CHAPTER 12

Factors influencing intergenerational learning: towards a framework for organisations to ensure successful learning in older employees

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The workforce in the EU is ageing, and this requires investment in older workers so that the organisations in which they work remain competitive and viable. One such investment takes the form of organising and facilitating intergenerational learning: learning between and among generations that can lead to lifelong learning, innovation and organisational development. However, successfully implementing intergenerational learning is complex and depends on various factors at different levels within the organisation. This multidisciplinary literature review encompasses work from the fields of cognitive psychology, occupational health, educational science, human resource development and organisational science and results in a framework that organisations can use to understand how they can create the conditions needed to ensure that the potential of their ageing workforce is tapped effectively and efficiently. Although not a comprehensive review, this chapter serves as a basis for further empirical research and gives practitioners an insight into solving a growing problem.

12.1. Introduction

The European workforce is ageing rapidly. This process of demographic change has consequences for both workers and the organisations that employ them. Workers will need to remain longer in service, and organisations will need to invest in programmes that can improve the effectiveness of older workers or suffer losses in viability and competitive advantage. At the same

time, demographics point to a shrinking of the available workforce, meaning there will be fewer new employees. Reports on the issue from the European Commission and EU Member States draw similar conclusions (Ministry of Internal Affairs, 2010; European Commission, 2009). The consequence is that these problems are acting together, and this makes it even more crucial for organisations to capitalise on their workforce effectively, especially with regard to older employees. We know that one way to do this might be to develop programmes based on intergenerational learning (IGL) (Spannring, 2008). IGL is a way for both young and older workers to share knowledge, learn and innovate together. In this sense, IGL is beneficial to both workers and the work organisation alike and can be implemented as an organisational development programme based on individual and group learning.

However, successfully implementing IGL in organisations is complex and depends on a variety of factors and conditions. For example, people learn for different reasons and in different ways as a result of (a) cognitive factors and processes such as speed of memory, (b) social factors such as learning history, (c) motivational factors such as intrinsic or extrinsic rewards and (d) some combination of the above. For example, younger people are guided more by extrinsic factors compared to older people, and this is related to sociocognitive and developmental/maturational aspects such as perceived contribution to society, self-fulfilment, etc. Implementing IGL – as a way of ensuring that older workers participate in the learning process – is also influenced by the organisational environment that influences employee learning, but we do not know for certain what is conducive to older employee learning or IGL.

This multidisciplinary literature review is a first attempt at devising a framework that organisations can use to understand how they can create the conditions needed to ensure that the potential of their ageing workforce is used effectively and efficiently. The review specifically concerns organisations employing a high percentage of knowledge workers and pertains to both the private and public sectors such as education, health care and the police.

The chapter is set up as follows: after conceptualising IGL, cohort theory is used to delineate the different generations currently active in the workforce. Subsequently, the characteristics of different generations currently employed in the workforce in relation to their learning and performance and the factors influencing the process are examined. We then look at IGL from an organisational standpoint, exploring questions such as: what is the impact of investing in IGL; what organisational structures generally encourage learning in older employees and IGL in particular; and how can an organisation deal with the differences in learning when designing and facilitating IGL?

12.2. Understanding intergenerational learning

Intergenerational learning (IGL) can be considered as various types of interaction among and between different generations where one or both parties learn (Ropes, 2011). In the social sector, there are many examples of programmes that link older people with younger ones in an attempt to recreate the extended family in which IGL occurred naturally (Gadsen and Hall, 1996). In education, IGL programmes can be found between students and elderly or older persons. In organisational science, references can also be found to mentoring and multigenerational work teams, which are similarly about linking older and newer employees. In each of these fields, IGL is implemented to achieve outcomes deemed desirable by the programme designers. Table 12.1 illustrates several aspects of IGL programmes: the three fields mentioned above, typical types of interaction, outcomes of the IGL process and the sources reporting these findings ([74]).

12.2.1. The impact of IGL on organisations

To remain competitive, organisations must be able to change and adapt based on signals from the environment in which they function. In the private sector, this means that firms – at least those that are successful – are continually innovating and developing towards becoming better at what they do. In the public sector, people's expectations change and budgets are often slashed, forcing organisations to learn and develop to remain efficient and to continue servicing the public in an effective way. We propose that investing in IGL is a way for organisations not only to ensure that skill gaps of employees are kept at a minimum but also to ensure organisational renewal and development by improving the internal processes that facilitate innovation and capacity for change. This has to do with the fact that the outcomes of IGL, as shown in Table 12.1, can have an impact on the organisation in various ways that are not readily apparent.

