Conceptualising Learner Agency: A Socio-Ecological Developmental Approach

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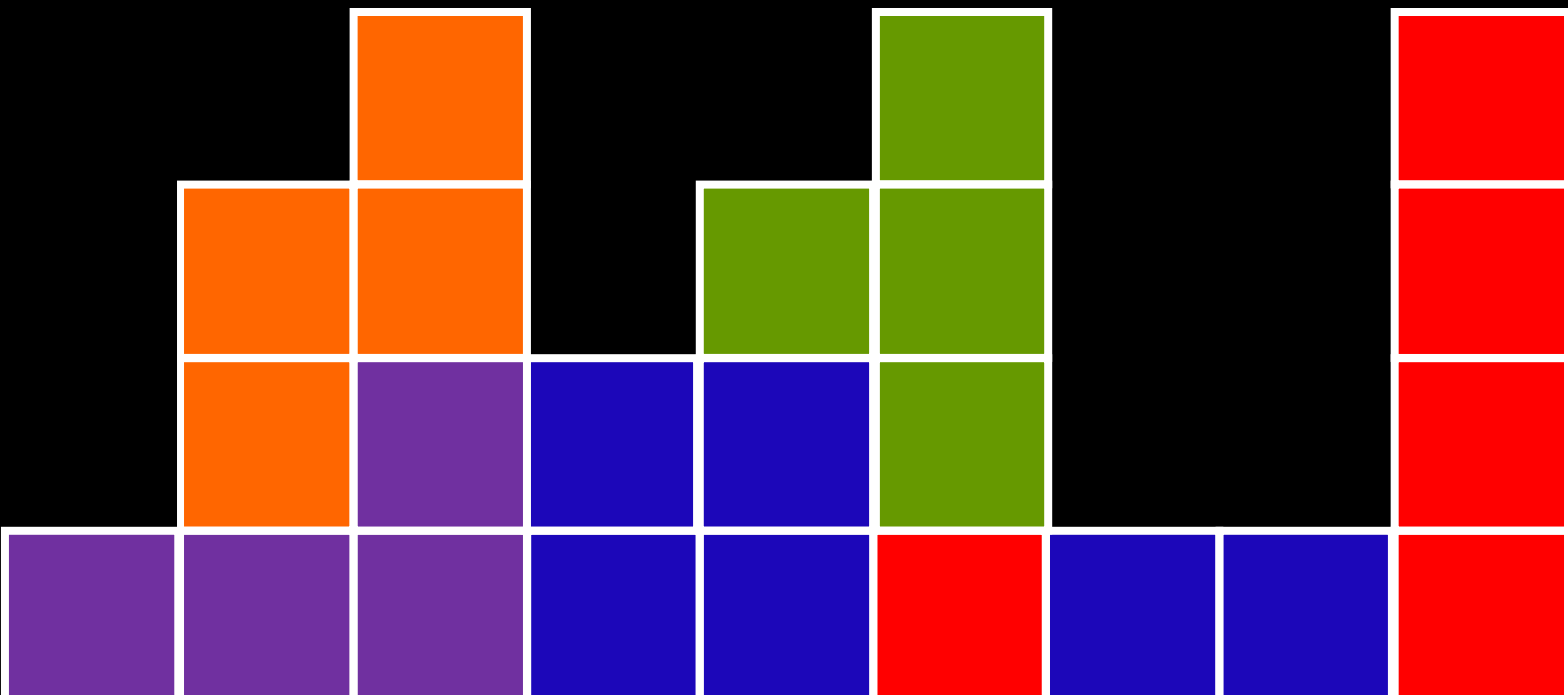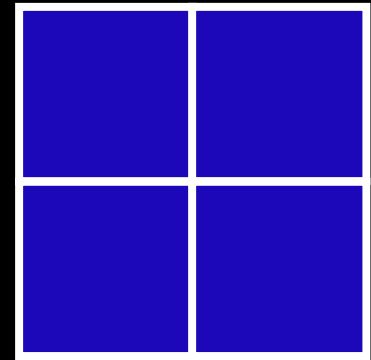# Conceptualising Learner Agency: A Socio-Ecological Developmental Approach

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Abstract

This paper addresses the interactions between a developing person and a changing social context shaping the acquisition of new skills and competences. It introduces a socio-ecological developmental approach for conceptualising learner agency, which is informed by expectancy-value models of human behaviour, theories of developmental regulation and ecological theories of life course development. Learner agency is understood to reflect the active and lifelong processes of inquiry, engagement and participation in the world around us. It involves the ability to act intentionally, to make things happen, to be a product as well as a producer of the social world. It is argued that learner agency is not a personality characteristic, but a relational process that emerges through interaction with others, and that its manifestations are shaped by the wider socio-cultural context. As such it is learnable and malleable through experience.

