# (STILL) MAKING WAVES: AGEING KNOWLEDGE WORKERS AND INTERGENERATIONAL LEARNING

Donald C. Ropes[1]
Centre for Research in Intellectual Capital
Inholland University of Applied Sciences
donald.ropes@inholland.nl

Abstract

This literature review explores ways older workers might continue to make waves and impact their work organization. The topic of the paper is grounded in the problem of an ageing organizational population looming in the near future. The work presented here is a start to helping management in knowledge-intensive organizations to understand how to effectively utilize the capacities of older knowledge workers by stimulating intergenerational learning as a means to retain critical organizational knowledge, encourage innovation and promote organizational learning through knowledge building. First, the concept of intergenerational learning is developed followed by a discussion of the organizational factors important for it to take place. The last section presents ideas on how to design and implement intergenerational learning as an organizational development program.

Key words

Ageing workers, intergenerational learning, organizational generations, organizational development, knowledge building

[1] Corresponding author. Address: Centre for Research in Intellectual Capital, Inholland University of Applied Sciences, PO Box 558, 2003 RN Haarlem, NL. Telephone +31(0)6 51018343; fax +31(0)23 5412412. Email: donald.ropes@inholland.nl

# 1 INTRODUCTION

Reports on European demographics forecast that in the next 20 years there will be large gaps in the available workforce due to retirements and an overall ageing of the population (Affairs, 2010; Giannakouris, 2008). European governments have for years been stimulating early retirements by implementing policy that makes leaving the workforce more attractive than remaining in it. These policies have been very effective, but are now becoming a threat to the economic wellbeing of EU member states because demographics also point to a shrinking population. Employment gaps seem inevitable. Presently, counteractive policies are being developed aimed at keeping older workers in service longer. One policy being tried is raising the legal age of retirement. Other policies gives incentives that make remaining at work more attractive. These types of policies seem to be a general trend, especially among northern European countries. For example, in The Netherlands tax breaks on earned income are given to workers over the age of 62. If new government policies aimed at retaining workers longer are at all effective then it follows that the overall age of employees will rise.

Another reason average employee ages will rise is that the European population as a whole is ageing. These points combined have important consequences for organizations, especially those that are knowledge intensive in nature, employing large numbers of knowledge workers. Especially in these types of organizations, loss of critical skills and knowledge due to retirements can be devastating, affecting competitive advantage and eventually sustainability. Another consequence is that management will need to learn how to better utilize older workers for innovation, organizational renewal and development. One way that might help management to build and maintain capacity in this changing demographic environment is to promote learning and innovation between the generations, or what is called intergenerational learning (IGL from now on).

IGL is an underdeveloped topic in both organizational learning and knowledge management literature. Most work on the subject comes from the fields of sociology or educational science. In sociology, studies look at how an older generation helps with the socialization of the younger one - typically made up of children. Studies in education science are similar, focusing on how grandparents can help schoolchildren in different aspects of learning basic skills or similar reports on service-learning programs. One EU project (see www.iglooproject.eu/) made a good start to developing the concept of IGL in organizations – especially in regards to understanding the importance of knowledge transfer - but failed in three respects:

1. To come to a conceptualization of IGL that can help guide detailed empirical research in organizations.
2. To explore in any detail the concept of IGL as a natural, social way of learning at work between and among generations that leads to improved employee meta-competences such as learning-to-learn, and in turn increases organizational capacity.
3. To make a structured analysis of what the learning outcomes of IGL are - or could be - that are valuable to knowledge intensive organizations and the knowledge workers employed in them.

The literature review presented here attempts to expand and contribute to understanding of IGL in the three ways mentioned above. The paper also tries to contribute to practitioner knowledge by exploring organizational conditions, and how

they might be created in order to lead to successful implementation of IGL as an organizational development strategy. For example, Ropes (2010) found that IGL was a naturally occurring process in communities of practice. Thus, one possibility is that for IGL to occur environments similar to those in communities of practice need to pre-exist or be explicitly organized. On the other hand, negative stereotypes in the organization about older workers may deter IGL from taking place – either as a natural, informal process or in a more formal, organized one. This paper explores ideas about IGL that will hopefully lead to waves of learning spreading among and across generational expanses, starting with coming to an understanding what IGL actually is.

## 2 CONCEPTUALIZING IGL

A clear conceptualization of IGL is needed before can any empirical work can be started. At the most basic level IGL can be considered to be a learning process that takes place between two groups of people distinguished by the generation to which they belong. But such a simple conceptualization of IGL raises some difficulties for organizational research.