One very important outcome of IGL is an increased level of social capital (Hassell and Perrewe, 1995; Kerka, 2003; Newman and Hatton-Yeo, 2008). Studies show that higher levels of social capital within organisations improve knowledge exchange between employees (Inkpen and Tsang, 2005), and this,

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([74]) With regard to IGL in organisations, aspects of IGL in other fields also occur. For example: socialisation into the organisational culture, personal growth, reduced (negative) stereotypes and improved mutual understanding, feelings of inclusion and empowerment, personal gratification and expansion of networks.

in turn, improves the learning capability of the organisation. The ability to learn and change is important for innovation and efficient problem solving (European Social Fund, 2007). Furthermore, social capital has been shown to help break down generational barriers that negatively affect working climates (Holtom et al., 2006). In some situations, there are up to four different generations working together in one organisation, and problems can arise between them (Section 12.2.2.). Kunze et al. (2011) found that ageism, or negative feelings towards older generations, is a direct result of the demographic changes within organisations that have an adverse effect on organisational climates. This is especially true for those organisations with a more flat organisational structure, because, in these cases, younger employees may be managing older ones, leading to feelings of resentment. IGL might be able to help reduce these problems (Duvall and Zint, 2007).

Another outcome of IGL is linked to the idea that knowledge is applied in novel ways, which is a critical aspect of innovation and problem solving. Tempest (2003) theorised that, to spur effective innovation, younger employees need to interact with older ones because the different types of knowledge each person has are complementary to the process. Older, more experienced employees have 'deep' knowledge but lack the understanding of the current world situation in which to apply it (Sprenger, 2007). Tempest (2003) gives the example of the Internet bubble as an illustration: younger employees lacked the depth of knowledge of older, more experienced entrepreneurs and were thus unable to be successful. Ropes (2010) found this to be the case in his study on practice-based learning communities. Those communities with high age diversity were able to innovate more effectively than those with a more homogenous age make-up. Qualitative data confirmed that this was partially because of the different types of knowledge held by the generations. Bontekoning (2007) found that interactions between generations are an important way for organisations to 'change with the times' and help towards organisational renewal, much like Mannheim's (1963) position that social change is partially an outcome of generational interaction.

12.2.2. IGL as (informal) workplace learning

Workplace learning is often divided into two types: formal and informal. The former is usually seen as an institutionally planned process that has pre-determined learning goals, a start and a finish. For example, off-site training in a new software programme for word-processing could be considered as formal learning. Formal training programmes are often skill-focused and vocational in nature. Informal learning, on the other hand, is seen as being

Table 12.1. **Summary of IGL learning types, outcomes and sources**

	Interaction typified	Outcomes related to IGL	Sources
Sociology	Grandparent/child; formal programmes, informal natural settings.	• socialisation, including modelling of behaviours; • enhanced social skills and personal growth; • positive attitudes towards others; • reduced (negative) stereotypes and improved mutual understanding; • social inclusion; • personal gratification; • expansion of social network; • feelings of empowerment; • social renewal.	Gadsen and Hall (1996) Kerka (2003) Mannheim (1963) Newman and Hatton-Yeo (2008)
Education	Elderly/youth; formal settings such as school programmes.	Higher student achievement Improved academic knowledge Improved self-esteem and behaviour (in school) Higher life aspirations Better school attendance.	Duvall and Zint (2007) Kaplan (2001)
Organisational science	• apprenticeships; one-on-one training situations; • group mentoring; group reflection and discussions; • constructive communication; understanding social position and relations in the organisation; • multigenerational teams; explicit formation of heterogeneous work teams; • learning platforms; e-based platforms where different generations exchange knowledge.	Reciprocal competence development Transfer of tacit knowledge Enhanced productivity of employees Time savings Applying knowledge in novel ways Increased social capital. Organisational renewal	Bontekoning (2007) European Social Fund (2007) Kupperschmidt (2000) Spannring (2008) Sprenger (2007)

Source: Authors.IGL as (informal) workplace learning

naturally situated in the workplace and more focused on experiential learning, or learning meta-competences (e.g. critical reflection, learning to innovate and learning to learn) that contribute to an organisation's capacity for change and development (Ropes, 2010). Research on workplace learning shows that informal leaning is the most common form of learning taking place in organisations (Ellinger, 2005). We position IGL as having characteristics of informal learning, which concurs with the few reports available on the subject (e.g. Spannring, 2008). However, most traditional conceptions of informal learning position it as an unplanned and unstructured event that happens sporadically. We would argue that such a perspective on informal learning is not helpful in our situation because it does not allow for the planning of interaction specifically aimed at promoting learning between the generations. More useful to our construct is Billet's idea (2002) that all learning – formal or informal – is dependent on the structures in which it happens, and, whether it is planned or unplanned, it is, in fact, learning. We return to this idea of structures later, but what is important for this chapter is to understand IGL as a social-collaborative way of learning that is situated within organisational structures, can take different forms centralised around work tasks, and may or may not be planned (Section 12.5.).

In the next section, cohort theory is used to delineate the four generations currently active in the workforce to gain a better understanding of their worldview, attitudes towards learning, work and life in general.