1. Introduction

Learning requires the activity and initiative of the learner – it requires the learner's agency. Active learning implies a shift from being a passive recipient of knowledge to being an active agent in the learning process (Martin, 2004; Zimmerman, 2008). It involves the intake, processing, retention and use of knowledge, skills, and beliefs (including attitudes & values) through experience and interaction with significant others and the wider socio-cultural context. Learning does not take place in a social vacuum, and a theory of learning should be built on the notion of person-environment interactions (Zimmerman & Schunk, 2011). Learning occurs through experience and is shaped by the life that the person is leading, by the circumstances encountered.

Recognizing that the changes in the world today, the challenges arising in our increasingly globalised knowledge societies and the advent of the 4th Industrial revolution, the OECD has launched the Future of Education and Skills 2030 project (OECD, 2018) aiming to equip young people with the capabilities to navigate an uncertain future, to shape their own lives and contribute to the lives of others – to become active agents. The focus is not only on the skills and knowledge required to get ahead in society, i.e. to get a good job and high income, but also to care about the well-being of their friends and family, their community and the planet. To that aim it will become necessary to re-orient education, to develop a new Framework for Education 2030 (OECD, 2017a), to actively address new challenges and opportunities. This implies a shift from the 'delivery' of skills and knowledge to the creation of opportunities enabling learners to become engaged and committed in the learning process, to become active agents. The learning process is however not restricted to experiences within the school context, but extents to the ongoing and voluntary pursuit of knowledge for either personal, social, economic or humanitarian reasons. Learning enhances personal development as well as active citizenship and social inclusion.

To be an agent in the learning process involves the ability to act intentionally, to make things happen, to be a product as well as a producer of the social world. The core features of agency enable individuals to play a part in their self-development, adaptation, and self-renewal with changing times (Bandura, 2006). It involves initiative, awareness of one's own capabilities, setting goals, self-regulation and perseverance in attaining these goals. It however also requires the individual to become aware of responsibilities of one's own action, of social connectedness

to others, and recognizing inter-dependence of one's actions. Agency cannot be adequately defined as an individual attribute. The socio-cultural context within which it is enacted also needs to be considered - as well as the ways in which individuals interact with this context. Agency has to be understood as a dynamic and relational process, embedded in a changing social context.

The aim of this paper is to conceptualise the notion of agency, to outline key aspects regarding the development of agency, highlighting the interactions between structure and agency, and discuss implications for the OECD Learning Framework 2030 (OECD, 2018).

2. Conceptualising Agency

Given the relational and dynamic nature of individual agency and action, its conceptualisation is a challenging task. Research into the study of agency has been hampered by differences in terminology, level of analysis and approaches to measurement used across fields (Sokol, Hammond, Kuebli, & Sweetman, 2015). For example, while psychologist tend to emphasise the role of individual decision making and actions often to the neglect of social forces that promote or limit development, sociologist focus on the social structures that shape human lives and behaviour, often losing sight of the person (Hitlin & Elder, 2007; Settersten, & Gannon, 2005).

To take into account both individual factors and the social context that shape the development and manifestation of agency requires an integrated socio-ecological and developmental approach (Schoon & Heckhausen, submitted; Schoon & Lyons-Amos, 2017). An integrated model of learner agency has to span across different disciplines and recognise that individual decision making and action depends on interactions with others, is embedded in a wider socio-historical context (ranging from immediate social settings in one's family and neighbourhood to macro-economic conditions), and is shaped by variations in access to socio-economic resources.

Moreover, the manifestations of agency change over time, depending on individual maturation, changing social relationships, as well as a changing social context. It is therefore important to understand agency is not a personality characteristic. It is a dynamic and relational process that unfolds and develops over time, shaped by interactions between a developing individual and a

changing social context. In a world characterised by rapid social change and transformation it is necessary for individuals to adjust to, cope with, and take advantage of the changing opportunities and constraints. This implies that learner agency is not only relevant during initial phases of schooling, training or higher education, but that it extends over the whole life course, reflecting life-long learning.