In the following sections a conceptualization of IGL that can serve as a solid foundation for further research is attempted to be made. The discussion starts by trying to get a grip on the idea of 'generation' and how it can be used to understand and define groups in organizations. This is followed by a look at how learning between generations is characterized in the existing literature.

### 2.1 Generations in organizations

Coming to a general definition of the word generation might seem to be simple enough, but finding a usable conceptualization for empirical research in organizations is in fact rather complicated.

Webster's dictionary defines 'generation' in three different ways; 1) as a process such as the act of procreating or the production of something; 2) as having to do with time – ("The period between successive steps in natural descent, usually about thirty years in humans"; "a body of persons existing at the same time or period"); 3) groups of persons grouped by social differences ("A body of persons overlapping other existing bodies, typified by difference in mental, moral or ethical outlook"). Interesting enough, chronological age does not seem to play a role - references are made simply to "older" and "younger" generations. In reports from on sociological and educational studies about IGL this is also seems to be true. There 'generation' is associated with a stage in one's life in relation to others. For example, a grandparent and her grandchild are considered to be from different generations. While most people would readily agree on what constitutes a child in respect to age (a person between the ages of about 4 and 11), the same is not true for a grandparent. The term 'grandparent' is a relational one being based on circumstance, not specific age. For example, some parents are 40 years old when they become grandparents, others might be in their 70's.

The work coming from sociology usually characterizes generations by using what is called cohort theory. Cohort theory considers that generations are similarly located in time and as such have experienced similar historical events. These experiences form world-views particular to that group. In other words, cohort theory posits that people growing up at the same time have similar life experiences, which in turn shape their behavior, their attitudes, their values and their opinions. Cohort theory is useful because it considers that different aspects of age and experience influence an employee's

attitudes and behaviors in certain ways. Moreover, it seems that values, especially formed during adolescence, have a lasting effect and remaining stable throughout one's life. The same holds true for work values (Meglino & Ravlin, 1998).

Organizational science literature on generations in organizations typically builds on cohort theory by introducing other aspects such as education, working and learning styles, and attitude towards work (Bontekoning, 2007). A short description of each of the four generations currently active in organizations is given below, followed by Table 1 showing some generational characteristics central to this paper (Ackerman, 1996; Baily, 2009; Bontekoning, 2007; Costello, Lenholt, & Stryker, 2004; Korchin & Basowitz, 1957; Kuperschmidt, 2000; McGuire, By, & Hutchings, 2007; Nauta, de Vroome, Cox, Korver, & Kraan, 2005; Shaw & Fairhurst, 2008). The four generations represented in the literature are:

- *The Still Generation* was born between 1925-1945. This group is mostly retired and of lesser importance to this research because of this fact.
- *Baby boomers*, born between 1946-1964. This is currently the largest group in the workforce and many are preparing to retire, leading to major gaps in the workforce. This is the group referred to as "the ageing worker" in this paper and is typically the group in control of the organization.
- *Generation X*, born between 1965-1980. Workaholic fathers combined with extremely different social trends helped to shape the cynical outlook developed during adolescence. This group is in line to take over control in organizations from the baby boomers.
- *Generation Y* (sometimes known as Millenials), born between 1981-2001, has just really entered the workforce. They are technical savvy and collaborative learners. This generation differs most radically from the previous ones. It experienced a breakdown of the 'nuclear family' becoming the first latch-key kids (families where both parents worked), experienced rampant divorce and the Internet revolution.

