Enterprise Professional Diversity and Challenges for Social-Collaboration Technologies

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Abstract

This paper investigates the potential impact of a diverse work environment on the intention to use enterprise social collaboration technologies. In a larger organization, different work practices and technology perceptions collide, which complicate the successful implementation of an enterprise social network. The first assessment of thisfactors will contribute to the growing field of enterprise social media research. By conducting a structured literature review of the professional diversity phenomenon in the information system (IS)research literature and reference literature (e.g., management or psychology research) a synthesis for the enterprise social media research stream is made. The main findings are three impact clusters resulting from professional diversity:98task characteristics, occupational subcultures and personality traits. The three clusters have unique ways to impact the intention to use an enterprise social network, resulting in a first assessment of positive and negative impact factors for a successful implementation of such information systems.

*Keywords:*enterprise professional diversity, social-collaboration technologies, enterprise social media, intention to use

1. Introduction

Organizations are implementing enterprise social media (ESM) into their corporate information and communication systems.They try to facilitate a better information exchange within the organization by utilizing the broad reach and easy information access through such social media tools (Leonardi *et al.*, 2013). The public media and software vendors commonly refer to those technologies – e.g., micro-/blogs, social networking sites, and wikis(Denyer *et al.*, 2011) – as Enterprise 2.0 and are common in user features of profiles, relational connections and sharing/exploring (Boyd & Ellison, 2007).The ESM scope can be limited to intra-organizational platforms restricted to an employee's audience or can be usedas a social media platform for external stakeholder interaction (e.g., with customers, suppliers or investors)(Richter *et al.*, 2011). The main concept behind the first named intra-organizational context is to make the intra-organizational knowledge and information flow visible throughout the whole corporation to enable employee driven communication, collaboration, innovation, and knowledge sharing (Leonardi, 2014). Open communication of the employees over the ESM services, which in the same step allows other network members to participate - actively or passively –helps to integrate the employee in the information exchange process(Kügler & Smolnik, 2014). Consequently, the ESM tools are challenging the established corporate collaboration and knowledge management practices(McAfee, 2006).In order to gain this benefit of the improved innovativeness, it is important that the ESM services are used bya wide range of users(functional or structural) (Chin*et al.*, 2015) to facilitate workers' diverse information exposure (Cummings, 2004).

For the intra-organizational utilization of an ESMthe discussion is driven by the support or substitution of internal communication, collaboration and knowledge sharing practices (Huang *et al.*, 2015; Leonardi *etal.*, 2013). The focus of research is the impact of employee`s performance on theESM usage(e.g., Kuegler *et al.*, 2015) and factors influencing individual employees motivation to engage or reject such platforms (e.g.,Chin*et al.*, 2015). As the ESM poses to revolutionaries and challenges current work patterns, first doubts appeared, that the social technology is perceived as useful by every professional background(Denyer *et al.*, 2011). Particular the digitalization of the workspace brings information systems (IS) (e.g., ESM access) to a more diverse workforce, including low skilled white collar workers and blue collar workers, adding knowledge work to their changing work environment (Sauer, 2014). The professionaldiversity of anorganization can be a challenge andmight affect employees'ESMusage and increases the complexity of a successful ESM implementation. The currentESM debate leaves an interesting research gap that possesses theoretical and practical relevance.The professional diversity can be a determinant of the success faced by organizations when implementing an organizational wide ESM service. Theoretically, the professional diversity perspective adds further insights to an under established IS acceptance domain and advances the ESM research field. Practically, it is from interest for organizations to have an optimal allocationof ESM implementation and change efforts between different professional groups. Therefore, we will address the following research question:

How is professional diversity influencing the ESMintention to use of employees?