2.1.   *Self-directed action embedded in a wider social context*

The OECD learning framework 2030 places learner agency at its heart. A crucial aim of education for the future is for students to develop a strong sense of self-control and self-directedness, to be able to actively influence and steer their lives in a meaningful and responsible way. Moreover, as citizens of tomorrow they will need to navigate the yet unknown, find solutions to economic, social and cultural challenges which our generation has yet to solve or even recognise. They will also have to create new opportunities for a better world (not just solve problems bequeathed by an earlier generation).

Learner agency implies that learners actively interact with their environment and are actively involved in their learning and development (Haste, 2001). Learners are viewed as agents who actively engage in constructing the terms and conditions of their own learning in whatever context they engage with, i.e. inside and outside formal learning contexts (Pintrich & Degroot, 1990; Zimmerman & Schunk, 2011). Moving beyond the conception of human behaviour being imposed by external pressures (i.e. a deterministic view prevalent in theories of behaviourism advanced by Watson and Skinner or reductionist sociocultural determination), the notion of agency implies self-determination, the ability to make one's own choices, to select and create the developmental environment and create new values.

However, agency does not mean that individual behaviour is unfettered by external constraints, i.e. that individuals do whatever they want. Individual behaviour is embedded in a wider social context that is not completely determined by the individual. It is shaped by social structures and institutions, social norms and expectations, unforeseen events, including unexpected and unintended consequences of one's behaviour. Thus agency, develops within existing structures and cultural identities, which is reflected in terms such as 'structured' or 'bounded' agency (Shanahan, 2000; Evans, 2002). Yet, individuals are not passively exposed to these external circumstances, they can take action to influence the structures which in turn influence their lives – they are a product as well as producer of their social world.

In addition behaviour is dependent on processes of biological maturation. However, this does not mean that a universal evolutionary process drives all human behaviour, as for example, reflected in the notion of the selfish gene (Dawkins, 1976). Evolutionary accounts of human behaviour conceptualise humans as survival machines, behaving in ways to maximise survival of the species. Yet, as pointed out by Bandura (2006), the creative power of human agency is often ignored in evolutionary theories. The human capacity for advanced symbolisation, the ability to comprehend, predict and alter the course of events, enabled humans to transcend the constraints of their immediate environment. Through their ability to imagine, evaluate and to construct alternative routes for action, human beings can shape their environment, which in turn shapes them. As such, individual agency can be understood as a relational process where person and context constitute each other (Eccles, 2009; Martin, 2004; Schoon & Heckhausen, submitted; Sokol et al., 2015). The manifestation of agency emerging through interactions of the person with their context, and cannot be reduced to either personality characteristics or structural influences. Both have to be considered for a comprehensive understanding of agency.

2.2. *What motivates individuals?*

Asking what motivates individuals – i.e. why do people chose certain goals over others and persist until achieving them - psychological theories have emphasised the role of beliefs, expectancy and values. Expectancy-value theories as applied to achievement motivated behaviours (Atkinson, 1964; Eccles & Wigfield, 2002; Heckhausen, 1967) argue that individual's choice, persistence and achievement can be explained by their belief of how well they will do at the task and how much they value it. Expectancy refers to the beliefs about one's own capability (i.e. self-concepts, self-awareness, confidence) and the expectations for success, the extent to which individual's believe that they can be successful in attaining the specific goal (i.e. self-efficacy, optimism). It is of note, that while ability beliefs or self-concepts are defined by the individual's perceptions of their current competence and past experiences, expectations for success refer to future attainment – a projection of the self into the future. Both ability and expectancy beliefs are crucial to expectancy-value theories, as is the notion of value. Values associated with attaining the goal include values that are intrinsic to the activity or the goal as well as values that are associated with the consequences of achieving the goal (utility or extrinsic value), such as social recognition or material rewards. Intrinsic value is associated with the interest and enjoyment of doing the tasks, while utility value is associated with the 'extrinsic' reasons for engaging with the task (see also (Ryan & Deci, 2000).