12.3. Generations in the workforce

As many as four different generations may be found in a work organisation at any given time. These are (Ropes, 2011a; 2011b):

(a) the 'Still Generation', which were born between 1925 and 1945. This group are mostly retired, but nevertheless may still be active in some family-owned businesses;

(b) baby boomers, born between 1946 and 1964. Referred to in this chapter as the ageing worker, baby boomers are often in more senior management positions in knowledge-based organisations;

(c) Generation X employees, born between 1965 and 1980 and next in line to take over control in organisations from the baby boomers;

(d) Generation Y (sometimes known as 'Millenials'), born between 1981 and 2001, have really only recently entered the workforce.

Table 12.2. **Generations and some of their characteristics**

Generation name/trait	Year of birth	Important social experiences	General Characteristics/ values
Still Generation	1925-45	• Great Depression; • WW II.	• conformist; • mature; • conscientious; • thrifty; • loyal.
Baby boomers	1946-64	• Kennedy and M.L. King; assassinations; • moon landing; • Vietnam War; • 1960s social revolution.	• idealist; • optimistic; • creative; • tolerant; • value freedom; • self-fulfilment important.
Generation X	1965-80	• aids epidemic; • oil crisis; • Cold War; • CNN; • MTV.	• individualistic; • sceptical; • non-conforming; • flexible; • controlling; • pragmatic; • informal.
Generation Y (Millenials)	1981-2001	• Internet; • fall of the Iron Curtain; • 9/11; terrorism; • new technologies; • information society.	• confident; • demanding; • collectivistic; • moralistic.

Source: Authors.

Cohort theory is typically used as a way to delineate generations for the purposes of understanding and study. The theory behind it lies in the idea that generations of people constitute groups similarly located in time, which means that each group has experienced similar historical events that help shape worldviews 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, also shape their behaviour, their attitudes, their values and their opinions.

Attitude towards work/work-related values	Working style	Learning Characteristics
• obedient to management; • loyalty (to institution and customers); • security (stability); • 'work before everything'.	• adaptive; • hard-working.	• traditional, skill-based training; • low learning-goal orientation.
• lifetime employment; • high org. commitment; • workaholism; • criticism; • innovativeness; • advancement; • materialism.	• being in charge; • team-orientation; • attentive to hierarchy.	• low learning-goal orientation; • improving skill sets through off-the-job training; • traditional educational interventions.
• 'work is to be endured, not enjoyed'; • low org. commitment; • free agency; • entrepreneurship; • materialism; • life-work balance.	• individualistic; • not attentive to hierarchy; • collaboration; • human relations.	• high learning-goal orientation; • situated learning; • lifelong learning.
• passion; • work that has meaning; • security (not stability); • loyalty to work, not to organisation; • willingness to work; • life-work balance.	• team-oriented; • flexibility and autonomy in task achievement; • integrated free/work times.	• collaborative; • visual; • non-traditional; • experiential; • collective reflection; • self-development.

Studies have shown that generation is perhaps even more of an influence on values than age (Wey Smola and Sutton, 2002).

Consequently, cohort theory is useful for understanding IGL in organisations because it considers that different aspects of age and experience influence an employee's attitudes and behaviours in certain ways. Moreover, it seems that values, especially those formed during adolescence, have a lasting effect and remain stable throughout one's life. The same holds true for work values

(Meglino and Ravlin, 1998). Accordingly, cohort theory allows research to take a perspective that is useful for understanding why different generations exhibit different behaviours in an organisational context and how behaviour can be accounted for in IGL programmes. On the other hand, cohort theory is problematic, owing to the fact that intergroup experiences may differ greatly for various reasons such as socio-economic background, cultural aspects, country of birth and residence, etc. There is also some difficulty with the concept of age and how that relates to cohort theory. Furthermore, with regard to work organisations, cohort theory does not consider organisational tenure as a factor. These pitfalls are discussed in more detail below, but first we present the findings of a literature review that refers to cohorts as generations and specifically considers factors within an organisational context that contribute to learning and development (Ackerman, 1996; Baily, 2009; Bontekoning, 2007; Costello et al., 2004; Korchin and Basowitz, 1957; Kupperschmidt, 2000; McGuire et al., 2007; Nauta et al., 2005; Shaw and Fairhurst, 2008). The results of the review are presented in Table 12.2. Specifically illustrated are general characteristics important to this review that are exhibited by the various generations. In the following section, aspects of the table are discussed in more detail.

12.4. Generational differences and influencing factors on learning and work performance

Recent research suggests that cognitive ageing does not affect the working ability of older workers and that motivational and psychosocial variables play a key role in the successful work outcomes of older workers (e.g. Ypsilanti and Vivas, 2011). Accordingly, it has been suggested that the assumption of the generalised cognitive decline in older workers that affects work productivity is too simplistic. However, relatively little is known about the effects of work motivation in older workers (Boerlijst, 1998; Warr, 2001). Moreover, increasing work motivation and productivity in older workers may contribute to the enhancement of organisational outcomes both financially and socially.