Table 1. Generations and some of their characteristics

| **Generation name/trait** | **Year of Birth** | **Important social experiences** | **General Characteristics/ values** | **Attitude towards work/work-related values** | **Working style** | **Learning Characteristics** |
|---|---|---|---|---|---|---|
| Still generation | 1925-1945 | Great Depression<br>WW II | Conformist<br>Mature<br>Conscientious<br>Thrifty<br>Loyal | Obedient to management<br>Loyalty (to institution and customers)<br>Security (stability)<br>'Work before everything' | Adaptive<br>Hard-working | Traditional, skill-based training<br>Low learning goal orientation |
| Baby boomers | 1946-1964 | Kennedy & M.L. King assassinations<br>Moon landing<br>Vietnam war<br>60's social revolution | Idealist<br>Optimistic<br>Creative<br>Tolerant<br>Value freedom<br>Self-fulfillment important | Lifetime employment<br>High org. commitment<br>Workaholism<br>Criticism<br>Innovativeness<br>Advancement<br>Materialism | Being in charge<br>Team-orientation<br>Attentive to hierarchy | Low learning-goal orientation<br>Improving skill sets through off-the job training<br>Traditional educational interventions |
| Generation X | 1965-1980 | Aids epidemic<br>Oil crisis<br>Cold war<br>CNN<br>MTV | Individualistic<br>Skeptical<br>Non-conforming<br>Flexible<br>Controlling<br>Pragmatic<br>Informal | 'Work is to be endured, not enjoyed'<br>Low org. commitment<br>Free agency<br>Entrepreneurship<br>Materialism<br>Life-work balance | Individualistic<br>Not attentive to hierarchy<br>Collaboration<br>Human relations | High learning goal orientation<br>Situated learning<br>Lifelong learning |
| Generation Y (Millenials) | 1981-2001 | Internet<br>Fall of iron Curtain<br>9/11; Terrorism<br>New technologies<br>Information society | Confident<br>Demanding<br>Collectivistic<br>Moralistic | Passion<br>Work that has meaning<br>Security (not stability)<br>Loyalty to work, not org.<br>Willingness to work<br>Life-work balance | Team-oriented<br>Flexibility & autonomy in task achievement<br>Integrated free/work times | Collaborative<br>Visual<br>Non-traditional<br>Experiential<br>Collective reflection<br>Self-development important |

On the one hand cohort theory, although well-accepted, is not strongly underpinned by empirical work (Noble & Schewe, 2003). Related to this is the idea that 'generation' is a problematic construct because it does not consider that persons in a specific generation might have very dissimilar experiences (think about ethnic background differences) and thus disparate world-views. Cohort theory also fails to consider organizational and/or professional tenure; just because a person belongs to an older generation does not automatically mean they have a long history either in the profession or the organization. On the other hand, there are in studies that clearly back up the theory of cohorts in organizations (e.g. (Bontekoning, 2007; Twenge, Campbell, Hoffman, & Lance, 2010), and more work is being done. New methodologies are also being developed to help overcome problems associated with using cohort theory to define generations in organizations.

This paper lays the groundwork for a larger prescriptive research project on the topic of IGL in organizations and thus it is important to have a basic understanding of what influences employees in the work organization so that effective programs for IGL can be designed and implemented. The characteristics shown above combined with tenure in the profession, is probably a sufficient conceptualization of generations in organizations for this research. But for other more descriptive types of research, different factors might need to be controlled for.

### 2.2 Characteristics of IGL

It was mentioned above that IGL is a learning process that takes place among persons belonging to groups distinguished by the generation to which they belong. Learning can in fact be seen as individual psychological processes (such as memory, perception, motivation) that lead to alterations or results in cognition or behavior (Illeris, 2002). For example an intervention that helps a boy learn to kick a football using a new technique. The psychological processes triggered by the intervention are related to memory of previous experience kicking a ball, perception that there is a new way of doing it and motivation – the feeling that it is important to learn the new technique. The outcome of this is that the boy is able to use the new technique.
But learning can also refer to the interaction processes between the individual and his or her material and social environment. These are direct or indirect preconditions of the internal learning processes mentioned above. Using the illustration from above, think about the boy being instructed by his coach on how to kick the football in a new way. During instruction, the boy is kicking the ball and maybe asking his coach questions about the new technique. This is the interaction process referred to as learning. The point again is that learning can be understood in different ways. In this paper learning is considered to be both a process and an outcome. This perspective is used to guide the discussion with an eye on understanding how the interactive and psychological processes can be designed and facilitated within organizations so that they lead to a desired result. But before the discussion on IGL in organizations starts, IGL in sociology and education - two other fields that have a longer tradition of research on the topic – is explored.

### 2.2.1 IGL in sociology

In sociology IGL is typified as an interactive process between a grandparent and a child or youth that usually takes place within a family situation and leads to better understanding of the youth's role in the family unit as well as society in general (source). This assumes IGL as a way for socializing the next generation in the mores and values of society.

Sometimes there are programs specifically designed to foster IGL. These promote formal meetings between two non-adjacent generations that are designed to help participants learn about each other, about the world, its people and social historical events relevant to both groups (Newman & Hatton-Yeo, 2008).