Thus, at the most general level, agency refers to the human capability to autonomously initiate and control one's behaviour and interactions with others (Bandura, 2001, 2006). It is a multi-dimensional construct that involves a) the anticipation of a valued outcome (foresight), i.e. the ability to set goals; b) planning the pursuit and attainment of one's goals (i.e. intention, planning, expectations for success); c) the assessment of available capabilities and opportunities (reflection); and d) self-monitoring, i.e. to remain committed to the task at hand (i.e. self-regulation, self-control, grit). Yet, agency does not take place in a social vacuum. Its manifestation is shaped by social conditions and support received from family members, teachers, peers, the community and circumstances in the wider socio-cultural context (which I will discuss in more detail later). These conditions do not necessarily aid or promote the realisation of individual strivings. As such, the individual needs to adequately respond to failure, to recognize when the pursuit of a specific goal is futile and when it becomes necessary to adjust goals or even disengage, i.e. to cut one's losses before it is too late. The acquisition of new competencies occurs in a continuous cycle of 'anticipation-action-reflection' (Heckhausen, Wrosch & Schulz, 2010), a learning cycle that ensures effective information processing and action.

According to the motivational theory of life span development (Heckhausen & Wrosch, 2016; Heckhausen, Wrosch, & Schulz, 2010) successful developmental regulation is to a large extent a function of individuals engaging with goals when the opportunities are favourable and disengaging from goals when opportunities are unfavourable, when time is running out, or goal pursuit has become too costly (i.e. persisting with athletic competition at the expense of general education). Sticking with unobtainable goals can become maladaptive, especially when individuals persist despite repeated set-backs. Feeling trapped in a project that does not bring the anticipated outcomes has been described as 'action crisis' (Brandstatter & Herrmann, 2016), referring to the conflict of being torn between holding on or giving up a specific goal. Successful developmental regulations does however also involve the recognition of fortuitous events that open up unforeseen opportunities for new ventures and relationships to emerge (Bandura, 2006; Heckhausen, in press).

2.3.   *A socio-ecological developmental approach*

To comprehensively conceptualise the notion of individual agency it is important to consider its multiple components, comprising beliefs, expectancies, and values as well as the resulting intentions and self-regulatory efforts in planning and carrying out the different steps needed to

achieve one's goals (Bandura, 2006; Heckhausen, in press; Schoon & Lyons-Amos, 2017). All these components of individual agency are shaped through experiences in the family or the school context as well as the general socio-cultural conditions encountered. As such, agency cannot be understood as a personality characteristic. It is a relational process, a phenomenon that emerges through the unique interplay of individual capacity and the socio-cultural structures in which it is enacted – and is thus learnable and malleable.

An integrated, socio-ecological developmental perspective of agency takes into account individual's capacity to act as well as the structural constraints and opportunities shaping human behaviour. For example, the value that an individual associates with a particular goal are strongly influenced by the social group the individual holds high in regard, such as parents, friends, teachers or peers, which in turn reflect current cultural norms and beliefs regarding appropriate behaviour and action (Eccles, 2008; Schoon & Heckhausen, submitted). As such the development of individual agency has to be understood as a relational process which is shaped through interactions with others and the wider social context. The sources of agency are shared by individuals and their contexts and cannot be reduced to one or the other.

Moreover, the socio-ecological developmental approach takes into account the temporal dimensions in the development of agency, i.e. conditions in the past, the present and anticipation of the future. The exercise of agency is rooted in past experience, which influences current evaluations of one's capabilities as well as the anticipation of the future (Bandura, 2006; Emirbayer & Mische, 1998; Hitlin & Elder, 2007). Individuals with a wide repertoire of experience, knowledge and skills may achieve agency more readily than those without. Past experiences also influence how current conditions, capabilities and resources are perceived and evaluated - and what futures are imagined or considered possible.

2.4. *Different modes of agency: Personal agency, co-agency and collective agency*
Individual agency can manifest in different modes, comprising personal agency, co-agency, and collective agency (see also Leadbeater, 2018). Personal agency is exercised individually, i.e. individuals regulate their own functioning, their cognitive, motivational, affective and choice processes and aim to gain control over their environment. Individuals have to develop a realistic awareness of their strengths and competences, their sense of identity, who they are, what is important to them, what action is possible for them within the social conditions encountered, and how they can achieve their desired goals.

In many activities, however, individuals do not have direct control over conditions that affect their lives. For example, children on their own are not able to secure safe housing, food, clothing or appropriate schooling for themselves. Moreover, children growing up in relative disadvantaged socio-economic circumstances have fewer resources to support their ambitions than their more privileged peers. For example, they might not have the necessary books to study, no desk to do their homework, or no access to the internet. Under these circumstances they have to rely on others, such as parents, teachers or community leaders who have the power or influence to act on their behalf to get the outcome they desire. Thus, others play a vital role in supporting individual agency, a role that had been identified as co-agency (Salmela-Aro, 2009; 2018). Through interactions and collaboration with others, children acquire a wider range of skills, attitudes and experiences enabling autonomy. This process is facilitated through shared values, goals and expectation, highlighting reciprocal processes between the learner and significant others.

