-mail or maybe phone him up / then the next would be the time difference right / for example when we have contact with Europe / we obviously need to wait to afternoon time in order to get in touch with them / or for example if you have to talk to colleagues in Sweden you have to wait for the office to start eight o'clock which is three or four o'clock in Singapore time / I mean if you need to talk to a person in Europe then e-mail is obviously a good channel / otherwise you need to wait to that person get online where you can start chatting with him or her (TM9).

#### 4.3.3 SOFTWARE TOOLS AND PLATFORMS

**IT tools** such as e-mail is recognised as a useful **communication tool** when the distance or time constraint do not allow face-to-face meetings, as further outlined by the team member:

Of course if you cannot have the conversation because of the limitation of distance or timing / then e-mail would be a good IT tool for you to basically end up your task or questions or your worries to that person / to get clarifications (TM9).

The team member also discussed how writing e-mails on the other hand can be inefficient, and expressed this point in the following manner:

I think that the fastest communication is to not have to write the e-mails / sometimes you just need to get some ideas / or have to run through things / to put it into e-mails you need to write a lot of things / but if you could just walk and talk to that person you could have a short discussion and then you would probably get ideas sorted out much faster (TM9).

The respondents also identified that they can find and get information through **communication platforms** such as the respective companies' intranet, databases and other IT-tools available. The majority of the respondents are using the respective firms' internal

intranet and SharePoint. One manager found it to be an important source of information and outlined the following:

I would say internally I use our intranet / that is a huge source of information for me (M3).

As highlighted by another manager the use of intranets and open platforms is a good way to keep colleagues and the team in the loop about projects, and it also enables synergies for other parts of the organisation.

We use a common SharePoint where they input their data they see what we have so it is completely open there is nothing hidden / you cannot just keep something to yourself you have to be an open book all the time /.../ so having a common platform where everybody has access / everybody sees what everybody is doing / it is the key to success to be open and talk about it /.../ it has been working before as well with other platforms but it has been very regional so my left hand has no idea what my right hand was doing so by having these open platform everybody know what everybody is doing /.../ people that have not before been talking to each other they are talking to each other now (M1).

It is pointed out in several interviews that **different tools** are in use within the respective organisations and that there are too many systems in place. Two team members discuss this problem and how the use of different tools is an inefficient solution:

It is not efficient to have so many different systems (TM7, *our translation*).

We need to have a much more efficient system /.../ there are so many different systems / there should be one system that store all information (TM2, *our translation*).

Another respondent explains that the multiple systems in the MNCs are not compatible and that one single system would be a better solution:

We do not have access to all systems /.../ we do not know if it is the correct information that is being transferred or if they have changed something in their processes /.../ it is difficult to secure data between the two systems (TM6, *our translation*).

Some team members recognise that it is difficult to find and agree on one **common tool** or platform. At the same time respondents feel that they miss a lot of structure and that it is difficult to find information in a structured and easily accessible way. This is demonstrated in the following quotations:

Actually it would be so much easier to have something where all this information is consolidated /.../ it is much easier to get a better overview if you have everything in one system (TM4).

We need to create something new, a common platform with global use potential / I think we have data everywhere (TM5).

The need for common tools for information sharing is also recognised on the manager level, as explained by one manager respondent:

We have struggles with IT tools I would say /.../ all functions take out the information and massage it in their way of how they would like to have it and use it / we have a hard time to find a common platform where everyone is working on the same excel sheet or drawing / people would until now at least take out the information and work with it on their desktop and then put it in again / but we would like more to be on the same documents and do it in the same way / but as people have different functions it is hard to find the common tools of doing that / there I think we have a gap and could do much better job (M2).

In connection to this, respondents outlined that individuals have different ways of working and assimilate information. It is difficult to find one single common software tool or platform that fits the demand of all employees in the organisation. As stated by one team member:

I think we are all working in different ways / even to get information from the SAP system / everyone is doing it in a different way / I feel like maybe there is a better way to do it but I do not know about it / then of course there are personal preferences / I prefer to work like this / so this is another thing but of course I would like to know how others are doing it / maybe it is easier maybe I am doing it too complicated (TM4).

If the use of a common **software tool** is managed to be put in place, it can facilitate the communication process as well as get people within the organisation that has no previous interaction to talk to each other. The effect of a common platform initiative is discussed by one manager respondent:

...what we see is just great feedback /.../ people that have not before been talking to each other they are talking to each other now (M1).

The introduction and implementation of new systems when trying to improve or harmonise existing systems can nevertheless cause resistance within the MNC. As a manager stated:

We humans in general we do not like change / we like things the way they are / the way things have been / you hear people talking about how it was so much better before



/ people do not fully appreciate change but there is nothing more constant than change (M1).

Several respondents noted that it is important to explain why the change is being made in order to get everyone to use the same software platform or tools. As expressed by one manager, it is important that changes are made gradually:

If the employees are not on board then they will be in trouble / because the only way to drive something forward is if everybody is on board with the programme /.../ there will be some resistance in the beginning but then you will get used to it and then we will make the next change and then we will make the next change gradually / that is the only way /.../ and the only way to do that is by talking communicating keeping open channels and then sure we will find ways to improve (M1).

With regards to the usage of new tools, one team member outlined that many employees might resist to use different software programs, as they did not find it user friendly enough.

We also have SharePoint / where we store a lot of information / and of course it is quite static / it is not a very user-friendly platform / the trainers would try to convince you but it is not / simply it is not (TM8).

User friendliness is hence regarded important for people in the organisation to actually make use of the systems put in place. In this sense, software training is essential, while lack of both initial and continuous software training could cause lack of understanding, as revealed by the following quotation:

We do not have enough technological skill here /.../ that is a lack / people who has been here too long / you can see that they do not have the up-to-date IT skills /.../ we do not even get any basic training /.../ you should have training in it / I think we lack more IT / I think that is our problem / we want to know how to use it or we can learn how to use it / we have the right type of leadership / the direction of the leadership is that way as well / now we are lacking the IT (TM5).

The need for training in systems is however dependent on the prior technological skills of individuals, which could obstruct the visible need for training. Not everyone finds it necessary to have trainings in the software used, while others do. A team member commented as follows:

...there is not much need for training / because SAP is fairly easy to use / they can ask us if they do not know and we can explain to them / there is some worry about too many people coming in / in such a short time / they can ask questions if they need to (TM2).

Several respondents also highlights the use of **social tools** in their respective organisation where employees can post and share information within the team. It is found by interviewees to be a good complementary tool. On the contrary, some respondents recognise that social tools can act as a barrier by interrupting the daily work rather than facilitating the information flow. One manager explained:

The effect of constant interruption on the depth of thinking / every interruption will take you half an hour- an hour before you go back to the same level of productivity (M3).

And at the same time, it could be a generational challenge to use social tools, as one manager outlined:

...and then generationally it is a challenge I did not grow up with messengers and some of my colleagues neither so that is very difficult to have this fast online chatting (M3).

It is important to also note that communication tools in general, and social tools in particular might not be viable across national borders.

...for example Asia and especially China is an issue in terms of from which search engines are allowed or which social networks are allowed so that is an issue (M3).

#### 4.4 SHARED PRIOR KNOWLEDGE AND SHARED UNDERSTANDING

'Share' was the 195<sup>th</sup> most frequent word from the sample and reoccurs 45 times in the data. The salient topic of shared prior knowledge and shared understanding includes the facets of the frequently occurring words highlighted in Table 5 below.

**Table 5.** Top 10% word frequency list, cross-coded in a semantic web, pertaining to the broader topics of 'shared prior knowledge' and 'shared understanding' highlighted.

place	freq	word	place	freq	word	place	freq	word	place	freq	word
40	208	information	144	67	business	198	44	tools	258	33	management
43	201	company	145	67	europe	201	43	communication	259	33	participant
44	196	people	151	65	important	204	43	input	260	33	projects
51	183	work	155	64	project	206	43	language	261	33	teams
65	155	time	157	62	level	207	43	meetings	263	33	transfer
110	96	system	164	59	product	210	42	culture	264	32	market
111	93	sap	166	58	person	212	42	job	267	32	tool
113	91	activity	170	56	colleagues	213	42	platform	270	31	leadership
117	89	talk	172	55	years	214	42	task	277	30	lead
119	87	team	179	51	organisation	215	41	change	280	30	region
128	80	supplier	180	50	understand	222	39	software	287	28	boss
129	79	use	181	49	article	225	38	common	288	28	department
130	78	course	188	47	problem	226	38	communicate	292	28	manager
131	78	knowledge	190	47	talking	233	37	role	293	28	question
140	70	data	195	45	share	238	36	process	294	28	training

Source: Table compiled by authors

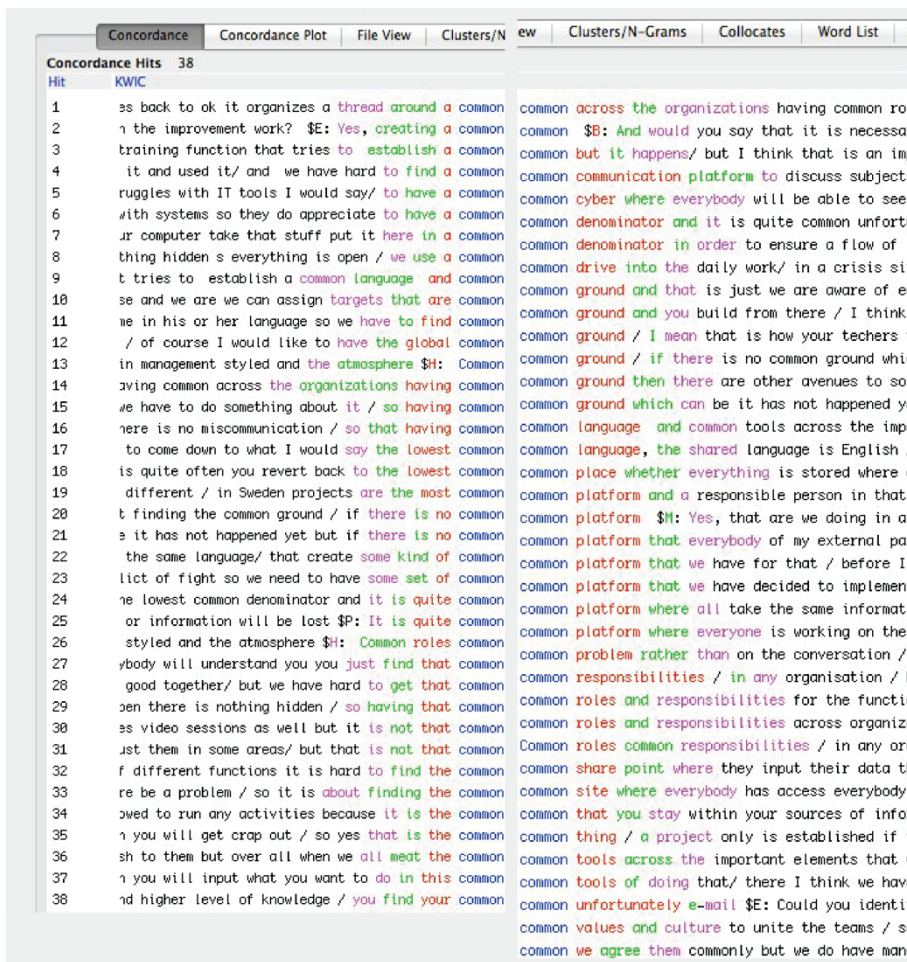
Appendix 11 shows a sample screenshot of a concordance plot retrieved from the AntConc program, and shows that 11 of 18 respondents spoke about the word share in their responses. The word share is reflected in a string search shar\* and will retrieve words such as share, shared, shareholders, sharing and sharepoint. Appendix 12 shows a collocates table to the word shar\* and shows the top most frequently co-occurring words with the word shar\* in the corpus. Figure 10 shows a sample screenshot of a concordance sorted 3-Left and 3-Right to the word shar\*. It can from these findings be seen that **shared language** and **shared objective** are prominent themes when respondents speak of shared prior knowledge and shared understanding.