Outcomes of IGL for both generations can be positive, which gives motivation for participation. For example "...the feeling of being valued, accepted and respected, enhanced knowledge and skills, and the creation of a meaningful, trusting intergenerational relationship." (Newman & Hatton-Yeo, 2008, p.33) Other positive outcomes for youths engaged in IGL are (Kerka, 2003; Newman & Hatton-Yeo, 2008);

- Socialization, including modeling of behaviors
- Enhanced social skills and personal growth
- Positive attitudes towards others
- Reduced (negative) stereotypes and improved mutual understanding.

But IGL is not just a one-way process. During social interaction the older generation also benefits by learning new ideas and perspectives from the younger one. Again, the positive outcomes of IGL act as motivating factors for participation. Some other outcomes for older participants in IGL are (Gadsen & Hall, 1996; Kerka, 2003; Newman & Hatton-Yeo, 2008);

- Social inclusion
- Reduced (negative) stereotypes and improved mutual understanding
- Gratification for their contribution
- Expansion of social network
- A feeling of empowerment.

### 2.2.2 IGL in education

IGL in educational programs is portrayed similar to sociology. Here too the IGL process is usually characterized as interaction between a retired or elderly person and a child or youth. However, in educational programs the focus is more on helping younger generations acquire basic skills (Kaplan, 2001). Examples would be programs where grandparents help children to improve reading skills, or college students are matched with retired persons in a particular field, such as nursing, to explore and learn about the field. Service learning programs such as these are common at universities. The interactive processes occurring during these learning relationships are based on knowledge transfer, usually from the older person to the younger. Outcomes of educational programs are similar to those given above. Others, more specific to educational programs, are (Duvall & Zint, 2007; Kaplan, 2001);

- Higher student achievement
- Improved academic knowledge
- Improved self-esteem and behavior (in school)
- Higher life aspirations
- Better school attendance.

Outcomes for the older generation are also along the lines of inclusion, and increased social networks, etc. (Granville, 2002). Fostering lifelong learning seems to be an important outcome for older participants too (Kaplan, 2001). Other outcomes are a product of 'reverse IGL', which means that the flow of knowledge is from the younger generation to the older. Examples of outcomes from reverse IGL could be improved abilities to employ new technologies, or new insights into changing social structures.

### 2.2.3 IGL in organizations

The points discussed above makes a good start to understanding the possibilities of IGL in organizations, which is conceptualized in a way similar to sociology and education. Here too IGL is characterized as an interactive process of knowledge transfer between generations that results in various learning outcomes. As in education, organizational IGL in the literature is considered to be a planned, formal process and as such a type of workplace learning (Spannring, 2008). The most common example of IGL in organizations is probably mentoring - a program that matches a senior employee with a junior one. In a mentoring situation the senior employee helps the junior to 'learn the ropes' of the organization. 'Learning the ropes' has elements of knowledge and skill development as well as socialization ("this is how *we* do it around here."). Other examples of IGL programs in organizations are (EQUAL, 2007; Sherman, 2006; Spannring, 2008);

- Apprenticeships; one-on –one training situations
- Group mentoring; group reflection and discussions
- Constructive communication; understanding social position and relations in the organization
- Multigenerational teams; explicit formation of heterogeneous work teams
- Learning platforms; e-based platforms where different generations exchange knowledge.

In organizational IGL there is also 'reverse IGL' - typically associated with younger employees teaching older ones new technologies. There are also some reports that discuss how older employees have 'deep knowledge' that needs to be complimented by the 'broad knowledge' of the younger generation (Tempest, 2003). For example, a veteran consultant needs to have new understanding of the changing marketplace in order to apply their knowledge in changing social or market structures and the younger employee is the one who can help. Organizational development programs based on the notion of IGL are often designed to do just that.

### 2.2.4 Outcomes of organizational IGL

Organizational IGL leads to outcomes similar to other situations, namely a reduction in negative stereotypes, expansion of networks, feelings of inclusion, etc. However, in an organizational setting other outcomes are also possible and even desired - learning at work is usually meant to benefit the greater organization. Any benefit for the individual, although possibly important, is actually secondary (van Woerkom, 2003). A review of the literature (EQUAL, 2007; Kuperschmidt, 2000; Spannring, 2008; Sprenger, 2007) revealed the following outcomes. Notice that each outcome is related to an improvement in employee, and in turn organizational, capability;

- Reciprocal competence development
- Transfer of tacit knowledge
- Enhanced productivity of employees
- Time savings
- Applying knowledge in novel ways
- Increased social capital.