Yet, many things are only achievable through socially interdependent effort, i.e. working in coordination with others to secure what one cannot accomplish on one's own. For example, in our fast-paced world of rapid social change innovative life decisions are required and it becomes necessary to create new opportunities and new patterns of living, working and socialising. In the exercise of collective agency people pool their knowledge, skills and resources, acting together for a shared purpose to shape their joint future, to change social structures and bring about innovation (Bandura, 2000; Settersten & Gannon, 2005). This can imply that many individuals who dare to make innovative life decisions open up new options for others, or entire groups of people act together through collective movements to instigate social change. Recent examples of collective agency include the political uprising during the Arab spring, or the current #MeToo campaign, using social media to raise awareness of sexual violence against women. Collective agency enables the person to feel part of something larger than themselves, a community, a movement, a society - to place themselves in a larger social whole (Leadbeater, 2018).

All three modes of agency reflect mutually constitutive transactions between individuals and the context they are embedded in. Manifestations of individual agency are the product of the continuous dynamic interaction between the developing person and the experience provided by his or her social settings, where individual and context create each other. A key ingredient of these transactions is a belief in the power to produce desired results, which involves shared

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intentions, knowledge, beliefs, values and skills, but also the interactive, coordinated, and synergistic dynamics of transactions. People do not live their lives in individual autonomy. Many of the things they seek are achievable only by working together through interdependent effort.

3. Development of Agency

The contemporary literature on the development of agency is characterised by different conceptions of the learner (Kay & Kibble, 2016; Martin, 2004). A constructivist conception explains self-regulated learning in terms of the Piagetian tradition, emphasising the active construction and reorganisation of knowledge structures that are internal to the learner. Knowledge is actively constructed as the learner engages with and makes meaning of their lived experience. The socio-cultural perspective, based in the theories of Vygotsky, emphasise the learner's embeddedness in socio-cultural practices, where learners gradually internalize the socio-cultural practices of those around them. Learning is considered as a process of enculturation or appropriation, where more knowledgeable others (i.e. parents, teachers or peers) provide developmentally appropriate input and support for learning. Both approaches conceptualise agency to emerge through person-environment interaction. However, socio-cultural approaches emphasise the transformative collaborative practices, i.e. that individuals do not simply adapt to their environment, but through collective agency are able to transform the context that shapes them.

A third approach, the social cognitive theory developed by Albert Bandura (2000, 2006) builds on both constructivist and socio-cultural perspectives, rejecting any dualism that sets psychological (constructivist) and socio-structural theories against each other. He sees the learner as both a product and a producer of social systems. Learning occurs through action, observation of others, and experiencing the effects of action directed towards oneself, which enables the individual to form ideas of how new behaviours are performed, and on later occasions this coded information serves as a guide for action. Self-regulated behaviour emerges as a result of continuous reciprocal interactions between cognitive, behavioural and environmental influences through which a symbolic representation of oneself as distinct from others is formed - a distinct self, capable of making things happen. Self-regulated behaviour is guided by visualised goals and anticipated outcomes, as well as anticipatory beliefs about the potential for success (efficacy) and anticipation of the consequences of one's action.

Another approach, informed by George Herbert Mead's perspectival realism (Mead, 1934), emphasizes the function of perspective taking and perspective exchange in the development of agency (Gillespie, 2012; Martin, 2006). Agency develops through the gradually increasing ability of the individual to become aware of, to exchange, and coordinate multiple perspectives within established patterns of social interaction. Being able to take the perspective of others helps the individual to reflect on their own situation and to empathise or participate in the feelings and experience of others. In more advanced or abstract forms this includes to take the perspective of the 'generalised other', i.e. perspectives held in common by members of a particular community or society.

Despite their differences, the four approaches emphasise that agency emerges developmentally through reciprocal person-context interactions that result in gradually increasing capabilities for self-regulation and self-determination. This can occur through the construction of representational cognitive schemes, internalisation or perspective taking.