2. Theoretical background

2.1 Technology Acceptance

The most well know and cited model is the technology acceptance model (TAM) introduced in by Davis (1989) and Davis et al.(1989). The TAM evaluatesindividuals'beliefs and attitudes to foresee once future behavioral intention to use a certain technology. Perceived usefulness (PU) and perceived ease of use (PEOU) have been identified as central constructs in predicting users' acceptance behaviors (Davis, 1989). PU was described "as the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context."(Davis *et al.*, 1989, p. 985) and PEOU as "the degree to which the prospective user expects the target system to be free of effort" (Davis *et al.*, 1989, p. 985).One central extension to the TAM was the introduction of social influence processes (e.g., social norms and image) and cognitive instrumental processes (e.g., job relevancy) and their influence on PU, which adds a new stream of external variables influencing the intention to use (Venkatesh & Davis, 2000). With the extended view and variables like job relevancy and social norms proof to have an influence on individual PU, professional diversity in terms of nature of task and professional norms might have a further explanatory role for the intention to use in this still underrepresented technology acceptance research stream (Sun & Zhang, 2006).

2.2 Professional diversity

The concept of diversity refers to differences between individuals on attributes that labela person different from oneself or others(William & O'Reilly, 1998). In the organizational context the performance and process impact are the primary subjects in diversity research (van Knippenberg & Schippers, 2007). The social categorization, similarity/attraction, and information and decision making theories are applied to understand how diversity affects performance and processes in groups(William & O'Reilly, 1998).The social categorizations concerned withthe conflict potential result from comparing individuals 'social identification. The information and decision making perspective, on the other hand, is more task-related and builds on the different information, knowledge and viewpoints. Here particular interest layson different processing patterns which are various within diverse groups (van Knippenberg and Schippers, 2007; William & O'Reilly, 1998).The main diversity elements in those assessments were age, gender/sex, ethnicity, tenure and background (William & O'Reilly, 1998). Among those,the functional and educational background of persons builds thebasis of the professional diversity understanding of this paper.Professional groups are generally distinguished by function and or educational background, where the latter can serve as an entry barrier to a certain professional group (Freidson, 1988).Anteby et al. (2015, p. 187)characterize professional groups as social entities including "(i) a category of work; (ii) the actors understood - either by themselves or others - as members and practitioners of this work; (iii) the actions enacting the role of occupational members; and (iv) the structural and cultural systems upholding". Consequently, professional diversity is a categorization of social groups byfunction which is socially influenced by subcultures (Schein, 1996), but it is also understood as different information processing attributes. That is because different professional groups perform distinctive task bundles associated with a work category.

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Professional diversity can be operationalized by the "differences in kind or category, primarily of information, knowledge, or experience" (Harrison & Klein, 2007, p. 1200).By adding beliefs as part of the operationalization we can account for subcultures mentioned by Schein (1996). Therefore, we can provide a social influences perspective (e.g., culture, norms) of different professional groups and the same time highlight cognitive information processing (e.g., task characteristics) differences.

2.3 Enterprise social media – Task relevancy and visibility

The importance of the progressing ESM research field originates from the strong focus of practitioners on the social collaboration technologies(Kane *et al.*, 2014). McAfee (2006) defined the intra-organizational useofESM services as a new meansfor knowledge workers toperform their occupational tasks. Knowledge work is "relatively unstructured and organizationally contingent" (Scarbrough, 1999, p. 7) and this particular way can be recorded by the ESMtoshow how "the way work really gets done" (McAfee, 2006, p. 21). The unstructured nature of ESM applications(Herzog *et al.*, 2015)seems to unfold its potential best when applied to non-routine tasks (Kuegler *et al.*, 2015). In detail, the visibility concept of user generated expertise suggests that ESM applications benefit tasks that "not only require novel solutions but require others' inputs" (Majchrzak *et al.*, 2006, p. 102). The example of seeking the expertise of others to complete a task with an unknown outcome characterizes the flexibleESMtask nature as non-routine,unstructured, collaborative, and interdependent.The named characteristics provide a first assessment when social media tools become task relevant and could be perceived as useful by the employee. Innovative non-routine jobs are only one part of a diverse occupation spectrum in organizations, especially by comparison to industrial and manual labor sectors like the automotive industry. It is questionable that those tools are meant for all organizational members and represent the next level of work practices (Raeth *et al.*, 2012). A particular focus in regard to professional diversity should be allocated to the visibility property of the ESM. With anofficial identity in an ESM platform,the employees become accountable for the information they provide to an anonym corporate audience (Treem, 2014). Additionally to the accountability constraint, uncertainty, induced bytheunrestricted access and edit rights toemployee-generated information, might conflict with the employees sharing behavior(Mansour *et al.*, 2011). Employees somehow displaying introversion traits or do not appeal to an open conflict culturecouldfeel intimidatedby those ESM properties(Mansour *et al.*, 2011). One could argue that the acceptance primary depends on the organizational culture, but the professional subcultures within an organization are determinants of the organizational culture (Bloor & Dawson, 1994).Consequently, professional diversity relates also to the social processes which might affect the acceptance of a certain professional group. As the ESM is a context depending technology (Richter& Riemer, 2013)those occupational influenced cognitive and social perspectives on the acceptance demand for particular investigation in this regard.