There is great inter-individual and intra-individual variation as to which cognitive functions decline earlier during the lifespan. The distinction between crystallised and fluid intelligence is not a recent one (Horn and Cattell, 1966). There is strong evidence for an age-related decrease in fluid intelligence and increase in crystallised intelligence (e.g. Ackerman, 1996, 2000; Ackerman and Rolfhus, 1999; Beier and Ackerman, 2001, 2003).

Crystallised intelligence reflects general knowledge or domain-specific knowledge, while fluid intelligence is the ability to think logically and to solve novel problems. In the course of development, most individuals suffer from age-related changes in crystallised and fluid intelligence and adopt strategies to compensate for lost functions. There is evidence that the awareness of a decrease in fluid intelligence may encourage older employees to select jobs with set goals that optimise their existing abilities as a self-regulating mechanism (Kanfer and Ackerman, 2004). Older workers who recognise age-related limitations in their skills are more likely to move to jobs or tasks that place higher demands on crystallised rather than fluid intelligence (Baltes and Baltes, 1990).

Work mobility is also largely dependent on changes in occupational interests across the life span. To protect their self-image, middle-aged and older workers may change job preferences depending on the demands on crystallised and fluid intelligence. Therefore, an older worker may show preference for positions that require more managerial skills and supervisory abilities that place higher demands on crystallised intelligence rather than operational positions that require fluid intelligence. However, some occupations involving academics and lawyers exhibit less mobility across work positions since they rely heavily on crystallised intelligence that tends to increase with age. In essence, age-related decline in work performance is more evident in occupations that rely heavily on fluid intelligence, such as aircraft pilots, while work performance in occupations that rely heavily on crystallised intelligence remains relatively stable throughout an individual's working life. However, between these extremities lie occupations that require both fluid and crystallised intelligence. Accordingly, there is a continuum of demands on cognitive abilities that largely determine age-related changes in work performance, which, in turn, affect work motivation and job preference as a self-protecting mechanism. From a practical point of view, an organisation is more likely to increase work motivation in middle-aged and older workers when work preference changes are considered. However, other job variables, such as status, job challenge and peer interaction, are also important.

12.4.1. Work motivation

Recent evidence suggests that, during adult development, there is a reorganisation of priorities that significantly affects work motivation. In contrast to previously supported assumptions regarding cognitive ageing in older workers, this hypothesis attaches great importance to the qualitative changes in motivation that take place during middle adulthood (Kanfer and Ackerman, 2004).

In accordance with Erikson's (1964) stage theory of psychosocial development, age-related changes are marked by crises that individuals must resolve successfully to proceed to the next stage. Such crises involve not only self-fulfilment and achievement but also economic prosperity and social acknowledgement. In many models, such as Erikson's, successful resolution is associated with specific accomplishments during the life course. Unsuccessful resolution of such crises results in psychosocial stagnation that forces the individual to remain in the previous stage, prohibiting them from further development and possibly leading to demotivation.

In a similar manner, Maslow (1943, 1954) identified a hierarchy of needs as a function of adult development that progresses from basic low-level needs to self-actualisation that is most commonly achieved in later adulthood. Although self-actualisation is not associated with age per se, needs at the highest levels of the hierarchy tend to be accomplished later in life when generativity is at its peak. In similar vein, Erikson (1964) defined generativity as a stage during which middle-aged adults develop a need to contribute to their community, while those failing to do so experience feelings of stagnation and underachievement. Successful resolution of this stage will help individuals to move towards old age, with a general sense of satisfaction and with few regrets about their life accomplishments.

As such, generativity motives were described to address life accomplishments and goals that are collaborative in nature and require cooperation rather than individual achievement and competition (Kanfer and Ackerman, 2004). Therefore, a distinction was made between achievement motives that are related to educational and occupational goals and generativity motives that refer to collaborative goals (e.g. common societal achievements that improve the life of a society as a whole). Such motives may be particularly important in middle-aged workers who occupy positions that require the collaboration of staff and managerial skills (Ackerman et al., 2002).

The relative increase in general knowledge of older workers, coupled with changes in other cognitive abilities, such as memory and processing speed, alter the self-concept of the individual. In the course of development, humans strive to protect their self-image for survival and social purposes. Maurer (2001) suggested that the protection of the middle-aged self-image largely determines people's involvement in career development tasks and lifelong learning. This commonly involves the avoidance of activities that rely heavily on fluid intelligence and engagement in activities that demonstrate wisdom. This equation must include the effort-performance trade-off that predisposes the individual to select work activities that require less cognitive effort and

have higher performance outcomes. Indeed, younger adults may easily compensate for their lack of knowledge by making an effort to learn new tasks effectively, while older workers are more reluctant to learn new activities because the effort-performance curve is steeper.

Overall, the psychosocial development of middle-aged and older adults is an interplay between cognitive, motivational and self-concept variables that affect work performance and career development. Nonetheless, the reorganisation of motives (from achievement to generativity motives) seems to play a major role in work performance.