Key developmental building blocks in the formation of agency are the basic sensorimotor and perceptual functioning of infants, as well as their social interactions, reflections and processes of meaning making across the life span that characterise autonomous and adaptive behaviour and action (Sokol et al., 2015). This does not imply that agency is biologically determined, but rather that these early precursors are already present at birth (Heckhausen et al., 2010; Sokol et al., 2015). Each developmental period is characterised by basic biological and cognitive changes as well as changes in the social surroundings.

Children's development is driven by their basic psychological needs to achieve competence, autonomy and relatedness (Deci & Ryan, 2000; Eccles, 2009). They seek opportunities to develop, master and demonstrate new skills, to make independent decision and control their own behaviour, to form new social relationships with peers and adults outside the family. They learn about the world outside the family home, match themselves against the expectations of others, compare their performance with that of their peers, learn to respond to new challenges and opportunities, develop new solutions and create new values.

Cognitive capabilities (e.g. attention, remembering, reflection, motivation and symbolising, etc.) develop through interaction with others and grow incrementally in instructional contexts. More advanced forms of agency evident in adulthood build on developmental processes

manifest already early in life. Agency can thus be understood as a process where person and context interact in an additive fashion to produce agentive, i.e. intentional and purposeful acts. These relational and reciprocal processes have also been described in terms of co-regulation (Sameroff, 2009) or co-agency (Salmela-Aro, 2009).

3.1. Basic self-regulation

The striving for control of the environment is manifest from the first days of human life, in particular regarding the expectation of maternal (or caregiver's) contingent responsiveness to the child's needs and behaviour. Early psychosocial forms of agency arise from the sensorimotor and perceptual achievements of infants, such as visual attention, the ability to detect differences between animate and inanimate objects and attention to dynamic events (Sokol et al., 2015). Through repeated observation of their environment infants learn about causality (Bandura, 2006). They learn to trust others to provide care for their basic needs, i.e. warmth, nourishment, physical contact and cleanliness. Trust in social relationships, the perception that others are reliable, caring and dependable is thus a cornerstone in the development of agency.

Within the first year of life, infants also learn to understand the intentions of others, and they personally experience the effects of actions by others directed at them. For example, experimental research involving infants observing an adult handling toys, demonstrated that already at 6 months of age infants can encode the actions of other people in ways that are consistent with more mature understandings of goal-directed action (Thoermer, Woodward, Sodian, Perst, & Kristen, 2013; Woodward, 2009). The findings contribute to the understanding of how infants develop conceptions of action, animacy and intentionality. By 7 months infants can imitate both completed and uncompleted actions of actors on objects (Hamlin, Hallinan, & Woodward, 2008; Mahajan & Woodward, 2009), and by 11 months they can anticipate goal-directed actions of the actor towards the object (Cannon & Woodward, 2012), indicating first capacities to understand the actor's underlying intentions and goals. Parents or caregivers can help the child to channel their attention and highlight outcomes associated with specific actions.

3.2. Pre-reflective forms of agency - Symbolic and linguistic functions

Pre-reflective forms of agency are evident in the emergence of symbolic and linguistic functions (Sokol et al., 2015). When children learn to use words and language in the way adults use them, they learn to understand that the same objects and events are constructed differently,

in relation to different points of view (Martin, 2008). For example, personal pronouns (such as I, me, mine, you, yours) are always specific to social-relational contexts and their meaning changes depending on who is uttering them – they refer to the roles particular people occupy in relation to one another in an interaction (Smiley, Chang & Allhoff, 2011). The use of personal pronouns enable the child to differentiate oneself from others. This competence emerges around age 18 months (Sokol et al., 2015) and is an important milestone in children's expression of agency, in the process of constructing an agentic self. By about 20 months children become able to recognise that they can make things happen, and can identify themselves as agents of their actions (Bandura, 2006).

Parents, other caregivers and siblings play an important role in facilitating and supporting children's emerging sense of agency and also contribute to individual and cultural differences. For example, the way parents respond to children's earliest assertions of: 'Let me do it! I want to do it!' by either supporting, opposing or dismissal can be a possible starting point for individual differences in the development of reflective agency (Sokol et al., 2015; Rechchia & Howe, 2008).