3. Research Design and Methodology

Since ESM is a relatively new research field, the existing body of literature is small and a common definition of ESM has not yet been developed. Therefore, consistent with Webster and Watson(2002), we conducted a rigorous and structured literature review of publications to identifying, analyzing, and conceptualizing relevant research literature pertaining job diversities integration into technology acceptance literature and its relevance for theESM research field. The rationale to use a literature review method is to structure the current body of knowledge in order to highlight what prior research has already uncovered and to conceptualize new opportunities to extend the evolving ESM research field with a special focus on job diversity. With respect to Schryen(2015), the following structure was used: (1) framing, (2) search and assessment, (3) synthesis, (4) interpretation, (5) guidance and (6) conclusion to extend the current body of knowledge.The framing took place in Section 1 and 2 of this paper to assure an accurate problem setting and to guide the literature search process (Elliot, 2011). The second phase is devoted to the collection of authoritative sources to take the proposed focus and scope into account. To succeed in accumulating a relevant research literature pool, the focus was on high-ranked journals(Webster & Watson, 2002). Due to the interdisciplinary ofthe research field, the literature base was furthermore extended to other journals and conferences that are not primarily focusing on IS. For identifying academic papers on ESM and job diversity, we searched for papers via keyword search in the following database: AISeL, ScienceDirect, IEEEXplore, JSTOR, SpringerLink, ACM, Wiley, Emerald and InformsOnline. To further extend the basis, a forward and backward search, as suggested by Webster and Watson (2002), was conducted. Furthermore, different search term combinations were used to account for different language usage (e.g.,Barki*et al.*,2008) and to refine for relevant sources (e.g.,von Brocke *et al.*,2009). The search terms applied were "enterprise social media", "enterprise social network", "enterprise social software" and "enterprise social networking".

In combination with "job category", "job diversity", "occupational culture/diversity", "professional culture/diversity" and "job characteristics". After this first round the results for ESM related literature proofed low in a number of quantity (e.g., only 6 hits at ScienceDirect) which did not bear relevant discussion points. The search field was expanded from ESM to more general related concepts like "technology acceptance" and "technology adoption". To select relevant publications in the considered research field, inclusion and exclusion criteria were defined. First, only literature in English language with a strong focus on ESM was considered. Second, non-academic publications (such as white papers) and those that did not specifically deal with job diversity as defined were excluded. The databases were searched to determine whether a publication contained at least one combination of the search terms in the title, abstract or keywords. In total, 110 publications were identified. Additionally, the reference literature from other fields like human relation, psychology, sociology and communication, to name the biggest four reference streams,amounts to 59 articles. If the field of search (i.e., title, abstract or keywords) could not be specified in the search query, a full-text search was conducted. In most cases, papers that we omitted did not yield any insights with respect to our research object or used the keyword in a different manner. After screening our database based on the before mentioned exclusion criteria, 61 academic papers remained (see Table 2).

Cluster	Description
Task characteristics	Characteristicsoftask e.g., non-routine vs.routine
Culture	Socialinfluence e.g., professional normsor professional subcultures
Personality	Personalitytraitsof professional groups e.g., extraversion vs. introversion

Table 1 - Clustering of Literature

The papers range from theoretical explorations of the ESM concept and job diversity to empirical studies and summaries of practitioner case studies. In Phase 3, we tagged each paper with keywords indicating the model/theory applied and its level of analysis in regard to job diversity. The phase 4 and 5 include activities such as connecting, comparing and explaining (Schryen, 2015) and we will give an outlook where this research is highlighting interesting novel themes. In phase 6 we will briefly summarize the results in order to extent the current body of knowledge in the underlying research field.