12.4.2. **Intrinsic/extrinsic rewards**

In addition to the reorganisation of motives in ageing workers, there are changes in the value of intrinsic and extrinsic rewards and job satisfaction. By intrinsic rewards, we mean the rewards that are derived from the satisfaction that an individual experiences during the process of reaching a goal rather than from the result of an activity (Beswick, 1971). By contrast, a reward is extrinsic when it is the consequence of effort to reach a specific goal or activity, such as pay. Extrinsic rewards tend to be predetermined or standardised and are usually delivered in the immediate future. Intrinsic rewards tend to be more satisfying in the long term rather than satisfying to the person during the process.

Some researchers suggest that, while the two types of reward can function together, intrinsic motivation is inhibited by using extrinsic rewards (Deci, 1975). For example, in the workplace, when someone receives money for doing something they would otherwise do out of personal interest, he/she is less likely to do the same activity without receiving payment in the future (Deci, 1975). The interplay between intrinsic and extrinsic rewards is a complex one. Typically, most employees find some level of intrinsic satisfaction in doing their work. However, there are individual and situational differences in the value of intrinsic and extrinsic rewards. Some people are equally motivated by both intrinsic and extrinsic rewards. These differences may be attributed to various factors, including educational and psychosocial variables (e.g. life models, personality, family values).

Kanfer and Ackerman (2004) reported that there are age-related differences in the value of extrinsic and intrinsic rewards, with older adults being more motivated by intrinsic rather than extrinsic rewards. Additionally, an organisation's behaviour towards other employees remains a strong predictor of the value that an individual might place on rewards (Andenike, 2011). For example, an organisation that rewards achievement motivation solely with

extrinsic rewards (e.g. pay, promotion) is unlikely to motivate generativity or intrinsic rewards among its employees.

Work satisfaction and performance are both affected by intrinsic and extrinsic motivation and rewards in a complex manner (Small and Venkatesh, 2000). Organisations are usually aware of this interplay, which has many implications for the use of extrinsic and intrinsic rewards in the workplace, but are not always aware of how to deal with them effectively. The existence of different generations of workers in the same organisation complicates matters even further. Indeed, striking a balance between satisfying the needs of different generations, each with different motives and different values for extrinsic and intrinsic rewards, is challenging.

Managers are often faced with the challenge of how different types of motives and rewards affect employee behaviour. Particularly important is the way in which work-related activities are rewarded for tasks that would otherwise have been undertaken purely out of self-interest. For example, medical doctors may be involved in research out of personal interest or because this is part of their duties. Such conflict in extrinsic and intrinsic motivation may affect the organisation's decisions about employee investment for future development. Indeed, the consequences of selecting appropriate rewards for work-related activities may be enormous to the organisation both in terms of productivity and of future investment. Consequently, the way extrinsic rewards affect intrinsic motivation has enormous implications for the management of organisations and the study of job performance.

12.4.3. **Effort and intrinsic/extrinsic rewards**

For younger workers, the level of effort is positively related to work performance and to intrinsic and extrinsic rewards such as salary, recognition, promotion and self-fulfilment (Kanfer and Ackerman, 2007; Kanfer, 1987). For older workers, particularly those who have reached the peak of their career, effort is not always stimulated by extrinsic rewards. In contrast, intrinsic rewards such as self-fulfilment and a sense of achievement potentially play a major role in work performance. Often, motivation is largely dependent on the level of effort that an older worker chooses to allocate to a work activity. Older workers 'choose' the amount of effort they put into work activities, particularly novel ones, and exhibit little interest in developing new skills. This suggests that they are less worried about failing to secure promotion compared to younger adults at the start of their career. However, evidence suggests that occupational achievement in older workers influences life satisfaction (Johnson, 2008). This fits well with the idea of reorganisation of goals and motives so that older adults

are more interested in generativity than achievement motives. The family environment also contributes to the importance of occupational achievement in older workers (Saltzstein et al., 2001).

The reorganisation of motives as a function of ageing as well as the relative reluctance of older workers to engage in novel work activities have consequences for both the organisation and the employee. Organisations can experience the ageing workforce as a burden that delays its development and entry into new technological and financial markets while, at the same time, older employees are threatened by job obsolescence that forces them to change careers to remain in the workforce (Warr, 2001). However, work motivation precedes work performance. Accordingly, counselling and guidance services are particularly relevant here. IGL might also be a way to mitigate these problems through tutoring between generations. If IGL functions as an informal means of information flow or work guidance from older to younger workers and vice versa in such a manner that both generations benefit from and complement each other, this will lead to an increase in work performance.