3.3. *Reflective levels of agency: Regulatory functions*

Language development facilitates the growth in children's self-regulatory abilities. In particular, children gain enhanced control of their behaviour when words that were previously used to regulate the behaviour of others, or which others used to regulate the child's behaviour, are used to regulate the self (Fernyhough, 2010). Self-regulatory processes are considered as higher-order functions involved in the reflective control and monitoring of thought and action (Carlson, 2005), sometimes also referred to as executive function (Sokol et al., 2015). At the end of age two, the child becomes able to reflect the outcome of an action (Heckhausen, 1988) which paves the way for anticipated positive self-regard and expected outcome of an action. As already mentioned, expectations for success are a powerful mechanism for future goal-related activity, letting the child persist in activities that lack immediate rewards and reduces their need for immediate gratification (Mischel et al., 2011; Mischel, Shoda, & Rodriguez, 1989).

Self-regulated behaviour requires the child to have an awareness of socially approved behaviours and therefore the development of self-regulation represents a significant aspect of children's socialisation (Kopp, 1982). The quality of the parent/caregiver-child relationship is

believed to be a key influence on children's internalisation of their parent/caregivers' values and goals (Darling & Steinberg, 1993; Grolnick & Farkas, 2002) (Brody et al., 2005; Kochanska, Murray, & Harlan, 2000; Li-Grining, 2007; Slagt, Dubas, Dekovic, & van Aken, 2016) especially during early childhood (Choe, Olson, & Sameroff, 2013; Ng-Knight et al., 2016). For instance, close and affectively warm parent/caregiver-child relationships support the learning of socially desirable behaviour by facilitating communication between parent and child (Estrad, Arsenio, Hess & Holloway, 1987; Cecil, Barker, Jaffee & Viding, 2012). Additionally, the stable emotional base provided by close parent/caregiver-child bonds allows children to explore and engage with difficult and challenging tasks which affords children the experience and practice required to develop good self-regulatory skills (Alessandri & Lewis, 1996). Conversely, parent/caregiver-child relationships characterised by high levels of conflict and hostility arouse negative emotions in children which then interfere with the cognitive processes underlying self-control (Pessoa, 2009).

Moreover, interactions with significant others (i.e. parents, caregivers, siblings, peers) affect children's appraisal of their experiences, the identification of the appropriate timing to regulate their emotions as well as the selection and implementation of specific strategies and behaviours (Diaz & Eisenberg, 2015). The development of the ability and motivation to self-regulate is closely related to the motivation and intention to act in accordance with the expectations of others. These expectations in turn are influenced by cultural values (Trommsdorff, 2012). More specifically, when trying to meet the expectations of their caregivers, children internalize social values and rules that reflect the cultural environment in which the family is embedded (Grusec and Goodnow, 1994). Processes of internalization and integration of extrinsically motivated activities have been identified by Ryan and Deci (2000) as key mechanisms involved in rendering extrinsic motivation personally important, to become part of the person, and when enacting the behaviour it will be an autonomous action.

3.4. Self-concept and identity

Entering primary school marks the period when children move from the home into wider social contexts. They spend less time under the supervision of their parents and come increasingly under the influence of teachers and activity leaders, such as coaches, tutors or instructors. They learn to cooperate with their peers and adults other than their family members. As they enter formal schooling they experience both increased individual freedom and heightened demands to control their behaviour – to be good, to show respect and to cooperate.

The start of formal schooling and organised activities introduces the child to new social roles where they earn social status by their competence and performance. They develop their personal identity, self-concepts and orientations toward achievement (Eccles, 1999). The expanding social world includes contact to peers, adults and activities outside the family brings new opportunities to develop competences and interests in different domains, as well as exposure to social comparison and competition in the classroom and in peer groups. Cognitive changes enable children to reflect on their own successes and failures and to recognise their strengths and weaknesses. They also develop a notion of how one goes about learning, and discover that strategies such as studying and practicing can improve their learning and performance. Feelings of competence and personal esteem are of central importance for a child's wellbeing. Successful experiences in different settings can support the development of a healthy, positive view of one's competences and a positive attitude towards learning and engagement in school.

Children who during their elementary school years do not perceive themselves as competent in academic, social, athletic, artistic or other domains might experience feelings of depression and social isolation (Eccles, 1999). Repeated feelings of frustration and incompetence may bring about a negative feelings about school and learning. They might conclude that failure is an indication of incompetence and not a condition that can be modified through increased effort in learning or practicing. If they belief they lack innate ability they become discouraged and withdraw from the task. By contrast, if they perceive their abilities as subject to possible improvement, they might become more competent through practice and development. A differentiation has been made between a fixed and a growth mind set (Dweck (2006), emphasising that a belief in one's own agency and the capacity to effect change is fundamental to the learning process (see also Leadbeater, 2018). When accompanied with appropriate help and support from peers or adults, the belief that ability can be cultivated reduces frustration with failure and allows children to maintain high expectations for future success (Eccles, 1999).