4.Research results and findings

Based on the previous assessment of ESM properties and professional diversity dimensions we screen the literature and identified three main clusters, which are shown in Table 1. The articles of the "task characteristic" cluster reviewed the task features (e.g., that an office clerk has a monotonous job routine compared to the professional group of engineers)(Zeffane & Gul, 1993)and consequently separated professionals by tasks. When the ESM would deliver job-relevant information, the influence on the intention to use would here result from the cognitive instrumental processes connected with the PU. Existing cultural differences between professional groups(Schein, 1996)constitute the second main cluster. The subcultures resulting from social influence processes like education or specific professional standards show that there are differences in, e.g., the level autonomy or openness between different occupations(Chau & Hu, 2002; Mitchell & Boyle, 2015). The third cluster personality is based on the idea that specific personality traits are stronger in specific professional groups like in the accounting field(Andon *et al.*, 2010).

AmountofSources			
Outlet / Category	Different levels	Onelevel	Total
IS Outlet	*5*	*30*	*35*
Culture	3	12	15
Task characteristics	1	14	15
Task characteristics / Culture	1	4	5
Other outlet	*10*	*16*	*26*
Culture	3	6	9
Personality		4	4
Task characteristics	4	5	9
Task characteristics / Culture	3	1	4
Total	*15*	*46*	*61*

Table 2 - Distribution of clusters among outlet and level of analysis

In Table 2 it is shown that majority of sources did evaluate only one level of analysis (e.g., studies either looked at culture or task characteristics from the professional level). Some articles apply a multi-level analysis examining different objects to show the interplay of, e.g., organizational and professional culture. The main clusters were "task characteristics" and "culture" with an even distribution within the literature sample. Interestingly, the task characteristics where dominant in the IS outlets. The personality cluster could only be obtained in none IS literature, with a particular connection to the professional diversity. Only afew articles addressed culture and task characteristics to some extent simultaneously.