12.4.4. **Intergenerational effects**

In our analysis of motivational changes across the life span, it is evident that there are significant intergenerational differences. Wey Smola and Sutton (2002) investigated intergenerational differences in work values to determine whether the differences are the result of cognitive/maturational effects or intergenerational differences in experiences. In a cross-sectional study of two age cohorts (27-40 and 41-65), they found that Generation X exhibits lower levels of work commitment compared to previous generations and puts more effort into balancing work and family obligations. However, both age groups felt that work performance does not define an individual's value, and older workers reported a less idealised view of their work compared to younger workers that reflected their lifelong experience of disloyal employers (Wey Smola and Sutton, 2002). Therefore, there are intergenerational differences in the goals, values and experiences that may interact with cognitive and maturational changes and determine work motivation and performance. These differences stem from the different economic and political conditions of each generation ([75]), particularly those relating to attitudes towards work commitment and retirement (Tolbize, 2008).

([75]) According to Dencker et al. a generation is 'comprised of individuals who share years of birth as well as noteworthy historical and political events taking place during one's formative years and over the course of one's life. The common experiences of similarly aged individuals may act as a lens through which future events are interpreted in their environments' (Dencker et al., 2007, pp. 212-213).

Another significant intergenerational difference regards organisational commitment. While baby boomers exhibited extreme loyalty to their employers, generation X shows little loyalty to their employer, changing on average 7-10 organisations across their working life. This finding is supported by evidence that employees value their relationship with their co-workers more than their managers (Karp et al., 2002). Perhaps generation X has witnessed from previous generations that loyalty to the employer does not guarantee work security. Although there are differences in loyalty towards organisations across age-cohorts there is a common perception as to which factors are likely to keep an individual loyal to his/her organisation. Such factors include mostly extrinsic rewards like salary increase and benefits, promotion and opportunity to engage in lifelong learning (Deal, 2007).

12.4.5. Consequences for employees and organisations

The reorganisation of motives across the life span changes the working conditions of employees and organisations. For younger workers, increasing work motivation is a function of extrinsic incentives that include new work and learning opportunities. For middle-aged and older workers, increasing work motivation is a combination of intrinsic and extrinsic rewards and opportunities to engage in activities that rely on knowledge and experience. Such activities are likely to develop a sense of job wellbeing contingent on the developmental changes of their age.

Adjustments to goals and performance criteria should be made to enhance performance outcomes. Relevant performance criteria should be defined in terms of managerial and training effectiveness that places greater demand on crystallised intelligence than on performance outcomes that rely heavily on fluid intelligence. This will promote the protection of the self-concept of older workers and will create a sense of completeness and job satisfaction.

The impact of age-related changes in cognition alters work performance and job satisfaction. These intellectual changes must be balanced against the effort of older workers who are less likely to commit to achievement goals that will undermine their self-concept. Kanfer and Ackerman (2004) propose that an age-related decrease in fluid intelligence affects motivation as a function of the amount of effort required to sustain work performance. This hypothesised relationship is further affected by job demands and a perceived effort-performance trade-off. Middle-aged and older workers move from achievement motives to intrinsic motives, attaching particular importance to protecting their self-concept and wellbeing.

Thus far, this review has focused on the change of psychosocial variables

of older workers under the assumption that older workers have longer tenure in an organisation. However, the hiring of older workers is an important issue in the current socio-economic situation in the EU. Recently, Heywood et al. (2010) examined the relationship between compensation, training and hiring of older workers in Germany. Previous studies indicated that managers place value on the increase in crystallised intelligence only with increased tenure within a company and not when they are thinking of hiring older workers. Their results indicated that compensation is a reason for not hiring older workers. However, companies are more likely to hire younger adults and retain them as older workers rather than hire older workers. For this reason as well, understanding how to invest in older workers so that they remain effective is an important issue.

12.4.6. Moving forward

In our analysis of the psychosocial factors that affect work performance and learning between generations, several variables have been pinpointed. Our attempt to establish a framework for the interaction of these variables is based on the assumption that there is interplay between biological, psychological and social factors that determine the successful coexistence of different generations in the same organisation. Such factors include developmental changes in intelligence across the lifespan, expectations and values that alter the perception of one's self-concept. In turn, these influence motivation and, ultimately, the value of intrinsic and extrinsic rewards. The addition of the relative perception of effort and job satisfaction seems to imply a non-circular direction in these factors that are caused by the biological and psychosocial changes of the individual across the life span and result in the termination of productivity at work.