Social capital is an especially important outcome for organizations as it has been shown to improve internal processes such as communication, knowledge exchange and the capability of groups to innovate (Adler & Kwon, 2002).

### 2.2.5 Motivation for participating in organizational IGL

Values have been shown to be a strong motivational factor for all types of behavior in all types of situations and settings, including organizational ones (Rokeach, 1979). For example, members of the baby boomer generation might be motivated to learn as a way to increase job performance as a road to advancement. Members of generation Y are motivated to learn as a way to achieve self-fulfillment. Other reasons younger workers may be motivated to learn in order to become more competent, while older workers want to remain employable. Like older generations participating in social or educational IGL programs, older employees also engage in organizational IGL because of a need for inclusion and extension of networks. Studies have also shown that many older employees are truly motivated to participate in mentoring relationships because of a desire to assure their knowledge is not lost when they retire as well as to give something back to the organization (Aryee, Chay, & Chew, 1996; Stam, 2010).

## 3 IGL as workplace learning

In the practical literature we found several best-practice reports reporting IGL programs to be an effective approach to workplace learning (Spannring, 2008; Zygouritsa, 2008)[2]. Another problem with the practical literature was that program descriptions missed an approach to workplace learning that considers the rapid, continual change and complexity of modern organizations and the meta- competences needed for older employees (and younger employees too, for that matter) to deal with

[2] No evaluative reports on organizational IGL programs in the scientific literature could be found. A search using the terms “multigenerational teams”, “heterogeneous workgroups”, etc was also fruitless. This points to a serious gap in the knowledge surrounding IGL and a need for empirical work on the subject.

this (Fuller & Unwin, 2005). Most of the programs analyzed were focused on improving vocational skills, which is a rather limited (and limiting) view to workplace learning. Related to this is the fact that one of the reasons that ageing employees leave the work organization is that the person-environment fit is out of balance (Ropes, Forthcoming) which can be a result of an inability to change along with the organization. However, vocational training is not really an option for older knowledge workers because it hardly applies to them. Neither is vocational training effective in helping workers to learn-to-learn and learn to develop so that they can change along with the organization. Learning such as this is more of a meta-competence than a vocational one and important for knowledge workers. Vocational competences are related to the ability to perform a task, while meta-competences are higher-level cognitive processes such as critical reflection and creative thinking.

More current theories on effective workplace learning considers these meta-competences to be a crucial focus. In this sense workplace learning is contextualized is as a situated, social experience with elements of competence development and knowledge transfer as well as collaborative knowledge building. The ability to participate effectively in social knowledge-building processes is actually a type of meta-competence closely related to the idea of learning- to-learn. Helping ageing employees (and at the same time their younger counterparts) to learn-to-learn effectively is probably the best strategy for the ageing worker because it is a competence crucial for increasing one's capacities to change and develop along with the organization one works in. This is an outcome of learning referred to as employability, which is an important aspect of IGL for ageing workers and workplace learning in general.

In the following section the idea of how IGL as a social learning process can be conceptualized as a way to help employees develop meta-competences through knowledge building is discussed.

### 3.1 IGL as a social learning process

IGL is considered here as a way to benefit ageing employees and at the same increase organizational capacity. As such, IGL thus is closely related to human resource development because it concerns helping ageing employees to learn and develop in the service of the organization. For this reason theory from human resource development (HRD from now on) is used for insights about how IGL programs might take form within organizational contexts.

In both HRD research and practice there is an ongoing trend of moving away from utilitarian training-based employee development programs to more flexible learning - based ones (Doornbos, Bolhuis, & Simons, 2004). According to Gibb (Gibb, 2004) effective HRD programs consider the affective, or aesthetics of personal development, not just the vocational aspects. The consequences of this are that HRD programs are being designed more and more using a social constructivist paradigm, which differs in several ways from the more traditional realist one. For example, employing a realist paradigm leads to HRD programs being designed to achieve specific organizational goals in a strictly utilitarian way. Using a social constructivist paradigm as guide allows for flexibility and creativity, which are more natural ways of organizing workplace learning. This is especially true for older, more experienced

employees (Fuller & Unwin, 2005). According to Gibb (2004) people seek to be part of the collective activities of an organization and in this way are continually learning and developing. This is in contrast to more traditional training programs where stocks of knowledge are transferred from one to another. Sfard (1998) calls this an 'acquisition metaphor' of learning and argues that although it plays an important role in training, there should be an emphasis on understanding learning as a participative process embedded in the social structure of the work organization. According to Illeris (2002), participation is the most extensive type of social interactive process leading to learning and participation in organizational groups as a form of interaction is the most relevant to a conception of IGL in organizations. In this way IGL can be conceptualized as a specific type of social learning between and among generations that takes place in the natural activity system of the workplace, where employees participate regularly in organizational group activities such as team meetings, formal and informal discussions, etc. Moreover, effective workplace learning is understood from an HRD perspective to be a largely a byproduct of participation in the daily activities of the organization, rather than as formal, planned training activities (Fuller & Unwin, 2005).