4.1 Task characteristics

In the first main cluster, the literature highlighted differences in the technology acceptance by task difference of users. In a recent study Laumer et al. (2016) evaluated with a work system theory modified TAMhow employees' work routines influence the resistance to use a novel technology which impacts their task execution. In their case study research, they measured PU and PEOU from a technology angle and a work routine angle for the HR department. The findings indicate that the technology PU and PEOU where not the main resistance predictors, but the perception of the PU and PEOU for the changing work routines are. As this survey was only evaluates one professional group, the authors limit their findings by indicating that the perception or requirements might differ between different occupations. This idea that different professions have different requirement for IT is also the object of analysis in Yang et al.(2009)study between a group of innovative and non-routine knowledge workers and a routine and repetition characterized student group. The TAM based study revealed, despite the social influence main theme of the paper, that the different task characteristics indeed had a moderating influence. The knowledge workers give more significance to the PU as they needed a tool to support the quest for innovative solutions and the student control group was more concerned about the PEOU to replicate an existing solution. Following the thought of different requirements, Lucas and Spitler(1999) suggest that the various uses of technology by salespeople and brokers originate from different task characteristics of this two professional groups. They extend their findings to be further proof of the incomplete predictive power of the original TAMwithout social and cognitive process variables.Showing similar results in the healthcare sector, Henderson et al. (1995)evaluated the resistance to use a new computer system between clerical staff and nurses based on their computer anxiety. The results indicated that nurses did have significantly higher anxiety towards computers and the authors relate this to the prior computer experience of the office clerks. Besides the anxiety, the study suggests thatthe tasks of the nurses were not having characteristics supported by the patient management system. Regarding the earlier mentioned innovation characteristic of a certain task, Stone and Shen (2008)argue that professionals with an innovative or creative and therefore non-routine task, tend to use more emerging technologies in their work activities. Due to the changing work task, those employees are more adaptable in their work routines. The recurring theme of non-routine and routine task characteristics is subject by Sun and Zhang(2006)in a meta-analysis of moderating TAM variables. They recognize PEOU as being more relevant to non-routine task professions, as those users are more likely frustrated if the tools are not hard to operate when the real task lays in a complex cognitive ad-hoc analysis.Thus despite the presented extend TAM view on PU also PEOU seems to be influenced by the professional's task profile, contradicting to Yang et al. (2009).Regarding knowledge management systems Pee and Chua (2016)evaluate job characteristics and their influence on knowledge distribution. Although this article is not in particular related to technology acceptance, it bears some recent insights as ESM technology might be used as a knowledge management system, because sharing behavior might operate as a proxy for the intended usage of the tool. The results indicated that different professional groups tend to have different knowledge sharing behaviors concerning of duration, frequency, and topic variety. The only ESM related article from Jackson et al. (2007)analyzed theESM blogging behavior of employees. The case study revealed that professional groups differently used the blog functions. Their conclusion for the sample of engineers 'was that they are used to create things from their technical task background are more into creating content, thus writing blogs. The marketing sample has its strength in the communication of content and therefore comment and links different contributions and blogs.The IS outlets give a clear indication that the PU is indeed influenced from task characteristic diversity.Further, this diversity suggests evidence that the task nature might moderate the intention to use directly.The reference literature sample, focused on the performance effect of diverse team compositions, highlighting different task natures,task language and cognitive difference as impact factors (Cummings, 2004).It should be underlined that the management and organizational literature acknowledges the interplay of different levels and different concepts, e.g., that organizational culture might have an effect on a particular task behavior arising from the diversity(Anteby *et al.*, 2015; Cummings, 2004; Rice, 2012).

Anteby et al. (2015)assessed that the current body of knowledge in the management and organizational literature did distinguish profession by their way of doing a task, proclaim a certain jurisdiction and also evaluating the emergence of new task activities helping new occupations to format and change existing work practices. Consequently, the task or activity itself associated with a certain professional group gives the explainable power to separate effects and therefore can be used as a variable to explain specific behavior towards an object or practice. We can transfer from that assessment that task characteristics describe the type of work a person executes in the organization and the technology is anobject which supports the task execution.Therefore, the reference literature grants the task relevance an intention to use a technology directly through task execution.