**Figure 10.** Concordance result: screenshot of AntConc search result for the word 'shar\*!'.



Appendix 13 shows a sample screenshot of a concordance plot retrieved from the AntConc program, and reveals that 5 of 18 respondents spoke about the word 'common' in their responses. The word common was the 225<sup>th</sup> most frequent word and occurring 38 times in the data. Appendix 14 shows a collocates table to the word common and reveals the top most frequently co-occurring words with the word common in the corpus. Figure 11 shows the concordance sorted 3-Left and 3-Right to the word common. **Common values** and **common ground** appears as important concepts when respondents speak about common. Findings related to common values are presented in section 4.2 Company Culture and Leadership while common ground will be presented in the current section.

**Figure 11.** Concordance result: screenshot of AntConc search result for the word 'common'.



Even if the use of a **shared language** facilitates communication, team members may not speak the same technical language. One respondent elaborated on this topic by discussing the need to adapt the use of language depending on whom you are communicating with:

...the person who was presenting was an engineer / and you immediately noticed that they have a complete understanding of these huge machine presentations / or how do you call this / diagrams / which for me is absolutely / I can not comprehend it at all / you should really be prepared of your audience / so can your audience read this huge technical diagram / no? / so what do you do to make it easier? / the easiest way is that you do not show everything / you just show some key elements / and make it in a language that they understand / so instead of abbreviations / you would use a word that a farmer would understand / you need to adopt your language (TM8).

A common technical language was identified as an important enabler for communication and hence knowledge transfer between people in the organisation. As pointed out by one manager:

Even if we do not speak in our mother tongue the fact that we do have backgrounds that are not so dissimilar does help / because then you have you are talking the same technical language you know when you talk about a technical specification /.../ so you do not have to do a huge debrief before you actually get to the point (M1).

It is found to be important with a shared language and common prior knowledge in order to assimilate new information, and this also has to be recognised by the sender of the information in order to avoid misunderstandings. Even if it appears as though we have the same language perception and knowledge structures, this is not necessarily the case. This topic was discussed as follows:

...for knowledge transfer I think the most important thing is about the person who want to transfer the knowledge is able to communicate her idea clearly / because sometimes you can speak the same language but you can think differently / you might have some ideas but when you try to transfer your ideas you are not so well communicated / as a recipient I tell you that I have received your ideas or have understood your message but in reality it is two different things / it is important that we are aligned in our understanding to make sure that the person is understanding the meaning of the message / we can speak the same language but then have such a big misunderstanding in the final objective (TM9).

Further, when talking to different types of teams it is important to mind the usage of language and content of interaction. This aspect was outlined by one manager:

Usually when I am talking to different teams I will use a different language, it is very important / if let us say today I am talking to the engineer it let us say I am talking a lot of strategy to the engineer the engineer might not be interested they might not care

what you are talking about / that is why the content of discussion or the interaction is also important (M4).

As highlighted by another manager it is therefore important to find a **common ground** in order to be able to communicate and transfer knowledge successfully.

How you transfer knowledge is about how you put certain words in a way that people will understand you / I can talk to an engineer in engineering terms and they will get me but I cannot talk as an engineer to a marketer so I have to find a way to be able to communicate with that person / and a marketer will not talk to me in his or her language so we have to find common ground / and that is just we are aware of each others let's say needs then there are no hinder to transfer what I know to someone else in a way that that person will understand /.../ so it is all about finding the balance how you transfer things and how you transfer information / and that is it everybody will understand you just find that common ground /.../ you find your common ground and you build from there (M1).

How to present information was also found as important for the information to be assimilated into the recipient's knowledge structures. Also how the message is formulated appeared important for the message to come through and for the recipient to understand and answer the questions that are actually being asked. As pointed out by the respondents:

Someone can put everything in the same email / they just try to summarise what they thought or in back of their mind / but after clarification you realise that they meant other things / they meant more than they have spoken / so that is why communication is important /.../ It is always about clarifying what was intended and what you want that the person should understand (TM9).

Another respondent elaborated upon this topic with regards to the volume of information being transferred and how it is presented.

He sent me a deck with 350 slides / and it took us a 45 minutes discussion to understand why we have all these slides and once again it is very difficult /.../ you explain something in words you think the other person understands but of course they do not just understand (M3).

The assimilation of the information of the side of the recipient was then found to be dependent upon the point of view of the recipient, which means that different people might have different understandings from the same piece of information. This topic was reflected upon by one manager with regards to a presentation:

One hurdle is always that you see information from, and only from your own point of view / I mean if you get a message, a presentation that is one hour long you only see it

from your angle / then of course if there are 30 people in the room they can get 30 different perspectives / some people have a hard time to see the full picture then analyse what this means for me and for others / some people have a hard time to do that I think / they only look at it from their own angle so to say (M1).

Several respondents also discussed what would facilitate the handover of information from the sender to the receiver. As expressed by the respondents, it is important to be clear and open in presenting information:

...to be clear on why I write something / to be clear on why I communicate / to be clear on the objectives / that is basically one of the key things that we would like to train our people as well in is to be clear about the objective / the background and the objective then the solution / many different solutions / but be clear about why do I write this letter why do you have this interview /.../ it is of course much easier to start writing a question then giving somebody the background / so much easier / and it is very difficult sometimes to say ok why do you need this and more often than not it is very difficult to answer the why / but I think it is crucial (M3).

In order for people to receive the intended message, it is further discussed the importance of the sender of information to be precise and concise, as presented by one team member:

You have to speak clearly / in terms of what is the objective / what was the intention / the purpose / try to be as precise as concise as possible / and do not assume that people understand your message / try to elaborate / the more you elaborate the more you could make sure that the person understand / otherwise you will have to get the person to resonate your questions whether he understands or not (TM9).

## 4.5 INFORMATION AND NETWORKS

'Information' was the 40<sup>th</sup> most frequent word from the sample, mentioned 208 times in the data. The concept of information and networks includes the facets of several other words, as shown in Table 6 below. Together this semantic network of words assists in making sense of the data collected.

**Table 6.** Top 10% word frequency list, cross-coded in a semantic web, pertaining to the broader topics of 'information' and 'networks' highlighted.

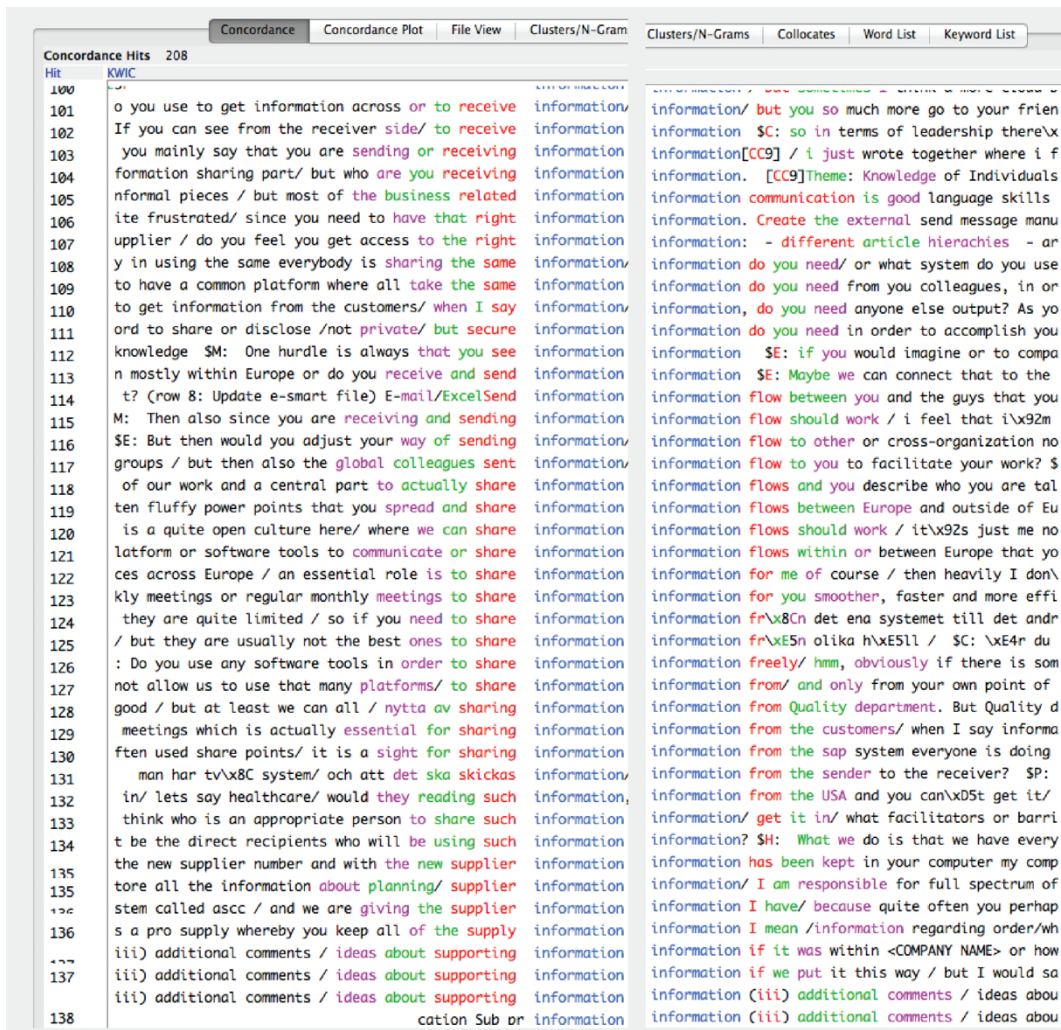
place	freq	word	place	freq	word	place	freq	word	place	freq	word
40	208	information	144	67	business	198	44	tools	258	33	management
43	201	company	145	67	europa	201	43	communication	259	33	participant
44	196	people	151	65	important	204	43	input	260	33	projects
51	183	work	155	64	project	206	43	language	261	33	teams
65	155	time	157	62	level	207	43	meetings	263	33	transfer
110	96	system	164	59	product	210	42	culture	264	32	market
111	93	sap	166	58	person	212	42	job	267	32	tool
113	91	activity	170	56	colleagues	213	42	platform	270	31	leadership
117	89	talk	172	55	years	214	42	task	277	30	lead
119	87	team	179	51	organisation	215	41	change	280	30	region
128	80	supplier	180	50	understand	222	39	software	287	28	boss
129	79	use	181	49	article	225	38	common	288	28	department
130	78	course	188	47	problem	226	38	communicate	292	28	manager
131	78	knowledge	190	47	talking	233	37	role	293	28	question
140	70	data	195	45	share	238	36	process	294	28	training

*Source: Table compiled by authors*

The data shows that 15 out of 18 respondents spoke about information in their responses (see Figure 3). In Appendix 15 the collocates to the word information are presented. The collocates table shows that the top most frequently co-occurring words with the word information are sharing information, output of information and input of information. Figure 12 shows a sample screenshot of a concordance sorted 3-Left and 3-Right to the word information. The data shows that **find information, get information, information flow, sharing information, receiving information and encouraging information** are related themes when respondents speak of information and networks.



**Figure 12.** Concordance result: screenshot of AntConc search result for the word 'information'.



To find information and get information has in the data on one hand been identified as a clear task with employees receiving clear guidelines on who to contact for information regarding specific issues. These guidelines could be stated in a specific document where sources of different specific types of information are listed, or their availability could be ensured through the direct recipients the company having the right networks in place and people in the company holding the knowledge of whom to contact regarding different specific issues. A good understanding of where to retrieve information for specific tasks or issues is by several of the interviewees perceived as an advantage. Where to find existing information within the organisation is dependent upon networks, where close social ties facilitate the transfer of knowledge as it helps employees to find valuable knowledge. As one team member expressed:

The important thing is that you must understand who is the right person and what could he or she bring to the discussion so you will be able to escalate the issues or approaching for some guiding (TM9).