It would be particularly useful for an organisation to be able to determine the current location of an individual in this model. By so doing, the organisation would be more likely to increase work motivation, performance and the desire to learn. Consider the example of a 40-year-old male employee working in a public organisation with 10-year tenure. To determine how to improve his effectiveness, we should be aware of the psychosocial changes that are linked to his age. If we are to adopt a stage model, this male would be entering the stage of generativity; accordingly, his life expectations would be centred around his family and career. Intellectually, the individual is still functioning very well, in terms of both crystallised and fluid intelligence, and places great value on the effort-reward outcomes that determine job satisfaction. In this rather simplistic example, the organisation is called on to decide whether this

individual is likely to be productive in a different work position (other than the production line) involving a managerial aspect that would increase his work motivation. In this way, this employee would be able to learn from the previous generation and help teach the next, as well as vice-versa. We propose a personalised approach in the determination of the needs and abilities of workers, with frequent re-assessments that would consider the changes of the individual across the lifespan. Stage models are not universally adopted by psychologists (e.g. Bidell and Fischer, 1994), but a discussion on this topic is beyond the scope of the present study. Indeed, there is some debate among social scientists as to whether the age boundaries of each stage reflect the whole population or whether other factors such as personality, life models, family values and education determine the developmental transitions across the life span. For present purposes, we need to understand that the points discussed above directly influence how IGL can be facilitated effectively in organisations. On the one hand, organisational structures need to be in place to ensure that older workers are approached in specific ways that will help them adapt to changing work situations. On the other hand, the speed at which organisations need to change and develop to remain viable means that any sort of organisational development trajectory based on learning will need to be designed with the needs of older workers – and, of course, younger ones as well – in mind.

12.5. Organisational structures, settings and designing IGL

Billet (2002) argues that all learning in organisations is dependent on existing structures which determine how people do their jobs.

Learning experiences in the workplace are shaped by structural factors associated with work practices. These regulate and are reproduced by the division of labour and the distribution of opportunities for participation in and learning about work. This structuring, and its contestation, is no more evident than in the assessment of or learning about work tasks that are highly valued or remunerated. This structuring underpins the need to identify ways of intervening in workplaces to assist in the equitable distribution of learning experiences (Billet, 2002).

While most literature on workplace learning emphasises the learning processes specifically from the point of view of the individual's experiences (Ashton, 2004), thus ignoring or underestimating important contextual factors,

there are some studies that consider workplace learning as a situated phenomenon that needs to be understood as such (Ellinger, 2005). For example, Ashton (2004) devised a model based on empirical work that illustrates the interplay between organisational structures, organisational culture and learning. Central to the model is the idea that the organisation ensures that there are opportunities to practise what has been learned. Interacting and influencing the ability to practise are linked to the following important structures: (a) how the organisation facilitates the distribution of knowledge and information, for example, team meetings, information-sharing methods; (b) rewards for learning, for example, pay rises, promotion; (c) support for learning, for example feedback, training in supporting learning. What Ashton does not discuss is the general organisational climate in which these structures were found. Organisational climate considers matters other than simply culture. For example, Skule (2004) identified seven conditions for promoting informal learning that can be more or less considered to be climate-related: a high degree of exposure to changes, a high degree of exposure to demands, managerial responsibilities, extensive professional contacts, superior feedback, rewarding of proficiency and management support of learning. Driver (2002) showed that management plays a critical role in developing a strong learning climate, and Sambrook (2006) found that, by not explicitly supporting learning, managers seriously inhibit the learning process.

Ellinger (2005) identified four emergent themes in her extensive qualitative study on positive organisational factors influencing informal learning that underpin the studies discussed above. Linked to the themes found in the data were sub-themes relating specifically to the behaviour of managers. For example, one emergent theme was 'learning, committed leadership and management'. The sub-themes of this were 'managers and leaders who create informal learning opportunities' or 'managers and leaders who instil the importance of sharing knowledge and developing other informal learning opportunities'.

IGL has been conceptualised in this review as a form of informal learning, and as such is different from more formal training. We then argued that a positive organisational learning climate is important to facilitate all types of informal learning, including IGL. However, for IGL to be successfully implemented, organisations also need to ensure a culture that is open to diversity. Negative stereotypes about different generations are a common problem in organisations and can lead to frustration when implementing IGL. In Ashton's model, for example, ensuring that all employees – not just the younger ones – are part of the information loop would play an important role,

as would allowing older employees to rotate jobs and take on new tasks. Unfortunately, older employees are often left out of organisational structures associated with informal learning. Again, managers play an important role in creating and maintaining an open culture.

12.5.1. Designing effective IGL environments

From the previous discussion, we can conclude that, for organisations to implement forms of IGL successfully, factors surrounding the employees and the structures in which they operate need to be considered. Literature has shown that older employees learn differently from younger ones and for different reasons. It has also shown that organisations need to have formal and informal structures for promoting learning of any type and that, with regard to IGL, age discrimination might be an added dimension that needs to be considered. In this section, we develop the idea of learning environments theoretically conducive to IGL using a model from Nieuwenhuis and van Woerkom (2007), based on what they refer to as goal rationalities.

Nieuwenhuis and van Woerkom (2007) draw attention to the fact that there is conflicting empirical evidence concerning learning opportunities at the workplace. While some studies show the workplace to be an effective learning environment, others show the opposite. This may be because the workplaces and professions studied were different, but it also might be because the attitude taken while evaluating them was different. The authors propose that evaluating workplace learning potential should be done using four different rationalities for learning to understand effectiveness properly. They argue that most studies approach learning at work from only one goal rationality, what they refer to as 'preparatory rationality' in which learning has a function related to preparing for work. This is a type of learning associated with formal schooling, or formal training in organisations. The other rationalities are grounded in the idea of informal learning and are intrinsic to the work environment, thus important to the present study. Table 12.3 provides a summary of the four goal rationalities, a description of each, the institution involved in the process and the goals for the learning process (Nieuwenhuis and van Woerkom, 2007).