Wenger's theory of social learning (Wenger, 1998) is closely linked to this idea of learning as participation in activity-based systems. According to Wenger, learning at the workplace means participating in activity-based groups called communities of practice. Communities of practice are social systems where learning takes place within the social connections of the group, while participating in specific activities related to the domain of the members. Wenger's - and other social theories of learning - differ from cognitive theories. Cognitive-based theories consider the individual as forming the basis for learning while social learning theories propose that the group actually has this function. In a social learning process, learning is stimulated because new knowledge or ideas are brought into the group and the social-cognitive balance is upset (Ropes, 2010). In order to return to equilibrium, new learning is needed (Hakkarainen, Palonen, Paavlova, & Lehtinen, 2004). The psychological processes occurring are combinations of group and individual reflection on and comprehension of the meaning of the new knowledge or idea. Creative thinking plays a major role in the learning process as well. Learning is thus a combination of internal psychological processes and external social ones that leads to further learning (Illeris, 2002).

From an HRD perspective then, learning at the workplace is typically social collaborative and as such is more accurately typified as knowledge building (Van den Bossche, Gijselaers, & Kirschner, 2006). Knowledge building is a type of situated social learning that takes place naturally in organizations and considers new knowledge to be built around a topic through learning processes such as group reflection, discussion and other types of interaction. For example, a team member has a problem with a client. The problem is discussed among the team and a solution is arrived at. Arriving at the solution is a learning process consisting of dialogue and reflection on the problem at hand. During the discussion team members exchange and increase their knowledge of the situation being discussed. In this example new knowledge – in the form of insights and a solved problem - is in turn introduced into the greater organization by the team members. This is a typical example of how individual learning is linked to organizational learning and innovation through group participation in naturally occurring knowledge building activities (Crossen, Lane, & White, 1999; Stahl, 2000). A classic visualization of the organizational learning

process is the Knowledge Creation Spiral by Nonaka and Takeuchi (1995). In their model as well, knowledge-building processes are a prerequisite for innovation.

In an activity-based social system like an organization, people of different generations will typically interact in different ways. This is because of their positions within the organization, their daily tasks and their values. Employees will also have different knowledge bases and different skill levels. As mentioned before, existing literature on IGL usually considers knowledge flows going from the older generation to the younger in mentoring type situations. However, mentoring assumes that older employees have the "best" or at least the most knowledge and that knowledge needs to be transferred to the younger generation. However, research has shown that during knowledge building processes taking place in communities of practice, knowledge flows were reciprocal (Ropes, 2010): while the older generation had deep knowledge of existing situations, younger generations could put that knowledge in the new context of a changed organization (Tempest, 2003). Lave and Wenger (1991) found that a mix of generations working together in communities of practice was also important for helping experts and novices bridge the gap that often occurs between these two groups and impairs the learning processes (Bransford, Brown, & Cocking, 2002). It seems that in groups with mixed ages representing diverse perspectives, skills and skill levels, knowledge flows easier among and between the individual actors and results in improved knowledge building processes.

Motivations for participating in social knowledge building groups are both intrinsic and extrinsic in nature. For example, studies show that employees participate in communities of practice because of improved networks, raised social capital and the need to gain of knowledge and information (that might be) valuable in other aspects of one's work (Akkerman, Petter, & de Laat, 2008; Wenger, 1998). Extrinsic motivations are linked to organizational structures such as reward systems: if a team is more effective in their work, group or individual rewards might follow.

The basis of this paper lies in the problem that due to demographic pressures, management will need to better utilize the capabilities of the ageing worker and implementing IGL is one way to do this. But what outcomes of IGL, conceptualized as it is in this section, might be considered to do this? Theoretically, one should see the following occur:

- Socialization of the younger generation into the organization by participating in the workplace activities alongside older generations.
- Critical knowledge transfer among and between the generations as well as knowledge retention in the younger ones.
- Increased employability of ageing workers through development of meta-competences, important for changing organizational contexts.
- Improved ability to innovate, again through improved meta-competences.
- Improved organizational innovation processes through combining wide and deep knowledge during knowledge-building processes.