On the other hand, unclear guidelines on who to turn to for information within the company could according to the respondents cause information sourcing to get stuck in groups within the company, leaving the different groups working in silos without an idea of what others are doing. Sourcing information without an idea of where to start or who to ideally contact could easily cause people to only look for information where it has previously been retrieved, not necessarily where the most relevant information is held, as discussed by a manager:

It is quite common that you stay within your sources of information /.../ that is definitely an issue if you want to get the most complete information in order to make the best decisions /.../ you develop a network where you have an idea of who to ask / but too often I am blind on who to ask (M3).

No clear guidelines on where to ideally turn for information could hence be a barrier for **information flows** within the company if the right networks are not in place and if people do not hold the knowledge of who to contact. As discussed by several team members it takes time to locate existing information and knowledge as it is not always clear whom to contact and who is responsible for certain tasks:

...sometimes I do not really know who should I contact / there I miss a lot of structure who is responsible for what / maybe there is a way to make it more visible / who is working with what (TM4).

The above quotation states that there should be some kind of network map in place where this kind of information is available, with clear guidelines on who to contact. This becomes even more important as new employees enter the firm. One respondent explains:

Me as a new employee I think it is really hard to know who holds responsibility /... / there is nowhere to find and I have to go around asking everyone / so that is not so good (TM7, *our translation*).

It was further discussed how differently defined roles for what is in reality the same role could serve as a hindrance for **sharing information** across the organisation.

...having common across the organisations having common roles and responsibilities for the function that you have is key to communication / that way you avoid misinterpretation that way you avoid misunderstandings and it is clear if it is in paper what you are supposed to do then there is no miscommunication / so that having

common roles and responsibilities across organisations for similar functions is key (M1).

Solutions to not get stuck in the trap of looking for information where you have previously received it was requested by one manager:

...what would be good is basically a reminder of whom you are not talking to / sort of basically a hot map of you are talking very much to these people might it not be a good idea to talk to these people / basically a constant meta-analysis of your e-mail traffic that says ok it is good / these guys you are talking a lot to or you are communicating a lot with / I recommend you to talk to that person based on function or hierarchy or whatever / so basically a spider that would stroll the corporate communication trail to say you guys do not talk (M3).

Another factor that could cause employees to not know where to turn for information is high employee turnover, where the knowledge will not be retained in the company and new employees might not receive the necessary training to obtain the same knowledge as former employees. This is expressed by one respondent as follows:

We are working a lot with this list and a new employee is developing it / I feel a little bad for him because apparently it is difficult to develop it / a prior employee left and he only got one week of practice (TM7, *our translation*).

On the contrary, several respondents found internal job rotation as a potential facilitator for learning and knowledge transfer as the rotation of people can enhance knowledge and facilitate the diffusion of knowledge within the MNC. This is illustrated by one manager:

Sometimes we need to rotate the people / for example some of the people are on their position for more than ten years or twenty years /.../ the job rotation is very important because the longer you sit at that position you will build up your own boundary / you do not know what you do not know / I mean we create another learning curve, whenever you start learning / then after you learn then you will start to make the change / then once you established, when you succeed, then you have to create another learning curve / because each learning curve you will discover something not only that contribute to the business but also for your self-achievement (M4).

To get or find data is not only dependent on the ability of the person **receiving information** but also the sender or holder of the information. Lack of information transparency from the side of the information holder could pose as a significant barrier for information to reach the requesting recipient, leaving the requesting unit without the relevant information. As one manager expressed:

...every region for the most part they are protective of their assortment and of their way of working / so one of the things that we have been doing is breaking silos / because if you work in a silo then you will not have lateral exchange, you will not be able to break the silos / to opening those lines of communication / so basically we play poker with showing the cards / that is the only way to break the silos (M1).

For this information to come to being, there must be motivation for information sharing from the side of the sender of information. A key factor for **encouraging information** sharing from the side of the sender of information is trust. Trust enables knowledge transfer and to be open and clear builds trust, this is illustrated by the statement by one manager:

The only way to talk to anybody within any organisation is that you are clear / you are open and you always have the cards on the table / the moment that a customer or the moment that a partner senses that you are hiding something the trust will not be there / you have to build trust / you have to be open if you want to drive any business forward /.../ it takes a lot of time to build trust, years sometimes / but it takes one action, one mistake to break that thing apart / and it is much, much harder to be built from scratch if you have broken it once / so openness is the key and that is how we wish to work /.../ always clear / and the systems are very open there is nothing hidden (M1).

This manager also discussed:

We have the partners in every region in every market / we are building communication bridges with them / the networks that have to be in place to get things done we get them there / so it is always about building trust once that you have someone in a market that wow that believes in things that you are doing or what you are trying to do it is much easier to get your message across (M1).

Another manager explained that people in the company are more open and show more trust now than before.

I think that we internally are more open nowadays /.../ we did not trust anyone else / but nowadays we are much more open / and that it should be allowed for everyone to find information /.../ it is at least a trend that we are much more internally open with information sharing nowadays then we have been before (M2).

Finally, this respondent also explained the potential issue of trust between employees and the management and in particular how employees can be suspicious towards the management in the decision-making process. The respondent elaborated upon this potential trust issue as follows:

...some people are always quite often a bit suspicious to our management that we have a bit a hidden agenda / and that we try to hide things / and that we already have

decided how things should be / but quite often we have not / some people in big organisations think that management already have decided how this should look in one year / this is just a play that we are doing right now / so then you have to convince people that this is / what we are saying right now is the truth and we are driving like this until we have other information (M2).

## 5. ANALYSIS

*This section presents a discussion and analysis of the findings from the previous section. The prominent findings are investigated and contextualised in relation to the literature review, presenting barriers and facilitators for the transfer of knowledge in a shared language context of a multinational corporation.*

### 5.1 SHARED LANGUAGE: A PREREQUISITE FOR KNOWLEDGE TRANSFER

The empirical data of this study show that English has been adopted as the common corporate language at respective sites, a trend that has been observed in a number of non-English speaking MNCs in recent years (Harzing and Feely, 2008). As highlighted by the interviewees, language diversity is not considered as a major issue in inter-unit communication and hence the transfer of knowledge. This is connected to the fact that many MNCs require their employees to be sufficient in the corporate language adopted by the organisation. The shared language setting removes to a large extent language as a barrier for knowledge transfer, but as found in the study there are several other potential barriers and facilitators for knowledge transfer being present even with a shared language in the MNC.

### 5.2 COMPANY CULTURE: THE CRITICAL DISSEMINATION OF COMPANY VALUES AND GOALS

A strong company culture that aligns the people within the MNC towards a shared values and perspectives context was recognised by the interviewees as critical. This is needed in order for people in the organisation to be able to move along with business issues, and various shared contexts (beyond a common language) are important facilitators for knowledge transfer. This is consistent with prior findings by Inkpen and Tsang (2005) concluding that a shared culture and shared norms amongst people in the organisation can facilitate knowledge transfer. The MNC is made sense of as a “mini country” by one interviewee, where several different cultures need be adapted to fit into one single company culture. If individuals fail to adapt to a strong company culture it may result in individuals not being able to align with business goals despite possessing the right skill set to get the work done. On the contrary, it is crucial to recognise that several different cultures and different norms most likely, to some extent, reside within even a strong company culture in order to adapt and be able to transfer

knowledge efficiently. In order to build and preserve company culture, the culture encouraged by management should also be the culture rewarded by management. It is evident from the current study that the case is not always so and therefore management efforts instead become a discouraging factor for individuals to adapt the company culture.

Lack of a company culture is highlighted as a potential barrier for knowledge transfer at the respective sites investigated in this study. Building upon this line of reasoning, respondents also expressed how lack of a company culture could result in individuals working for themselves and driving their own agenda, not allowing for knowledge transfer to occur. This symptom was most apparent in the day-to-day work where no critical outside threat was evident. The current findings suggest that to overcome this behaviour and unite the people in the organisation, MNCs need to be less careful about defining why they exist and let this definition permeate the day-to-day operations on all levels. This is in line with the findings by von Krogh (1998) who argues that explicitly stated values by top management need to be visible in every managerial action and communicated throughout the organisation.

The current study further reveals how heritage and slow change in the company culture can pose as a barrier for knowledge transfer. Industry changes will demand businesses to change accordingly, which can be troublesome for the organisation as stickiness of company culture might pose as a hindrance for internal change. Apparent from the current study, culture and norms resides and persists within individuals, making the management of people by for example moving them across divisions important in order to change the company culture to fit the industry.

#### *5.2.1 LEADERSHIP COMMITMENT*

Leadership was by interviewees found to be important as good leadership can not only serve to provide structure, training, knowledge expertise and motivation for employees, but can as a result also develop the company culture. In turn, the culture might also impact the most suitable way of leading as one way of leading all employees might not yield the best results. Three different ways of how culture can affect leadership are found in the current study and discussed below.

Firstly, where an employee is situated geographically within the MNC was found to influence the most suitable way of rewarding that employee. Social rewards are in the current study found to be the most critical form of reward to motivate employees, as is also found by Argote et al. (2003), but different levels of monetary rewards can be appropriate in different geographical settings. Secondly, the current study indicates that where an employee is geographically situated in the MNC should have an impact on the way managers communicate with employees to motivate them. An individual in one part of the world can be more likely to respond and get motivated by getting the purpose of the task explained (carrot), while another individual in another part of the world can reach a higher level of motivation by being put under the pressure of the requesting unit going to the boss if the employee does not deliver what is requested (stick). Finally, interviewees identified generation as a factor that should be taken into account when leading employees, particularly as the 1990s generation is entering into the workplace. This new generation is trained to have opinions and to question, while earlier generations in comparison are more likely to follow without questioning. For managers to successfully communicate with employees from the 1990s they should engage in the conversation with open questions, where they with older generation employees can directly express the request and demand it to be done within a certain timeframe.

### 5.3 COMMUNICATION PROCESS: THE KEY CONSTRUCTS OF TRANSPARENCY AND EFFECTIVENESS

#### 5.3.1 COMMUNICATION AND CULTURE

The respondents discussed that cultural differences are playing an important role in the communication process, where the way of presenting information as well as the amount of data presented depends upon employees' different backgrounds and cultures. This is in line with the findings by Inkpen and Tsang (2005) who discuss that shared culture is a social factor affecting the transfer of knowledge. Another finding related to this topic is the importance of timeliness of communication, where timeliness and speed of knowledge transfer depends upon employees' cultural backgrounds. For example, it was shown that it can sometimes take more than two months to get data from individuals from some countries, while individuals in other countries are more time oriented and deliver the data within the timeframe.



The way of speaking a certain language added another complex layer to communication related problems. In this connection, the findings of this study show that even if we speak the same language there are different ways of presenting a language. As shown in the study, respondents from Singapore are speaking their own style of English, known as SCE (Alsagoff and Ho, 1998; Deterding, 2007). In terms of engaging in IB and for MNCs operating in Singapore, Singapore's style of speaking English as highlighted by the interviewees can act as a barrier when communicating with colleagues outside Singapore, even if they speak English.