4.2 Occupational Cultures

Social norms are part of well-respected cultural definition by Hofstede (2001), and Trice and Beyer (1993). Consequently, cultureis a frequent theme in the IS acceptance literature, but a comparison between different occupational cultures was not often subject to investigation (e.g.,Chau & Hu, 2002; Leidner& Kayworth, 2006; Nistor *et al.*, 2014; Raitoharju&Laine, 2006; Yang *et al.*, 2009).Nistor et al.(2014) compared the influence of professional and national culture from a TAM derived Unified Theory of Acceptance and Use of Technology(UTAUT). The study comparedRomanian and German cultural differences, but they subsample the nations into an educational (e.g., background in science, technology, engineering or mathematics) and none educational professional groups. With Hofstede's (2001) cultural dimensions they showed differences between the two professional groups, assigning the subsample of none educational background "to be more authoritarian, more individualistic, more feminine, more uncertainty avoidant and less long-term oriented" (Nistor et al., 2014). These differences led to a further distinctions in the perception of "effort expectancy on use intention, and of facilitating conditions and computer anxiety on the use behavior"(Nistor et al., 2014) between the two groups. However, the greater significance on technology acceptance is devoted to the national culture and might raise the idea that there is an interplay between national and professional culture. That interplay is supported by Leidner and Kayworth(2006)theory of technology culture conflict. They formulate that conflicts are influenced by national differences or by the organizational level (e.g., Business Unit A has different values towards IT than Business Unit B) or the conflict can result on sub-unit level due to different IT values. For sub-unit level, they propose that the stronger the values of the sub-unit are contradicting to the value associated with the new IT (e.g., high openness to information access, but the IT limits the access), the lower the adoption by the sub-unit. Accordingly, not only the cultural values of the organizational member but also the IT itself carries beliefs that either fit the professional group culture or not. Coming back to a TAM based study, Chau and Hu (2002) evaluated the acceptance of telemedicine of healthcare professionals and compared it with general TAM findings, showing that the original TAM weakens its explanatory power when applied in a professional context. They have shown, that PEOU, contradicting to general user studies, had no significant influence on PU or the attitude construct.Raitoharju and Laine (2006)further have shown that the TAM construct PU is differently influencing the "intention to use" of three professional groups (physicians, nurses and office clerks) highlighting the thought of Leidner and Kayworth (2006) again. Here the findings of Rao and Ramachandran (2011) seem noteworthy which compared management and IS employees culture. The biggest difference between the two groups is the object under management. Whereas IS professionals are managing technology, the managerial culture is human relation oriented. This difference is also the subject of a descriptive case study of Meier (1999), highlighting that even in perfect information symmetry professional diversity will influence the perceptions of its group, due to different representation and cognitive reasoning styles. In this study, the engineering group is much more abstract than the experience based culture of operators when it comes to technology innovation. That disparity suggests that the requirement for a technology comes from theprofessional groups' cultural background and their vision and/or goals. Professional culture diversity, is also a research subject in the IS security domain comparing IS security perception in regard to the professional background and its associated information confidentiality needs (e.g.,Ramachandran *et al.*, 2013).Due to the visibility information in an ESM service, we assumed the IS security in this term as reference field within the IS domain.Like the technical object in the acceptance literature the IS security beliefs are influenced by occupational distinct beliefs. Moreover,different security cultures lead the professional groups to different behavior based on their production-oriented or control-oriented professional environment (Ramachandran *et al.*, 2013). Same can be attributed to sharing culture,whereas the professional background had a significant influence on how collaboration features of IS are viewed(Tan & Vathanophas, 2003).Thenon-IS outlet seem to be clearly used as a reference point for some of the IS studies as they use similar ideas and concepts.

The literature focuses on the interplay of different cultural levels (e.g., national, organizational and occupational), revealing that conflicts arise from professional subcultures which makes the management of different subcultures necessary(Cummings, 2004; Schein, 1996; Trice & Beyer, 1993).Antebey et al. (2015)suggest that the cultural salience of the organizational status of different professional groups is a more distinct demographic like e.g., gender or ethnic. Consequently, professional diversity is manifested in the way how different functional groups relate to another. This cultural salience of different groups, can also be a source of innovation as this makes different professions to be aware of each other, enabling interaction(Mitchell & Boyle, 2015).Nevertheless, DiBengo & Kellog(2014)argue that professional groups can relate to other professional groups on a single shared social artefact, even if the they no further common ground or beliefs. The professional culture diversity in the organizational interplay is a complex phenomenon, with several connections to different cultural levels.

4.3 Personality traits

Personality traits and technology acceptance are single topics of interest but these studies did not consider occupational demographics (e.g., Barnett *et al.*, 2015;Devaraj*et al.*,2008). The professional diversity component could not be obtained to the best of our knowledge.Nevertheless, in the reference literature we encountered several articles making the connection between personality traits and professional diversity. More recent research following the idea and indicating that the personality traits play a role in the job selection, suggesting that e.g., people with a high level of extraversion will choose jobs with social interaction(Andon *et al.*, 2010).However,a small sample of job performance literature, can be connected as TAM constructs like task relevance and data quality and the PU construct are associated with job performance(Davis *et al.*, 1989).Barrick and Mount (1991)examined which of the big five personality traits (extraversion, emotional stability, agreeableness, conscientiousness, and openness to experience) predict performance in a certain occupation.The findings show that there are, except for conscientiousness,differences in the job performance prediction. Extraversion was a better performance indicator for sales or manager jobs, than for technical professionals where the human and social interaction is not such a strong job part.Underpinning personality traits as an occupational performance indicator, Salgado (1997)highlighted that different professional groups had different personality factors of the big five.Personality traits like extraversion and openness to experiences being particular important in job context of social interaction. Similar findings by Hurtz and Donovan (2000)relate extraversion to sales and managerial jobs and openness to customer service, again pointing to jobs with a strong social interaction, where also agreeableness was seen as a performance enhancer. Consequently, when there are specific characteristics influencing the job selection and on the other hand these personality traits influence the performance, there might be a connection that personality traits will influence the way professional groups perceive a certain technology.