Knowledge building processes are not new to organizational development strategies. What might be new is the idea that these processes among different generations might be explicitly included when designing organizational learning environments with an eye towards an ageing employee population.

In this section the psychological and interactive processes associated with learning were discussed. Literature showed that using a social theory of learning helps to conceptualize IGL as a way people naturally participate in organizational activities and in turn engage in a type of learning called knowledge building. Understanding IGL as being a social learning process seems quite logical: the term "intergenerational learning" in itself implies some type of social interaction associated with learning. The discussion now turns to a more prescriptive tone by looking at what factors are important for IGL to either occur naturally or be implemented in organizations.

## 4 IGL program design and implementation

In this section the question 'what factors must be considered when designing and implementing IGL in organizations?' is discussed. As mentioned above, this paper makes up part of a large design-based (prescriptive) research program that looks at how management can successfully implement IGL as a way to increase organizational capacity by capitalizing on ageing workers, especially in regards to learning and innovation.[3]

An organizational development program based on IGL will be similar to other types of organizational change trajectories in the sense that it too will be susceptible to failure if it is not designed properly. Aspects of adult learning and situated learning need to be accounted for, as well as generational considerations such as financing, management support, etc. Furthermore, research has shown that for any type of change program certain steps need to be taken before actual implementation (Walker, Armenakis, & Bernerth, 2007). Introducing IGL into an organization can create specific problems because it deals with tensions between generational groups that lead to conflicts (Westerman & Yamamura, 2006) that might interfere with organizational processes.

Implementation of IGL should also consider the serious problem of negative stereotypes; older workers may be perceived as rigid and inflexible by younger employees, while older workers see younger generations as uncaring and shallow. This means that that management will need to first eliminate powerful barriers to IGL before actually implementing any kind of program. Probable barriers to implementing IGL programs in organizations are the next topic in this paper, followed by a short discussion on possible group-level interventions.

### 4.1 Barriers to IGL in organizations

Barriers to IGL occur at different levels of the organization and for different reasons. The first to be discussed are the pernicious and enduring stereotypes of the older worker.

Negative stereotypes of ageing workers are often related to inflexibility and resistance to change, but also concern health issues, organizational commitment, performance and cognitive ability. For example, managers often perceive older workers as being

[3] In design-based organizational research, the point is to come to knowledge that contributes to both science (through developing knowledge descriptive in nature) as well as helping practitioners (through developing knowledge prescriptive in nature) (van Aken, 2005).

sick longer and more often than younger colleagues but this has been proven untrue (Ilmarinen, 2001). Older workers are also seen as being less committed to the organization, but this too has been proven to be a false assumption (D'Amato & Herzfeldt, 2008). Studies on performance show that severe declines typically begin after age 70, and this varies dramatically between individuals (Barnes-Farrell, 2006). Older workers are stereotyped as having decreased cognitive functionality that negatively affects understanding, memory and their ability to learn. Because of this, managers often exclude older workers from learning activities. However, studies have shown the adage "you can't teach a dog new tricks" to be highly dependant on the age of the dog and the type of trick one wants to teach (Korchin & Basowitz, 1957; Nauta et al., 2005). And in fact, the ability to process complex problems actually increases with age (Ilmarinen, 2001).

Other barriers concern individual rather than generational traits, such as a disinclination to learn and organizational cynicism. For example van Roekel – Kolkhuis Tanke (2008) found that some older workers showed a tendency to rely on established work routines while others were continually renewing them. Cynicism about change is related to negative past experiences surrounding change leading to reluctance to take part in any new initiatives (Wanous, Reichers, & Austin, 2000). Thus, first step towards implementing IGL is to prepare employees for a change (Walker et al., 2007), for example by instituting measures that break down the barriers to IGL. Conditions for IGL are discussed below.

### 4.2 Conditions for IGL

Most studies on organizational based learning programs such as IGL point to the importance of conditions favorable to creating and maintaining a positive learning climate (Argyris & Schön, 1996). Organizational climate is defined as "...set of attributes which can be perceived about a particular organization and/or its subsystems ... that may be deduced from the way that the organization and/or its subsystems deal with their members and environment." (Hellriegel & Slocum, 1974) According to theory, organizations can have different climates and one of these is related to learning (Mikkelsen & Gronhaug, 1999).