### *5.3.2 MEETINGS*

This study shows that the exchange of complex and tacit knowledge requires frequent and close interactions between people. Socialisation in terms of team meetings and discussions was found to be important in the transfer of tacit knowledge, which is consistent with Nonaka and Takeuchi (1995). In connection to this, the respondents highlighted that it was not solely official face-to-face meetings that was of importance for knowledge transfer to occur, but also the unofficial communication and interaction was considered to be an important factor for the transfer of knowledge. This finding is in line with the research by Darr et al. (1995) who state that regular communication and personal acquaintances facilitates the transfer of knowledge. Several respondents in this study recognised the value of having regular meetings and our findings show that employees further recognised the need of even more frequent meetings. At the same time, it was found that it is important to calculate the value and cost of each meeting, as some respondents found meetings to be time-consuming and thereby serving as a hindrance for the day-to-day work to be done, overshadowing the potential positive impacts of the meetings on knowledge transfer.

### *5.3.3 SOFTWARE TOOLS AND PLATFORMS*

Findings of this study show that respondents are using video and online conferences in order to communicate throughout the MNC, when face-to-face meetings are not possible due to high physical distance. Several respondents found online meetings to provide positive environmental aspects as well as time and cost savings as it removes the need for travelling, consistent with prior findings of Bender and Fish (2000). At the same time our study strengthens prior findings of Argote and Ingram (2000) and Fahey and Prusak (1998) by showing that the fact that team members are dispersed globally, and meetings are rather

conducted through information technology then via face-to-face meetings increases the challenges related to trust. This finding is connected to elements in personal communication that easily get lost in written communication and even in visual communication. It is thus found to be of importance to preserve the tradition of sending people on cross-border meetings, even with online solutions increasingly hampering the need for travel. This confirms research by Darr et al. (1995) and Bender and Fish (2000), that both found how face-to-face interaction facilitates the transfer of knowledge.

Timeliness of communication is another factor that was revealed in the interviews to be hindered by high physical distance between the sender and recipient of information. Physical distance was found to affect timeliness of communication in two ways. First, respondents identified that knowledge was transferred by higher speed if the sender and receiver were located in the same office and the communication could be initiated instantly and in a face-to-face manner. Second, respondents expressed that one must consider the time difference associated with high physical distance when communicating across the organisation and that this could highly affect the timeliness of communication. An example of this is people in Asia only being able to talk to European peers in the afternoon, causing communication to be delayed or potentially even get lost.

The significance of choice regarding which technological tool to use becomes evident when discussing timeliness of communication and physical distance. E-mail is found by respondents to be a useful tool when timing or distance does not allow for face-to-face meetings or online conferences, consistent with findings of McDermot (1999). This tool of communication however holds some constraints in comparison to live communication as one cannot adapt the presentation of the information in response to the reactions of the receiver of information. The content and how clearly the information is presented in the e-mail is hence of major importance for the interacting parties to be aligned on the topic and what is being discussed, and thus for the outcome of knowledge transfer.

Other tools that were found to be of importance in this study and used frequently by the respondents were the organisations' open platforms, such as databases and intranets. As presented in the findings, it was stated that the use of an open platform could serve as a facilitator as it keep colleagues and the team in the loop about projects and thereby enables synergies for other parties within the organisation. At the same time, several respondents

highlighted that it was difficult to find information in a structured and easily accessible way. It was many times stated by the respondents that data spread across the organisation and that it takes time to locate existing knowledge within the firm. As a result, the respondents recognised the need for creating a common platform with global use potential. By using a common platform where all information is consolidated, the employees are able to get a better overview and thereby locate existing information more efficiently within the organisation. However, even if the respondents requested a more efficient system, they found it difficult to find one common platform that fulfils different needs for employees during different stages of work process, as individuals have different ways of working and assimilate information. This finding coincides with the research by Yuan et al (2013).

In addition, social media tools were found as a complement to long-standing databases and other communication tools. The research by Yuan et al (2013) shows that the use of social media tools can increase people's awareness of each other's expertise and effectively support the development of social capital. However, as presented in the findings, some respondents expressed that social media tools could serve as a barrier by interrupting the daily work of employees.

It is apparent from both earlier studies and the findings in this study that technology is an essential tool and enabler for knowledge transfer and that different tools are important within the MNC as they enable different actions and are suitable in different situations (Bender and Fish, 2000; Yuan et al., 2013). Technology also reinforces norms about documenting and information sharing, where norms play an important role in the adoption and usage of technology. As highlighted by several respondents the implementation of new systems could cause resistance from employees within the organisation as people by nature are resistant to change. Yuan et al. (2013) found that rivalry may arise between different generations of technology tools such as for example social media tools and long-standing databases. Our findings show that the implementation of a new technology does not automatically mean full adoption of the technology. In this sense, training in technology is important to reduce resistance within the organisation. However, the need for training is dependent on the prior technological skills of the employees. This issue is also discussed by Yuan et al., (2013) who state that awareness of the value of older technology and concerted efforts for migration of new technology are key to prevent potential knowledge silos and avert difficulties for knowledge transfer.

## 5.4 SHARED PRIOR KNOWLEDGE AND SHARED UNDERSTANDING IN THE KNOWLEDGE TRANSFER PROCESS

Common knowledge was identified as an important enabler for communication and knowledge transfer between team members, where the fact that employees share the same backgrounds facilitated the communication between members. This finding is also correlated with the research provided by Cohen and Levinthal (1990) who demonstrates that it is important to have common prior knowledge in order for the recipient to assimilate new knowledge. As found in this study, it is important to use different languages when communicating with different teams, where it is important to find a common ground in order to be able to communicate and transfer knowledge successfully. For example, it was found that a common technical language was an important enabler for communication, as you cannot use the same language when talking with an engineer as to a marketer, simply because they do not have the prior related knowledge in common.

Even if the use of the same language facilitates the communication between team members as discussed by Harzing and Pudelko (2014) there are still some existing challenges that were highlighted by several respondents. One of these challenges was lack of shared understanding, which is consistent with the findings of Grant (1996). Even if we speak the same language we tend to think differently due to our own unique past experiences, that in turn help us understand and manage our own contextual surrounding in relation to others. Another aspect that was stated by the respondents was the importance of being clear and thus expressing the message in a concise manner. This aspect was important in order to create a common understanding and to make sure that the key objective was communicated.

In order for the message sent to reach the receiver in a satisfactory manner, it is important that information is presented in a structured way. Another layer to this problem is that different people have different understandings from the same piece of information. This was shown in the findings, as individuals tend to see information from their own unique point of view. This finding correlated with the findings of a study by Schutz (1967), where it was found that the knowledge structures are not the same for the person sending the message as for the receiver.

## 5.5 INFORMATION AND NETWORKS TO LOCATE AND SHARE EXISTING KNOWLEDGE

The findings of this study shows that to locate existing knowledge can be a time consuming task, which could be a significant barrier for knowledge transfer as the identification of knowledge is a prerequisite for the knowledge transfer process to begin (Szulanski 1996). To find information within the MNC was perceived as a particularly difficult issue when there is a lack of relevant networks in place. Network issues were found to affect knowledge transfer in several different ways.

First, employee turnover can cause network imbalances and negatively affect social ties within the organisation, leaving employees not knowing where to locate relevant information and knowledge. This current finding of employee turnover to be a barrier for both information and knowledge transfer within the MNC is consistent with findings of Inkpen and Tsang (2005) that find creation of social capital to diminish with an unstable network. Internal job rotation has in the current study contrarily been highlighted as a factor that could positively influence knowledge transfer as it keeps the people in the MNC continuously motivated and willing to learn and share information as well as knowledge.

Second, trust is a factor for knowledge transfer to occur and if there is no trust there will be no willingness for people to share their knowledge, discussed by Powell et al. (1996) and Dyer and Singh (1998) and apparent from the current study. The social capital related to trust (Naphiet and Ghoshal, 1998) within the MNC takes time to build (Granovetter, 1985) and is in the current study found to be something that could be broken down by one single action. To be open and clear in order to retain trust was identified by interviewees in this study as critical for knowledge transfer.

In contrast to the findings on decentralisation of authority as a facilitator for knowledge transfer by Inkpen and Tsang (2005), the current study finds the need for structured and centralised guidelines for whom to contact to receive certain knowledge and information. Leaving it up to the individual to without clear guidelines identify a piece of knowledge or information for a particular situation might result in the ideal information of knowledge not reaching the individual (even though it resides within the MNC). This as the individual is likely to stay within his or her regular sources of information. A more standardised way of

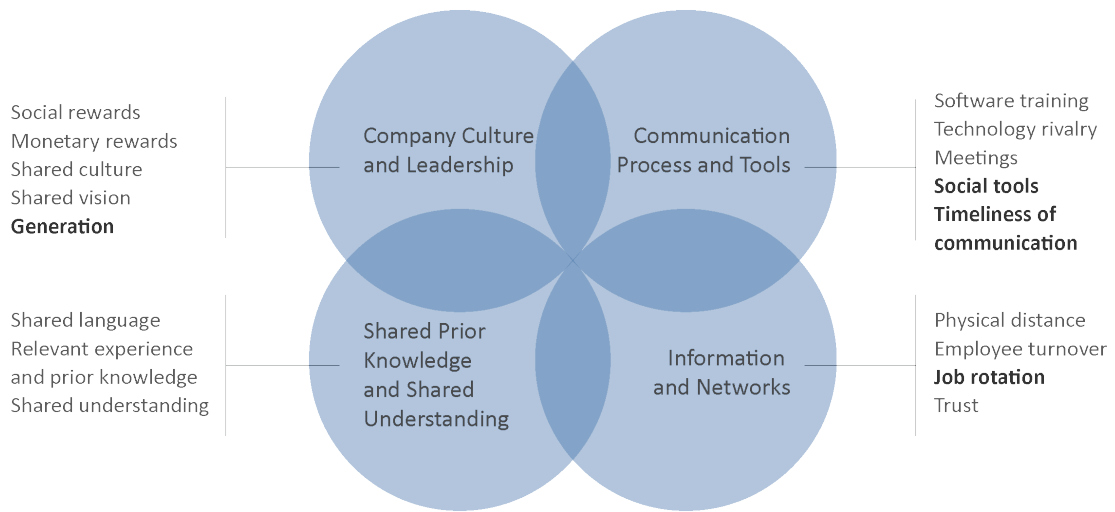
defining working roles was also requested in the current study as it could serve to facilitate the sourcing of relevant information and knowledge within the MNC.

## 5.6 CONTRIBUTION OF THE INCLUSION OF A SHARED LANGUAGE

The recognition of a shared language context and its inclusion when studying knowledge transfer does not only confirm several previous findings, but also reveals additional barriers and facilitators. All potential barriers and facilitators presented in the literature review has been discussed in the interviews of this study and discussed in this chapter. All of these factors, except from one was confirmed by the current study. The main findings of this study beyond confirming previous findings presented in the literature review were related to generation, timeliness of communication, job rotation and social tools.

Generation is found to be an important factor that has to be considered when managing a team of employees, especially as the 1990s generation is now entering into the workplace. Timeliness of communication is found to be an important factor for successful knowledge transfer to occur and job rotation is important for people within the organisation to be willing to share as well as receive information. With regards to social tools, this study shows an opposing picture compared to prior findings by argumenting that social tools might not only be a facilitator for knowledge transfer but can also be a factor interrupting the assimilation of new information. The findings of the current study are presented by category in Figure 13 below, with these most prominent findings highlighted.

**Figure 13.** Barriers and facilitators for knowledge transfer: factors revealed in a shared language setting highlighted.



*Source: Figure compiled by authors*

## 6. CONCLUSION

*This section provides an overview and summary of the study's theoretical and empirical contributions to current academic literature at the intersection of the disciplines of knowledge management, language studies and IB studies. It presents managerial implications to the findings of this study and study limitations. Future recommended research in the field is also presented.*

### 6.1 FINDINGS AND THEORETICAL CONTRIBUTIONS

Previous research have recognised language as one of the most important functions in IB activities and has been identified as a hindrance for effective knowledge transfer to occur. In recent years an increasing number of MNCs have adopted English as lingua franca, meaning that MNCs no longer operates in a multilingual environment as before and that language does no longer constitute the same barrier for knowledge transfer. But despite the adoption of English as lingua franca the question of effective communication remains. Even if shared language and knowledge transfer are relational concepts, previous research has not fully incorporated both these themes and studied their interconnection.