The concept of goal rationalities is useful when we consider how IGL environments might be effectively designed and successfully implemented. If we graft IGL on to the goal rationalities and combine it with information taken from the literature referred to above about motivation and rewards, we arrive at the following framework for the design of IGL.

Table 12.3. **Goal rationalities, description, institution involved and goal for learning**

Rationality	Description	Institution involved	Goal/criterion for learning
Preparation	Learning as preparation for work	Education	Qualification
Optimisation	Learning for effective task execution	Work organisation	Optimising productivity
Transformation	Learning for innovation	Economy	Competitiveness and organisational vitality
Personal development	Learning for personal goals	Individuals	Personal development

Source: Nieuwenhuis and van Woerkom (2007).

Learning environments focus on optimisation. Optimisation as a goal rationality is closely linked to the idea of (reverse) mentoring in the sense that improved employee competence in task execution is probably the most important outcome (Scandura, 1992). In this case, the younger worker, who needs to become more competent, benefits from the older worker's expertise. The opposite holds true for reverse mentoring – for example where a younger employee is linked to an older employee to improve his/her technical expertise. At the same time, older employees would be engaged in situations where their expertise and knowledge are used effectively. In mentoring situations, the crystallised intelligence of the older worker is thus used to its full potential. Aryee et al. (1996) found that motivation to participate in mentoring is a combination of intrinsic and extrinsic dimensions, personal traits such as altruism and the need to share knowledge, etc. inside both formal and informal organisational structures that promote these types of learning relationships.

Learning environments focus on transformation. Transformation is a goal rationality connected with innovative learning environments. From this goal rationality perspective, IGL is driven by an organisational need to change and develop and often takes the form of multigenerational innovative teams and communities of practice. Here, team-level learning is directly linked to knowledge-building and innovation, which, in turn, are linked to organisational learning (Crossen et al., 1999). In transformative learning environments,

different types of knowledge are important to the innovative processes (Ropes, 2010; Tempest, 2003). This includes 'deep' knowledge that older employees hold as well as 'broad' knowledge usually held by younger employees (Tempest, 2003). In addition, older workers are able to apply both fluid and crystallised types of intelligence for the benefit of the organisation. The former type of intelligence is important for the development of new perspectives on existing situations – crucial to innovation – and the latter type is needed to ensure the effective operationalisation of new concepts – crucial to successful development and implementation of the innovations themselves. Intrinsic motivation to participate in these types of environments lies in the idea that older workers feel a need to be engaged with the organisation in ways that promote its growth and development (Barnes-Farrell, 2006). This concurs with Erikson's (1964) concept of the generativity stage discussed above. Furthermore, older workers seem to be more motivated to take part in organisational learning activities that are collaborative in nature because they require cooperation rather than competition (Kanfer and Ackerman, 2004).

Learning environments focus on personal development. In an organisational setting, the impulse to learn often comes from pressures placed on the employee to perform better (an optimalisation goal rationality) or to contribute to the development of the organisation (a transformation goal rationality) in situations such as IGL. However, the desire to learn might also be stimulated for other, more personal reasons such as the desire for happiness, an attempt to to function better in one's personal life or the possibility of a change in one's career. Here again, the idea of generativity as a motivating factor is important because the focus of one's learning changes and is directly related to the different generations' view on the life-work balance and the various levels of organisational commitment. For older workers, the desire to learn for personal development shows a continuing concern for self-development and self-directed learning. These traits are important for the wellbeing of the employee but have also been shown to be important characteristics of effective employees (Caffarella, 1993).

12.6. Concluding remarks

In this study, we took the position that IGL is one way that organisations can invest wisely in older workers to ensure that they continue to learn throughout their working life. We proposed that several factors are important for organising IGL and explored this concept through a multidisciplinary review

of the literature. What we found is that, for IGL programmes to be effectively designed, there needs to be a clear understanding of three interconnected levels in organisations. This is the basis for the framework that organisations can use to understand what factors are important for ensuring older employee learning through IGL. The first level concerns the individual and factors associated with a world-view, personal and work-related values, type of intelligence and different types of motivations. This we see combining in the different goal rationalities for learning. At group level, it is important to structure interactions between generations in ways that complement the different types of knowledge and relate to how that knowledge is used (i.e. intelligence). Finally, at the level of the greater collective, we found that it is important for organisations to invest in both formal (reward) structures as well as informal ones (a positive learning culture), as the latter is more likely to engage all workers – not just older ones – in lifelong learning.

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List of abbreviations

IGL	intergenerational learning