Both management and individuals play a role in creating a positive learning climate, which is reflected in the following list of factors shown to influence organizational learning climates (Sambrook, 2006; Tracey, Hinkin, Tannenbaum, & Mathieu, 2001):

- Organizational factors such as a collaborative culture, but also formal reward and accountability systems that motivate employees to engage in learning.
- Managerial support in the form of positive professional and personal relationships that motivates employees to learn.
- Job support, which means the nature of work assignments needs to be such that they allow for flexibility, learning and growth.
- Job involvement, which is the degree to which the work one does is central to one's life and satisfies important needs.
- Organizational commitment, which is conceptualized as an individual's identification with and involvement in a particular organization. This has a direct relationship with motivation to learn in the service of the organization.

How each of the above factors are organized affects the potential for organizational IGL in the workplace. In the following section some specific suggestions for designing organizational IGL interventions and their implementation are given.

## 4.3 Designing IGL interventions

The effective design and successful implementation of any type of organizational change program is dependent on different factors such as efficacy of the program design and the quality of the implementation. Programs based on IGL should also follow the basic tenants of effective change programs, but need some special considerations because of their nature; entailing a mix of different generations that have different learning styles, motivations and the problems with negative stereotypes. In this section several considerations for program design are given. The discussion is structured using the three levels of the organization, namely individual, group and the organization as a whole.

### 4.3.1 Individual level considerations

At the individual level, motivational aspects should be carefully weighed for assuring participation. This is true for any type of learning based program (Ropes, 2010). Approaching motivation from a values perspective would be logical as programs could be designed that appeal to different generations according to their specific value-frameworks. See, for example, the columns 'General Characteristics/values' and 'Attitude towards work/work-related values' in Table 1 above. Understanding preferred interaction (i.e. working styles and learning characteristics) of the different generations is important for designing effective IGL interventions as they directly influence learning processes, including motivation to learn.

Thus, efficacious designs of IGL programs will consider the diversity of employees in respect to motivation for learning (values) and the type of interactive learning processes (working and learning styles) most effective.

### 4.3.2 Group level considerations

Social collaborative learning environments focused on knowledge building and innovation also need to be designed so as to motivate employees to participate. Furthermore, they need to be facilitated in ways that assure their efficacy. This is true for group process facilitation – helping groups to learn to innovate, having quality coordination, etc. - as well structural support in the way of resources (time allotment, financial support, ICT, etc.). Thus, understanding and accommodating for how and why different generations interact will be an important consideration for IGL intervention design.

### 4.3.3 Organizational level considerations

At this level management will need to assure that the barriers to IGL are eliminated before any program is implemented. Management will also need to create a positive learning climate in ways given above as well as by recognizing and communicating the value of intergenerational teams and other types of intergenerational interaction. Management will need to capitalize on the strengths and differences of the various generations when developing any type of IGL based change program. Furthermore,

management will need to carefully consider ageist practices that are alienating to some groups. For example, all generations value the opportunity of flexible working times, alternative work organization, merit-based pay and other programs often granted exclusively to older employees.

### 4.3.4 Designing implementations

A search of the scientific literature didn't turn up any studies on implementing IGL programs and the limited practical literature was based on anecdotal evidence. However, there are many different models for implementing changes in organizations that might be adjusted for IGL. For example McGuire, et al (2007) developed a model for implementing human resource solutions for achieving intergenerational interaction in organizations based on a synthesis of three theoretical perspectives; race relations, individual and group reactions to change and the effects of change on the different levels of the organization. The key to choosing a model for implementation of IGL is assuring that it considers group diversity. In all situations internal communication plays a central role in expediting implementation.

## 5 Conclusion

Due to external pressures from both demographics and government policies aimed at raising the legal age of retirement, managers will need to find ways that better utilize the capacities of ageing workers. One way might be to develop intergenerational learning-based HRD programs aimed at improving meta-competences of older workers and at the same time increasing the capacity of the greater organization in regards to knowledge building and innovation. Designing IGL programs on the basis of social collaborative knowledge building environments seems to offer a good chance of doing this. Furthermore, overall improved organizational harmony between the generations also adds considerable to the organization's capacity to renew and develop. However, both design and implementation of IGL programs need special considerations due to the different generations involved in the process. But, if done successfully, IGL might be one way to assure ageing workers continue to create new waves of learning, innovation and organizational renewal throughout the organization.

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