In this study the relationship between a shared language and knowledge transfer has been investigated, in particular we uncovered and analysed possible barriers and facilitators for knowledge transfer in a setting where a shared company language has been adopted. The research questions that were formulated in order to examine knowledge transfer in a shared language context were the following; *does a shared language context contribute to or hinder the transfer of knowledge within and between collaborating teams?* and *what other factors contribute to or hinder the transfer of knowledge in team collaboration with a shared language?*. With a shared language adopted by MNCs, language as a determinant for knowledge transfer is found to be less of a concern, while the dynamics of barriers and facilitators for knowledge transfer appears to partially change with changing language structures in the MNC.

Our study shows that a shared language context eliminates the concern of language as a barrier for knowledge transfer as none of the respondents in this study, all operating within a shared language context, expressed any concern about whether a shared language mattered for knowledge transfer. The absence of this concern is particularly noticeable as language in



earlier studies has been identified as one of the most important determinants for successful knowledge transfer (Argote and Ingram, 2000; Welch and Welch, 2008). The shared language setting to a large extent removes language as a barrier for knowledge transfer, but there are several other potential barriers and facilitators for knowledge transfer being present even with a shared language in the MNC.

Several factors influencing knowledge transfer that are found in the current study, incorporating a shared language setting, was consistent with previous findings on knowledge transfer where shared language has not been incorporated in its full essence. Nevertheless, the relationship between a shared language and knowledge transfer appears to be more complex and multifaceted than previously assumed. This is discovered in the current study as the shared language context does not only confirm several barriers and facilitators identified within the MNC in earlier studies on research units without a shared language, but the context of a shared language also sheds light on additional barriers and facilitators for knowledge transfer that the contemporary MNC faces.

The empirical findings show that a strong organisational culture is needed in order to align the work among organisational members. An organisation needs a vision that synchronises the entire organisation and openness as well as explicitly stated values visible in everyday managerial actions is important for effective knowledge transfer to occur. Our study also shows that an important task of managers is to provide support in terms of mentoring programs and through different reward systems. Good leadership can further encourage employees to share valuable knowledge. An important contribution of the current study is the finding that the most suitable leadership style in a certain situation can vary with the individual that is being managed depending on generation.

As the study shows, lack of software training can constitute a barrier for knowledge transfer. Multiple systems within the MNC can also create rivalry between the different tools, hindering knowledge transfer. These findings are consistent with prior literature, the current study although contributes with additional findings regarding the software architecture. It is found that the software architecture of an organisation needs to be designed in a way that is open, clear and common to all organisational members, as software systems that are too complex to manage may serve as a hindrance for knowledge transfer. Previous research suggests that social media tools facilitate the transfer of knowledge as it creates social capital.

On the contrary, our findings reveal that social media tools can also serve as a barrier by interrupting the daily work.

Group dynamics are important for a well-functioning team and hence the transfer of knowledge. The findings of this study show that consistent group meetings are important as it allow employees to share experiences and knowledge. Further, our findings reveal that close and stable social ties are important for knowledge transfer, where high turnover of employees limit the creation of social capital. The study contributes to the existing literature by showing that job rotation can be an effective tool for the transfer of knowledge. Another aspect that was found in this study was the timeliness of communication, where physical proximity facilitated communication between team members and hence the transfer of knowledge. Physical proximity was found to enable instant initiation of communication as well as removing the barrier of time difference.

## 6.2 MANAGERIAL IMPLICATIONS

This study shows that adopting a shared language is important and effective but on its own not enough to ensure successful knowledge transfer within the MNC. Apart from adopting a company language, several actions can thus be taken by management to ensure effective knowledge transfer within the organisation.

Our findings reveal that generational differences can pose as a management challenge and different management styles may have to be used in order to facilitate and promote knowledge transfer between team members within the MNC. This finding is particularly important as the 1990 generation is now entering the workplace with a stronger propensity to question claims and decisions. It is also important to have regular meetings in order to build trust within organisational units and allow for knowledge to flow between individuals. Face-to-face meetings are a crucial medium for communication as it allows for tacit knowledge to be transferred between individuals and for common understanding to be built.

Common platforms should be developed in order for all members to be able to communicate and share information as well as knowledge. These common platforms should be open in presenting information to all members of the organisation, as this transparency can not only build trust but also enhance knowledge on developments on relevant projects. New employees

should also receive training in company software for all members of the organisation to be able to use the common software solutions.

### 6.3 STUDY LIMITATIONS

As the aim of the study is to understand if a shared language is enough to overcome barriers for knowledge transfer, the scope of this study is delimited to investigating the link between a shared language and knowledge transfer. According to Gupta and Govindarajan (2000) the transfer of knowledge tends to be slow. For deeper insights into this process, what would be beneficial is the undertaking of a multi-year study of each transfer process. This understanding of a longitudinal perspective is confined in this study, where the long-term real-time investigation of the phenomenon cannot be fully captured.

The generalisability of the study may also be limited due to the investigation of solely two companies operating in two different industries. The number of interviews are limited to a total of 13, with five complementary surveys. In order to provide a counter-balance for this instantaneous perspective to the findings, what has been done in this study in terms of methodology is to have a data driven approach in data analysis, enabled by the use of a concordance software. As such, the findings can be said to be derived mainly from respondent insights, coupled with researcher inferences towards the conclusion of this study. As such, it is still believed that the most significant barriers and facilitators for knowledge transfer have been identified through the data collected.

### 6.4 RECOMMENDATIONS FOR FUTURE RESEARCH

The current study contribute to the existing research by investigating how effective a shared language truly is for knowledge transfer across different organisational contexts, by examining the effectiveness of shared language on knowledge transfer within different research units. As digital infrastructures mature, a shared language/s and knowledge transfer will continue to be an important aspect for the global operations of the MNC.

As the inclusion of a shared language into the research field of knowledge management is still new and unexplored, several measures can be acted upon to strengthen the findings of this study and to further investigate the topic. A general recommendation is to conduct more

studies on knowledge transfer with the research units having adopted a shared language and to in the study fully recognise the role of a shared language.

To further increase the generalisability of the current findings and to control for potential context specific findings, future research should incorporate in-depth data from several MNCs. It is also useful to collect data over time with respondents as this could serve to reveal other potential factors influencing the complex topic of knowledge transfer. To obtain a full and nuanced picture, it is useful to further increase the scope of respondents in the MNC in two different ways. First, respondents across different positions, from junior to senior levels, should be targeted as they can provide different views. Second, to obtain data from individuals just entering the MNC and individuals with several years of experience within the company is useful as they are likely to look at organisational issues from different perspectives.

The inclusion of corpus analysis into the field of IB studies and knowledge management would be advantageous also for future research on knowledge transfer in MNCs. This as a corpus analysis increases objectivity of the study and thus assists in providing a truthful and complete picture of knowledge transfer and its influencing factors.

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# APPENDIX

## APPENDIX 1. INTERVIEW GUIDE

### I. INDIVIDUAL level

- a. Name of group.
- b. Describe your function / role within the group.
- c. What type of knowledge / information do you need to accomplish your daily tasks?
- d. What software platforms do you use on a daily basis? What functions does this platform allow you to accomplish in your work?
- e. Are there any work flows that you currently deem too time consuming, redundant or inefficient? What would you like to see improved in terms of the system software architecture?
- f. If there was a 'dream architecture software / template' you would like to see actualize for your own work, could you describe what that would ideally look like?

### II. SOCIAL level

- a. If there was input into your work in terms of information needed, which other function / roles would you describe as important for your work to get done?
- b. Is there a way to make the input of information for you smoother, faster and more efficient?
- c. Once your work is done, do you forward that information to another function / role in the team or organisation? If yes, who might that be?
- d. What would facilitate the hand-over of information from you to the receiver?
- e. If there was an ideal way of input and output of information flows, coming in for you to do your tasks and then going out from you to a receiver of your work, how might you describe that information flow? Can that be visualized in a common template / platform for work?
- f. Would you recommend social work tools to be integrated into a common platform if possible? If yes and if none already exists, what types of social tools (email, chat function, direct talk etc) would you like to see incorporated into a common software platform?

### III. ORGANISATIONAL level

- a. If and when you face a challenging day at work, is there a person or persons that you can turn to with regards to mentorship to help you in your work? If yes, who might that person / persons be?
- b. What work organizational practices, whether it is corporate culture or management styles would you like to see at organisational level that could help you in your work?
- c. What does 'leadership' mean to you?
- d. What general improvements in corporate culture and atmosphere would you like to see?

#### IV. REGIONAL / CROSS-ORGANISATIONAL level

- a. Which aspects of the input and output of your work flow goes across organisations either within the country or to the European region per se?
- b. Is there a work flow, input or output that you see could currently be optimized? Do you have any personal recommendations for a better way of doing things compared to as they are now?

#### V. GLOBAL / CROSS-ORGANISATIONAL level

- a. Which aspects of the input and output of your work flow goes across organisations on a global scale i.e. to regions outside of Europe?
- b. Is there a work flow, input or output that you see could currently be optimized? Do you have any personal recommendations for a better way of doing things compared to as they are now?

#### VI. ENVIRONMENTAL level

- a. With your knowledge and experience in the field, what in your perspective would contribute to sustainable business practices for the long term?

APPENDIX 2. COLLOCATION RESULTS FOR THE WORD LANGUAGE, INDICATING THE MOST COMMON CO-OCCURRING WORDS/CONCEPTS FOR THE WORD LANGUAGE.

AntConc 3.4.1m (Macintosh OS X) 2014

Concordance Concordance Plot File View Clusters/N-Grams Collocates Word List Keyword List