5. Research Synthesis

The impact of professional diversity on the technology acceptance manifests itself on multiple levels. The IS literature was often following the single level approach, despite the ambivalent interrelation in the reference literature. That one-dimensional focus underlines the need for multi-level analysis in terms of system usage evaluation or prediction (Burton-Jones and Gallivan, 2007). Based on the clusters identified in the literature,we propose in Figure 1an assessment of professional diversities impact on the technology acceptance in the context ofESM applications.
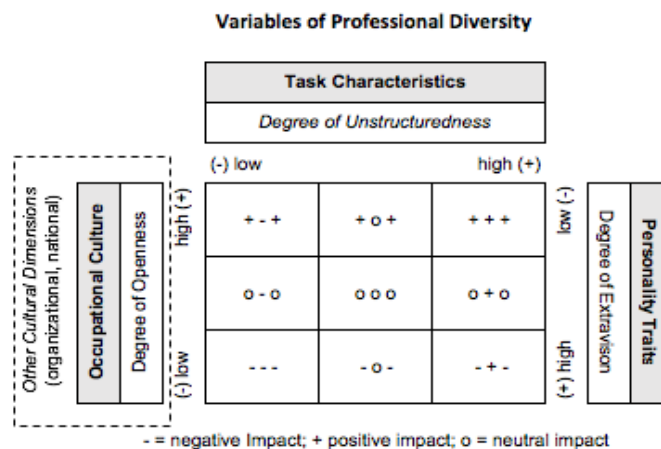

Figure 1 - Professional diversity and its impact on ESM acceptance

The first variables identified are the task characteristics. ESM platforms are implement for the entire organization and not only for a single specific user group(Huang *et al.*, 2015; Kuegler *et al.*, 2015; Treem, 2014)and therefore these platforms are confronted with professional diversity regarding different task natures of the users. When considering that the ESM technology received wide contributions examining knowledge workers (Denyer *et al.*, 2011; McAfee, 2006; Stock & Gross, 2016), there is some variety missing.Subsequently, ESM services show a good fit for unstructured task natures.Although knowledge workers are an increasing workforce group (Burke & Ng, 2006), there are still industries concerned with,e.g., production. A production worker who executes routine task might not gain any benefit from the ESM usage. Similarly, other low-skilled white collar groups like office clerks suffer from unstructured ESM architecture, which might even hinder their workflow of routine tasks.As displayed sections before, the task relevance is a major driver of the PU in the technology acceptance literature. There is evidence that the PU of a change in work practices, has an impact on the intention to use.As the ESM is fundamentally challenging existing work practices, the professional diversity has an impact on the PU through task relevance.The intention to use might also be moderated from work routine perspective. Consequently, employees whose tasks are characterized by a high degree of unstructuredness, will show a higher PU and more likely intended to use an ESM.Here we should remark, that even professional groups with an unstructured task might not intend to usethe ESM, if it does not offer a greater benefit from existing practices. The personal change effort will still be barrier if the change utilization does not improve enough.The cultural component of the ESM technology is driven by an open communication culture with the visibility, accountability, collaboration,and openness at its core (Chin*et al.*, 2015; Huang *et al.*, 2015; Leonardi, 2014; Treem, 2014). The review showed the existence of several differences in the culture devoted to professional diversity, primarily driven by social influence processes.Professional groups embedded into an open and collaborative culture will more likely to perceive the ESM as useful or be curious to use it. As with the task characteristics, that cultural frame fits the autonomy preferring knowledge workers(Burke & Ng, 2006; Scarbrough, 1999). However, the direct personal exchange component is missing in the ESM environment, which can cause difficulties for professional groups, like for blue-collar workers, where interpersonal communication is prevailing.Furthermore, culture is a cluster with several levels, which account for interdependencies.That highlights that here caution is needed when interpreting findings only accounting for one level. The review showed the different objectification of culture. It was either incorporated in the IT artifact itself or concerned with the general common mindset of an occupation. Based on the IT conflict culture theory it can be argued, that professional groups with contradicting values towards the social and collaborative nature of theESMtechnology will not intend to use it (Leidner & Kayworth, 2006; Stock & Gross, 2016). One other aspect derived from the IS Security subculture presence is that there might be different needs for information and different associated responsibilities regarding who needs to secure the data (Ramachandran *et al.*, 2013). Therefore, we argue that professional groups which tend to have a strict information security culture (enhanced by law or professional standards), will not intend to use the ESM, even though the tools might be perceived task-relevant.The last cluster was interestingly underrepresented in the literature in connection with professional diversity. That might be related to the avoidance of archetype thinking. Chin et al. (2015) found the user's personality to bean enabler towards a positive ESM services attitude. Literature from the common use of social media like Facebookor the internet use suggests that extraversion is accounting for group participation of users, but that the same usersarenot the widest connected people or frequent users of the communicative features(Ross *et al.*, 2009). That might be related to the missing in-person interaction associated with extroverts, which social internet applications are not providing(Landers & Lounsbury, 2006). Therefore, we need to be cautious, when applying findings of the organizational and management literature to a computer-mediated collaboration and communication environment. Personality traits in the general technology acceptance show that the big five traits have an influence when considering individual behavioral intention preferences.Although for extraversion, the technology acceptance seems not to have a direct impact on the intention to use (Barnett *et al.*, 2015; Devaraj *et al.*, 2008)there is evidence that it moderates the impact of norms towards the intention to use (Devaraj *et al.*, 2008).Same can be attributed to the openness to experience trait (Barnett *et al.*, 2015; Devaraj *et al.*, 2008). However, openness to experience is linked in public social media studies as a measure of willingness to try computer-mediated social interacting(Ross *et al.*, 2009). Professional groups that showa high degree of extraversion might tend to be less likelyto use ESM services for collaboration or social interactions. They prefer other more personal channels.