Total No. of Collocate Types: 176 Total No. of Collocate Tokens: 430

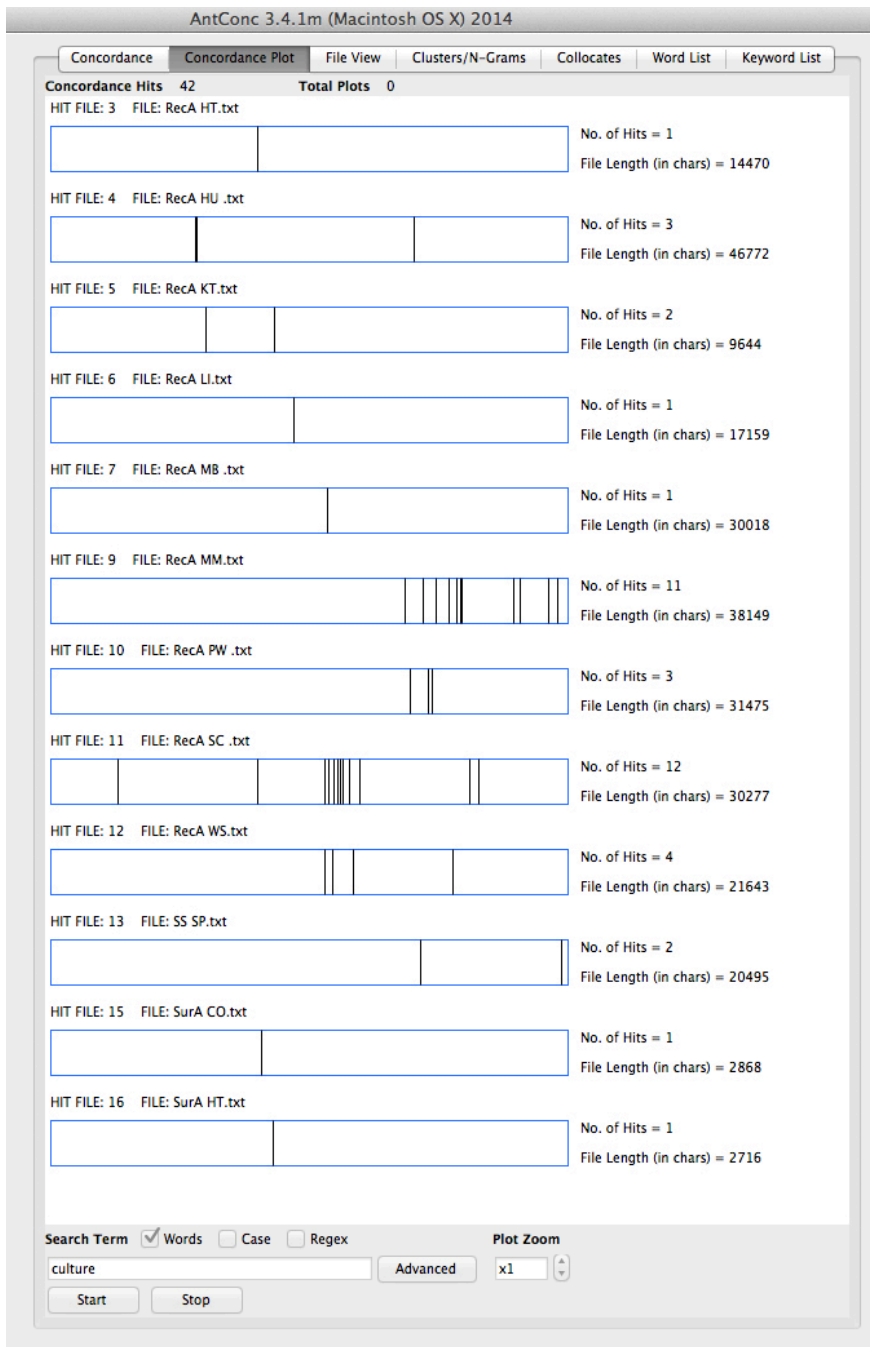
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1	2	2	0	11.48529	roman
2	2	1	1	11.48529	regardless
3	1	1	0	10.48529	originally
4	2	1	1	10.48529	nation
5	1	1	0	10.48529	meat
6	1	1	0	10.48529	mates
7	1	0	1	10.48529	levels
8	1	1	0	10.48529	confused
9	1	0	1	10.48529	character
10	1	1	0	10.48529	bulgaria
11	2	2	0	9.90033	measuring
12	3	2	1	9.74833	farmer
13	11	4	7	9.69680	english
14	1	0	1	9.48529	wise
15	1	0	1	9.48529	vice
16	1	1	0	9.48529	tries
17	1	0	1	9.48529	touched
18	1	0	1	9.48529	sets
19	1	1	0	9.48529	grammatical
20	1	1	0	9.48529	establish
21	1	0	1	9.48529	conflation
22	1	1	0	9.48529	chatting
23	1	0	1	9.48529	abbreviations
24	1	0	1	8.90033	switch
25	1	0	1	8.90033	primarily
26	1	0	1	8.90033	president
27	1	1	0	8.90033	formal
28	1	1	0	8.90033	adopt
29	2	1	1	8.67794	shared
30	12	6	6	8.64399	language
31	8	7	1	8.48529	speak
32	1	1	0	8.48529	mother
33	1	0	1	8.48529	differently
34	2	0	2	8.31537	however
35	1	1	0	8.16336	please
36	2	1	1	8.16336	latin
37	1	0	1	8.16336	helps
38	1	1	0	7.90033	speaking
39	1	0	1	7.90033	interest
40	2	1	1	7.78485	skills
41	1	0	1	7.67794	whenever
42	1	0	1	7.67794	relevant

Search Term  Words  Case  Regex  Window Span  Same

language  From... 5L To... 5R

Sort by  Invert Order

### APPENDIX 3. CONCORDANCE PLOT FOR THE WORD CULTURE, INDICATING FREQUENCY AND DISTRIBUTION OF WORD USE IN CORPA.



APPENDIX 4. COLLOCATION RESULTS FOR THE WORD CULTURE, INDICATING THE MOST COMMON CO-OCCURRING WORDS/CONCEPTS FOR THE WORD CULTURE.

AntConc 3.4.1m (Macintosh OS X) 2014

Concordance   Concordance Plot   File View   Clusters/N-Grams   **Collocates**   Word List   Keyword List

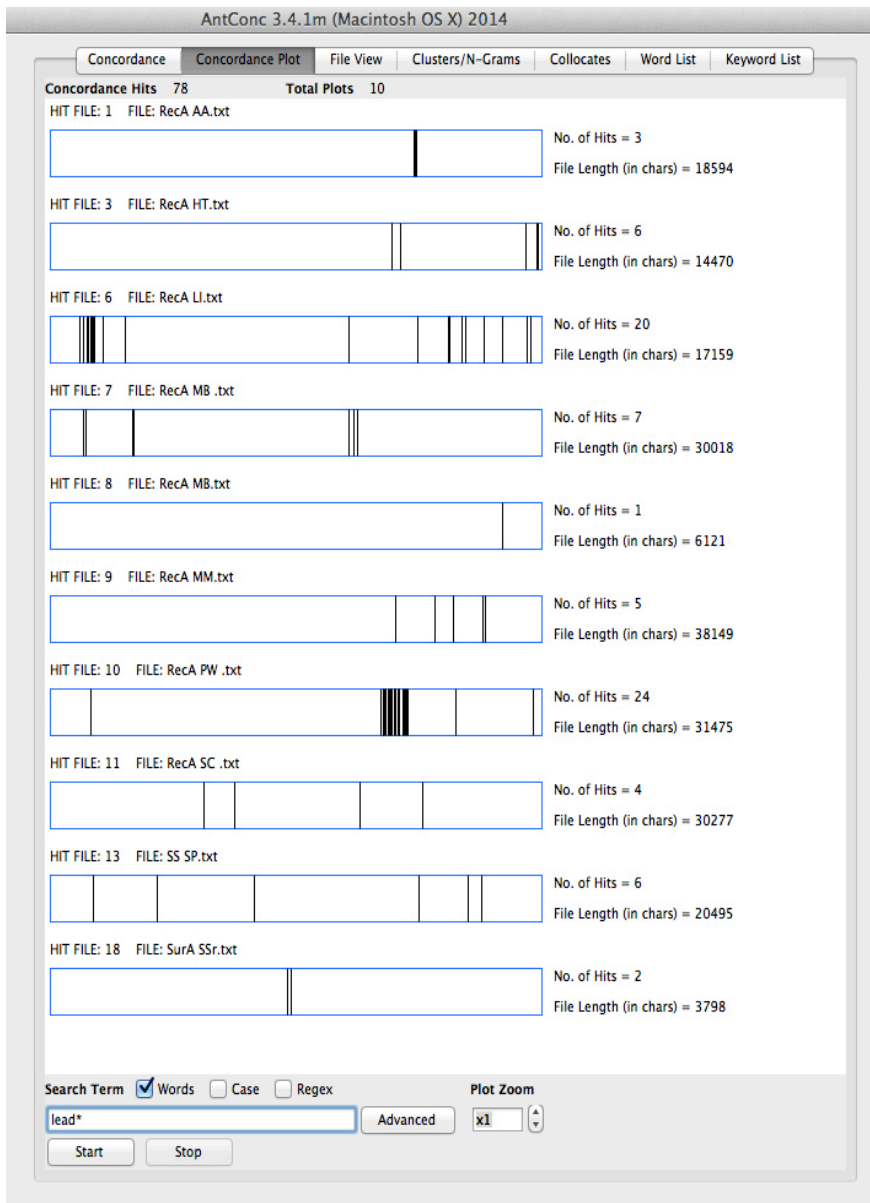
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3	1	0	1	10.51924	guide
4	2	2	0	10.51924	adapt
5	2	1	1	9.93428	mix
6	13	13	0	9.69612	corporate
7	1	0	1	9.51924	unite
8	1	1	0	9.51924	styles
9	1	0	1	9.51924	motivate
10	1	1	0	9.51924	dependent
11	1	1	0	9.51924	carrot
12	2	1	1	9.19731	values
13	1	1	0	8.93428	scandinavian
14	1	1	0	8.93428	met
15	1	0	1	8.93428	japanese
16	1	1	0	8.93428	grown
17	1	1	0	8.93428	adopt
18	2	2	0	8.71188	environmental
19	1	0	1	8.51924	reduce
20	1	1	0	8.51924	due
21	1	1	0	8.51924	developing
22	1	1	0	8.51924	acquisitions
23	2	0	2	8.34931	fika
24	2	0	2	8.34931	differences
25	1	1	0	8.19731	though
26	1	0	1	8.19731	organizational
27	1	0	1	8.19731	normal
28	1	1	0	8.19731	definition
29	1	1	0	8.19731	become
30	1	0	1	7.93428	rewarded
31	1	0	1	7.93428	according
32	2	0	2	7.81880	companies
33	2	0	2	7.81880	changes
34	2	2	0	7.71188	ii
35	1	1	0	7.71188	din
36	1	0	1	7.71188	american
37	1	0	1	7.51924	themselves
38	1	1	0	7.51924	depending
39	1	1	0	7.51924	besides
40	1	0	1	7.51924	absolutely
41	2	1	1	7.43178	learn
42	1	1	0	7.34931	set

Search Term  Words  Case  Regex   Window Span  Same  
 culture   Advanced   From... 5L   To... 5R  
        
 Sort by  Invert Order   Min. Collocate Frequency 1



APPENDIX 5. CONCORDANCE PLOT FOR THE WORD LEAD\*, INDICATING FREQUENCY AND DISTRIBUTION OF WORD USE IN CORPA.



APPENDIX 6. COLLOCATION RESULTS FOR THE WORD LEADERSHIP, INDICATING THE MOST COMMON CO-OCCURRING WORDS/CONCEPTS FOR THE WORD LEADERSHIP.

AntConc 3.3.5m (Macintosh OS X) 2012

Concordance Concordance Plot File View Clusters/N-Grams **Collocates** Word List Keyword List

Total No. of Collocate Types: 43 Total No. of Collocate Tokens: 93

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3	2	2	0	10.31391	bad
4	1	0	1	9.31391	fixing
5	2	2	0	8.72894	strong
6	1	1	0	8.57694	nice
7	1	0	1	8.57694	definition
8	1	1	0	8.57694	define
9	1	1	0	8.09151	thought
10	1	0	1	8.09151	style
11	1	1	0	6.57694	feel
12	3	0	3	6.04089	team
13	1	1	0	5.99198	call
14	1	0	1	5.94467	probably
15	3	3	0	5.81141	good
16	1	0	1	5.68942	role
17	1	1	0	5.61347	does
18	1	0	1	5.37531	someone
19	1	1	0	5.17095	their
20	1	0	1	5.01623	basically
21	1	0	1	4.61347	knowledge
22	2	2	0	4.40702	our
23	2	1	1	4.36749	as
24	2	1	1	4.24066	think
25	1	0	1	4.21237	mean
26	1	1	0	4.06598	cc
27	2	0	2	3.39504	or
28	1	1	0	3.35971	my
29	1	0	1	3.15740	from
30	1	0	1	3.15740	e
31	1	0	1	3.00405	can
32	3	3	0	2.81318	of
33	1	0	1	2.63208	there
34	1	1	0	2.58599	what
35	4	0	4	2.46008	is
36	5	3	2	2.33282	the
37	1	1	0	2.27682	not
38	2	1	1	1.57356	that
39	1	0	1	1.47680	so
40	1	1	0	1.25501	in
41	1	0	1	0.49373	you
42	1	1	0	0.26134	to
43	31	0	0	-1	leadership

Search Term  Words  Case  Regex  Advanced  Same

leadership From... 1L To... 1R

Start Stop Sort

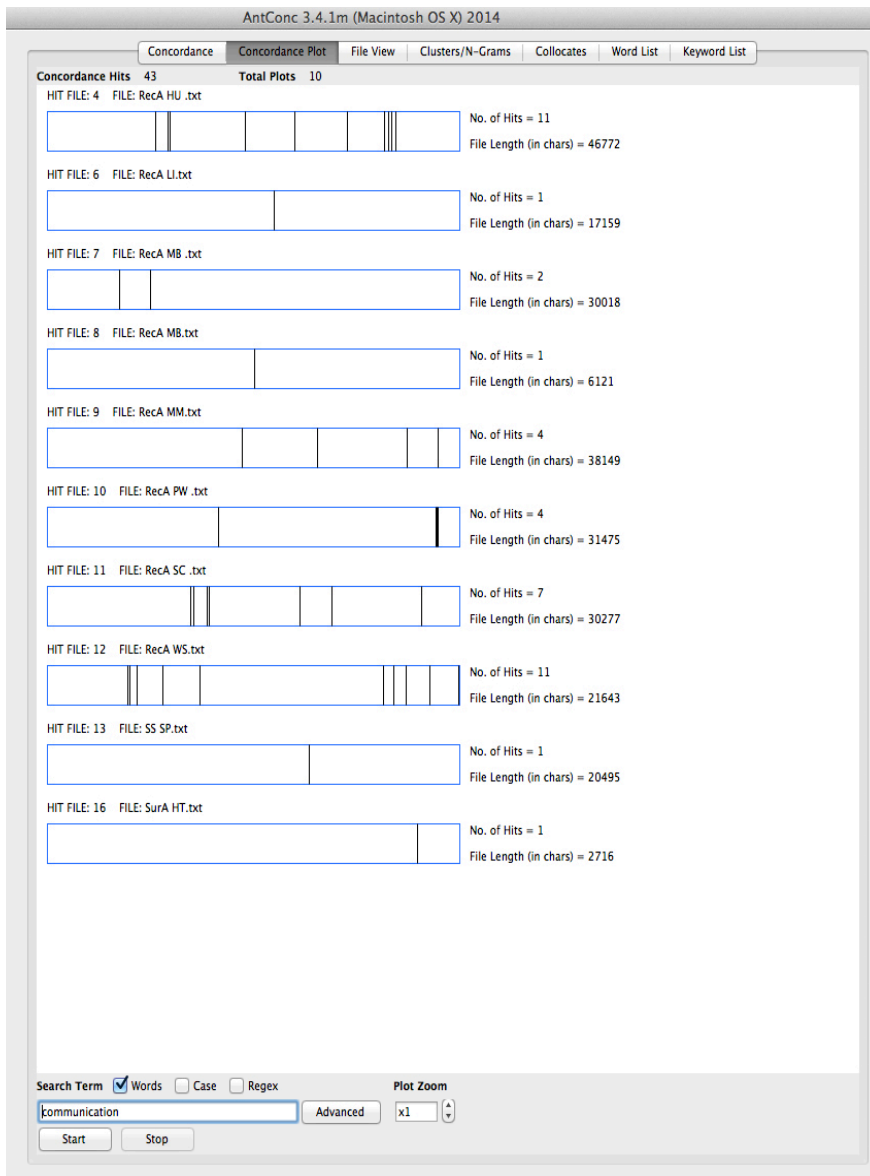
Sort by  Invert Order

Sort by Stat

Min. Collocate Frequency 1

Clone Results

## APPENDIX 7. CONCORDANCE PLOT FOR THE WORD COMMUNICATION, INDICATING FREQUENCY AND DISTRIBUTION OF WORD USE IN CORPA.



APPENDIX 8. COLLOCATION RESULTS FOR THE WORD COMMUNICATION, INDICATING THE MOST COMMON CO-OCCURRING WORDS/CONCEPTS FOR THE WORD COMMUNICATION.

AntConc 3.4.1m (Macintosh OS X) 2014

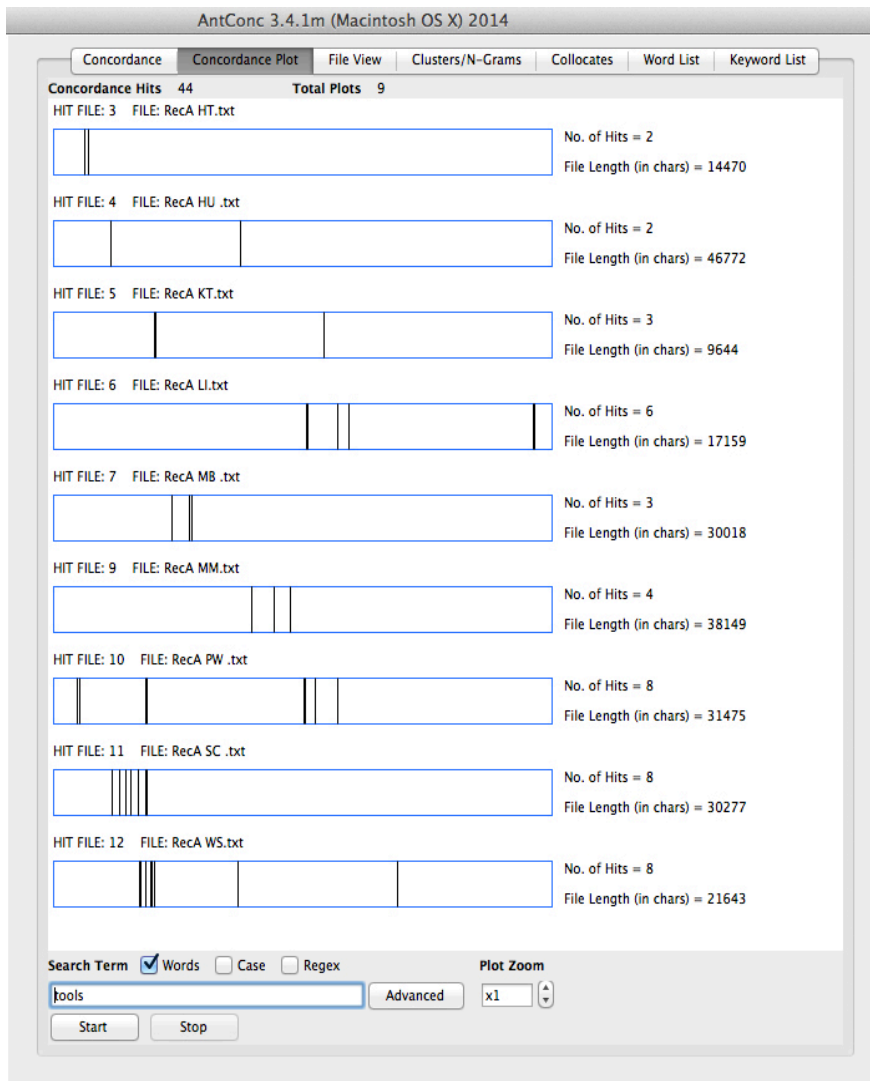
Concordance   Concordance Plot   File View   Clusters/N-Grams   **Collocates**   Word List   Keyword List

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5	1	1	0	10.48529	stroll
6	1	0	1	10.48529	regardless
7	1	0	1	10.48529	purposes
8	1	0	1	10.48529	partied
9	1	1	0	10.48529	opening
10	1	0	1	10.48529	misinterpretation
11	2	1	1	10.48529	lost
12	1	1	0	10.48529	involves
13	1	1	0	10.48529	ease
14	1	1	0	10.48529	advocates
15	1	1	0	9.48529	versus
16	1	1	0	9.48529	unofficial
17	1	1	0	9.48529	target
18	1	1	0	9.48529	street
19	1	1	0	9.48529	sharepoint
20	2	1	1	9.48529	session
21	1	0	1	9.48529	serve
22	2	2	0	9.48529	lines
23	1	1	0	9.48529	inside
24	1	1	0	9.48529	fastest
25	1	0	1	9.48529	claims
26	3	1	2	9.48529	channels
27	1	0	1	9.48529	aligned
28	1	0	1	9.48529	agencies
29	1	1	0	9.48529	achievement
30	1	0	1	8.90033	stakeholder
31	1	0	1	8.90033	skill
32	1	0	1	8.90033	primarily
33	1	0	1	8.90033	networks
34	1	1	0	8.90033	microsoft
35	1	1	0	8.90033	facilitator
36	1	1	0	8.90033	com
37	1	1	0	8.90033	channel
38	1	0	1	8.90033	bridges
39	1	1	0	8.48529	written
40	1	0	1	8.48529	subjects
41	1	0	1	8.48529	cards
42	1	0	1	8.48529	avoid

Search Term  Words  Case  Regex   Window Span  Same  
 communication   Advanced   From... 5L   To... 5R  
         Min. Collocate Frequency 1  
 Invert Order   Sort by Stat

## APPENDIX 9. CONCORDANCE PLOT FOR THE WORD TOOLS, INDICATING FREQUENCY AND DISTRIBUTION OF WORD USE IN CORPA.



APPENDIX 10. COLLOCATION RESULTS FOR THE WORD TOOLS, INDICATING THE MOST COMMON CO-OCCURRING WORDS/CONCEPTS FOR THE WORD TOOLS.

AntConc 3.4.1m (Macintosh OS X) 2014

Concordance Plot File View Clusters/N-Grams Collocates Word List Keyword List

Total No. of Collocate Types: 181 Total No. of Collocate Tokens: 440

Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate
1	1	1	0	10.45212	wirehandles
2	1	0	1	10.45212	translate
3	1	0	1	10.45212	templates
4	1	1	0	10.45212	struggles
5	1	0	1	10.45212	sandvik
6	1	0	1	10.45212	purposes
7	1	1	0	10.45212	primary
8	1	1	0	10.45212	papers
9	3	2	1	10.45212	microsoft
10	1	1	0	10.45212	mentions
11	2	2	0	10.45212	household
12	1	0	1	10.45212	helping
13	1	0	1	10.45212	facials
14	1	0	1	10.45212	entering
15	1	0	1	10.45212	communications
16	1	1	0	10.45212	adopted
17	5	4	1	10.18909	steco
18	1	1	0	9.45212	traditional
19	1	0	1	9.45212	serve
20	1	0	1	9.45212	monitor
21	1	0	1	9.45212	harm
22	6	6	0	9.03709	social
23	1	0	1	8.86716	rely
24	1	0	1	8.86716	primarily
25	1	0	1	8.86716	elements
26	1	1	0	8.45212	train
27	3	1	2	8.45212	manage
28	1	1	0	8.45212	developing
29	1	0	1	8.45212	although
30	8	7	1	8.16672	software
31	1	0	1	8.13020	received
32	1	1	0	8.13020	members
33	1	0	1	8.13020	integrated
34	1	0	1	8.13020	database
35	1	0	1	8.13020	collaboration
36	4	0	4	7.80827	used
37	1	0	1	7.64477	yet
38	1	0	1	7.64477	skype
39	1	1	0	7.64477	shared
40	1	0	1	7.64477	link
41	6	3	3	7.57766	tools
42	10	6	4	7.47027	use