6. Limitations

This study is subject to some limitations, some of which offer opportunities for future research. Firstly, we tried to incorporate peer-reviewed sources predominantly to assurethe literature quality. Although, the main base of the articles are quality reviewed publications some smaller, but frequently cited and subject relevant conference proceedings or books were included. Secondly, the initial keyword search utilized a combination of two search terms in combination. A few publications might have been neglected in the processes, which would have been covered if an inductive second keyword search would have been performed after the clustering. Finally, we did not provide an empirical validation of our proposed assessment matrix, which will be done in a future research work.

7. Conclusion and Outlook

The systematic literature review shows that professional diversity regarding social categorizing and cognitive information processing has an impact on the technology acceptance. Based on thereview, we synthesized how professional diversity might affect theESMacceptance, with particular regard to ESM characteristics. We identified three clusters of potential differences: (1) task characteristics, (2) professional subcultures and (3) personality trait differences. We highlighted with this clustering that professional diversity is a complex concept and that differentprofessional groups have different perceptions or requirements when they are confronted with new IT. These three clusters give practitioners the first indication that they need to consider the difference between professional groups, particularly for the "intention to use" when they want to implement anESM system. They can identify pioneer groups for the implementation, based on the three clusters and devote the additional change management efforts to groups which do not fit the non-routine task, open culture or openness to experience personality trait profile. Theoretically, we contributed to an underrepresented technology acceptance stream, highlighting that there are different levels to recognize when researching multifaceted concepts like professional diversity. PU proofed to be a powerful construct to measure differences in a diverse professional user setting. For the ESM research stream, we highlighted that ESM platforms are made for knowledge workers, which fit the unstructured and open nature of the ESM services. Organizations with a professional diverse workforce have employee groups which do not match these characteristics. Consequently, it would be for future research to investigate these differences between knowledge workers and the other employee groups. Especially, theoccupationally related perception and critical success factors of such social collaboration toolsare an interesting research field.

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