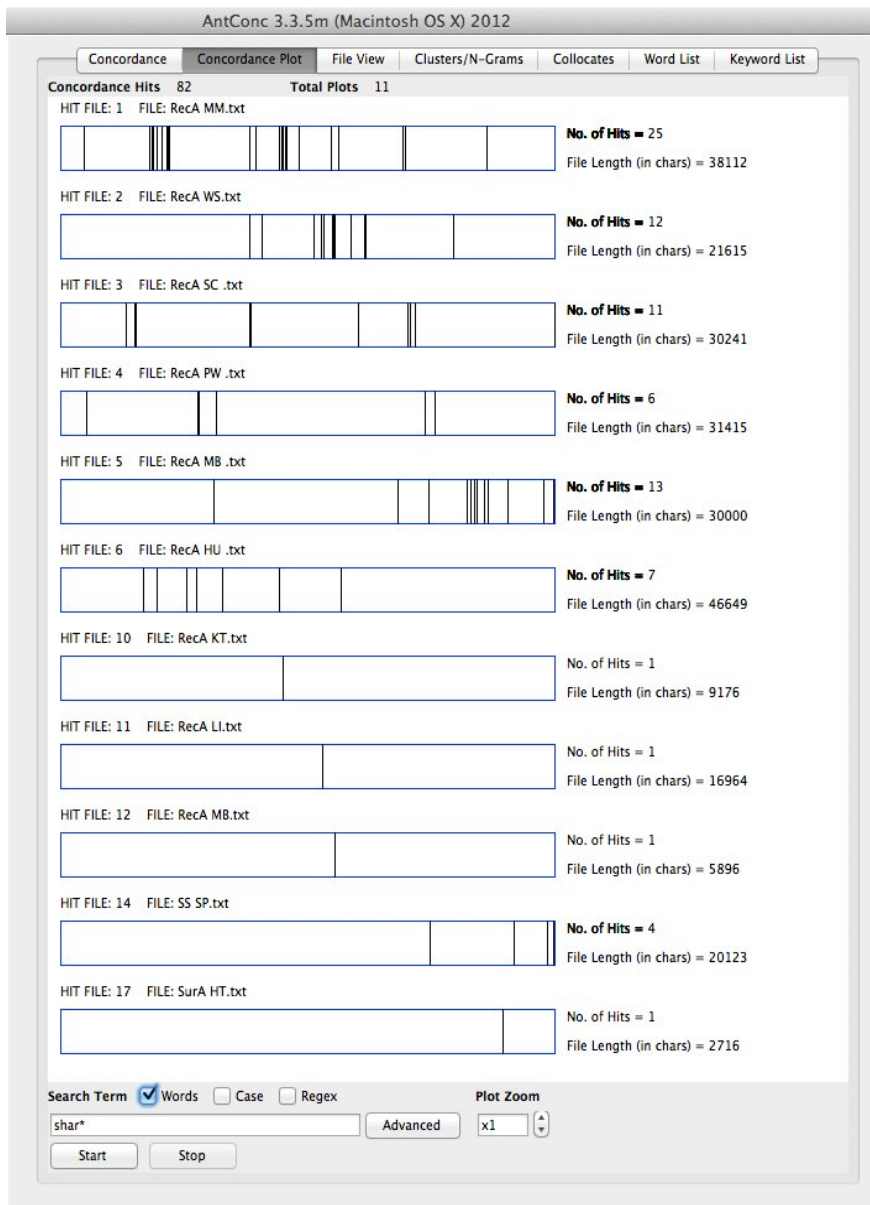
Search Term  Words  Case  Regex  Window Span  Same

tools  From... 5L To... 5R

Min. Collocate Frequency 1

Sort by  Invert Order

# APPENDIX 11. CONCORDANCE PLOT FOR THE WORD SHAR\*, INDICATING FREQUENCY AND DISTRIBUTION OF WORD USE IN CORPA.



APPENDIX 12. COLLOCATION RESULTS FOR THE WORD SHAR\*, INDICATING THE MOST COMMON CO-OCCURRING WORDS/CONCEPTS FOR THE WORD SHAR\*.

AntConc 3.3.5m (Macintosh OS X) 2012

Concordance Concordance Plot File View Clusters/N-Grams **Collocates** Word List Keyword List

Total No. of Collocate Types: 75 Total No. of Collocate Tokens: 246

Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate
1	1	1	0	10.26810	sentences
2	1	1	0	10.26810	quick
3	1	1	0	10.26810	creating
4	1	0	1	9.68314	nowadays
5	1	1	0	9.68314	microsoft
6	2	0	2	9.46075	points
7	1	0	1	9.26810	folders
8	6	0	6	9.15263	point
9	1	0	1	8.68314	purpose
10	1	0	1	8.46075	link
11	1	0	1	8.26810	objective
12	26	13	13	8.26810	information
13	1	0	1	7.80867	online
14	2	0	2	7.68314	best
15	1	0	1	7.56766	such
16	1	1	0	7.46075	opinion
17	2	0	2	7.13882	w
18	2	0	2	6.80867	everything
19	1	0	1	6.68314	across
20	1	1	0	6.62425	used
21	1	1	0	6.62425	access
22	1	1	0	6.51322	av
23	1	1	0	6.13882	even
24	1	0	1	6.02018	than
25	1	0	1	6.02018	part
26	1	1	0	6.02018	common
27	2	2	0	5.98270	knowledge
28	1	0	1	5.84184	language
29	1	0	1	5.84184	communication
30	1	0	1	5.80867	tools
31	6	0	6	5.32950	with
32	1	0	1	5.20201	right
33	2	0	2	5.10823	all
34	1	0	1	5.02018	which
35	3	3	0	4.95825	can
36	1	0	1	4.82516	within
37	1	1	0	4.82516	g
38	1	0	1	4.79237	has
39	2	2	0	4.77625	our
40	2	2	0	4.75240	will
41	17	17	0	4.71804	to
42	2	2	0	4.69825	also
43	1	1	0	4.66819	should
44	1	1	0	4.60989	really
45	5	3	2	4.58160	for
46	3	0	3	4.54018	what

Search Term  Words  Case  Regex Window Span  Same

shar\* From... 1L To... 1R

Start Stop Sort Min. Collocate Frequency 1

Sort by  Invert Order Sort by Stat Clone Results





APPENDIX 14. COLLOCATION RESULTS FOR THE WORD COMMON, INDICATING THE MOST COMMON CO-OCCURRING WORDS/CONCEPTS FOR THE WORD COMMON.

AntConc 3.3.5m (Macintosh OS X) 2012

Concordance   Concordance Plot   File View   Clusters/N-Grams   **Collocates**   Word List   Keyword List

Total No. of Collocate Types: 38   Total No. of Collocate Tokens: 114

Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate
1	2	2	0	10.60514	lowest
2	6	0	6	10.60514	ground
3	2	0	2	10.60514	denominator
4	4	1	3	9.43521	roles
5	1	0	1	9.02018	unfortunately
6	1	0	1	9.02018	cyber
7	1	0	1	8.28321	values
8	1	0	1	8.28321	site
9	1	0	1	8.28321	responsibilities
10	7	0	7	8.02018	platform
11	3	3	0	7.60514	having
12	1	0	1	7.43521	drive
13	1	0	1	6.28321	place
14	2	0	2	6.17887	language
15	2	0	2	6.14571	tools
16	1	0	1	6.02018	across
17	1	1	0	5.85025	global
18	1	1	0	5.17887	most
19	1	0	1	5.17887	communication
20	2	2	0	5.12940	no
21	1	0	1	5.11329	share
22	1	0	1	5.05055	problem
23	1	1	0	5.02018	find
24	2	2	0	5.00523	quite
25	1	0	1	4.51768	thing
26	1	1	0	3.72250	h
27	1	0	1	3.54986	b
28	8	8	0	3.53234	a
29	1	1	0	3.08944	your
30	6	5	1	2.86480	that
31	5	5	0	2.83908	the
32	2	2	0	1.93448	of
33	1	1	0	1.80101	this
34	1	0	1	1.74405	but
35	1	1	0	1.46559	are
36	1	0	1	0.66556	we
37	1	1	0	0.34893	and
38	38	0	0	-1	common

Search Term  Words  Case  Regexp   Window Span  Same  
 common   Advanced   From... 1L   To... 1R  
        
 Sort by  Invert Order   Min. Collocate Frequency 1

APPENDIX 15. COLLOCATION RESULTS FOR THE WORD INFORMATION, INDICATING THE MOST COMMON CO-OCCURRING WORDS/CONCEPTS FOR THE WORD INFORMATION.

AntConc 3.4.1m (Macintosh OS X) 2014						AntConc 3.4.1m (Macintosh OS X) 2014																	
Concordance		Concordance Plot		File View		Clusters/N-Grams		Concordance		Concordance Plot		File View		Clusters/N-Grams		Collocate							
Total No. of Collocate Types: 523						Total No. of Collocate Tokens: 2075						Total No. of Collocate Types: 523						Total No. of Collocate Tokens: 2075					
Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate	Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate	Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate						
83	1	1	0	7.21112	precise	1	1	1	0	8.21112	fill												
84	3	2	1	7.21112	piece	2	1	1	0	8.21112	fallet												
85	1	0	1	7.21112	multicultural	3	1	1	0	8.21112	ensure												
86	1	0	1	7.21112	lost	4	1	0	1	8.21112	ena												
87	1	0	1	7.21112	individuals	5	1	0	1	8.21112	ecm												
88	1	0	1	7.21112	imagine	6	1	1	0	8.21112	dynamics												
89	1	1	0	7.21112	healthcare	7	2	1	1	8.21112	distinction												
90	1	1	0	7.21112	functional	8	1	1	0	8.21112	delivering												
91	1	1	0	7.21112	filter	9	1	0	1	8.21112	consolidated												
92	1	1	0	7.21112	disclose	10	1	1	0	8.21112	collect												
93	1	1	0	7.21112	confidential	11	1	1	0	8.21112	collatable												
94	1	1	0	7.21112	clickview	12	1	0	1	8.21112	coherent												
95	1	1	0	7.21112	appropriate	13	1	0	1	8.21112	carried												
96	1	0	1	7.21112	amm	14	1	1	0	8.21112	capture												
97	1	1	0	7.21112	adjust	15	1	1	0	8.21112	bakgrundsinformation												
98	9	9	0	7.13311	step	16	1	0	1	8.21112	abounded												
99	9	6	3	7.13311	ideas	17	9	9	0	8.05911	supporting												
100	6	2	4	7.09564	flow	18	20	5	15	7.94808	sharing												
101	4	3	1	7.04119	facilitate	19	6	3	3	7.79608	iii												
102	5	1	4	6.94808	flows	20	3	3	0	7.79608	encouraging												
103	2	2	0	6.88919	vendor	1	15	3	12	7.72569	output												
104	2	0	2	6.88919	efficient	2	2	1	1	7.62615	upon												
105	2	0	2	6.88919	allows	3	2	1	1	7.62615	sender												
106	9	6	3	6.79608	list	4	2	1	1	7.62615	fluffy												
107	16	7	9	6.78485	input	5	2	2	0	7.62615	essential												
108	16	15	1	6.71926	share	6	2	0	2	7.62615	automatically												
109	2	1	1	6.62615	vilken	7	5	5	0	7.53304	receiver												
110	2	1	1	6.62615	ver	8	5	3	2	7.53304	receive												
111	1	0	1	6.62615	typically	9	3	1	2	7.47415	ing												
112	1	0	1	6.62615	theme	10	1	0	1	7.21112	wrote												
113	4	3	1	6.62615	sending	11	3	0	3	7.21112	wish												
114	1	1	0	6.62615	secure	12	1	0	1	7.21112	vlookup												
115	1	1	0	6.62615	reading	13	1	1	0	7.21112	viktig												
116	1	0	1	6.62615	providers	14	1	0	1	7.21112	vid												
117	1	1	0	6.62615	prepare	15	1	0	1	7.21112	uppdaterat												
118	1	1	0	6.62615	possibility	16	1	1	0	7.21112	touched												
119	1	0	1	6.62615	portal	17	1	1	0	7.21112	tacit												
120	1	0	1	6.62615	nowadays	18	1	1	0	7.21112	status												
121	1	0	1	6.62615	lacking	19	2	2	0	7.21112	sources												
122	1	0	1	6.62615	kommentarer	20	1	1	0	7.21112	source												
123	1	1	0	6.62615	include	1	1	0	1	7.21112	sm												
124	1	0	1	6.62615	idag	2	1	1	0	7.21112	revisions												