Early manifestations of agency continue to develop and change. With the transition to secondary school new demands and opportunities to experience autonomy, competence and belonging to new social groups arise. When adolescents are in settings within the family, the school, or community programs that are not attuned to their needs and emerging independence, they can lose confidence in themselves and slip into negative patterns of behaviour, such as truancy or school drop-out. Moreover, if these settings produce stressful social relationships

between youth and adults, young people will not turn to adults for help and support (Eccles, 1999). These interactions between individual and context have been specified in the stage-environment fit theory (Eccles & Midgley, 1989; Eccles & Roeser, 2004) which argues that a mismatch between the learner's needs and the stimulation and support provided by the environment can have negative consequences for the development of agency and wellbeing (Gutman & Eccles, 2007), which in turn has implications for later attainment and readiness to engage in learning.

3.5. *Purposeful and intentional action: Taking responsibility*

Another important building block in the development of agency is learning to understand what is right and what is wrong and to adjust one's behaviour accordingly. During primary school children learn to recognise the normative constraints of a situation and to recognize negative emotions resulting from guilt and remorse for violating moral standards (Sokol et al., 2015). For example, they learn that it is not acceptable to break a toy belonging to another student or to intentionally harm another student. They learn to differentiate between accidental and intentional behaviours (such as breaking a toy), and the associated moral accountability.

They also learn to take the perspective of others, and come to understand that others might have a different point of view and different knowledge than they have (Eccles, 1999) and that they can be hurt by one's action. They also learn to empathise with other's emotional states (Eisenberg et al., 2010). While in young children the understanding of another's emotional state may be fairly rudimentary, it becomes more salient and conscious during middle childhood. The development of empathy, in turn, is considered to play an important role in the degree to which individuals respect others, and their engagement in prosocial or antisocial behaviour. Through interaction with others (for example their peers) they begin to adjust to the needs of others and pursue mutual interests. Moreover, they try to win acceptance from their peers and must learn how to manage tensions and conflicts. Managing tensions and conflict, to balance the need for independent action and collaborating with others is one of the most important lessons young people have to learn (OECD, 2018).

The development of responsible and moral behaviour is context-bound, varying from situation to situation, and depends on advances in cognitive development (Damon, 1999). While in middle childhood, i.e. during primary school, children connect moral feelings with adult observation and their behaviour is largely depended on whether they think they would be

caught. For example, a 7-year old chocolate thief is unlikely to feel guilty unless she gets caught in the act.

With advancing cognitive development children learn to understand that they are responsible for their action. Parents and caregivers play an important role in facilitating moral development. Of particular importance is the establishing of consistent rules and firm limits, reflecting an 'authorative' style involving high demands and high levels of responsiveness encouraging open discussion and clear communication to explain and, when justified, revise the rules (Baumrind, 1978; Steinberg, 2001). Another critical aspect is for parents or teachers to encourage the right kinds of peer relations, as interactions with peers can spur moral growth by showing children the conflict between their preconceptions and social reality (see also Salmela-Aro, 2018).

3.6. *Social responsibility and citizenship*

Over time children come to understand that social rules are made by people and thus can be renegotiated and that reciprocity in relationships is fairer than unilateral obedience (Damon, 1999). Students learn to think for themselves, to reflect on their actions and that of others in the light of their experiences, their personal and societal goals, what they value and what they consider as right and wrong. Going to school is a profound and formative experience for children because they understand what it means to be part of a community larger than a family, with authority exercised by strangers, and where the child learns to respect and get along with others (Leadbeater, 2018).

Advances in developmental processes also involve reflection about existing norms or behaviours, establishing if they are appropriate and relevant, or if they are no longer functional. For example, confrontation with a disorienting dilemma, such as experiencing bullying or discrimination in the class room or the wider society, serves as a trigger for reflection and can lead to the transformation of meaning perspectives, a phenomenon also identified as transformative learning (Illeris, 2014; Merzirow, Taylor, & &Associates, 2009).

Regarding the development of agency this can imply the emergence of social responsibility and civic engagement (Lerner, Fischer & Weinberg, 2000; Sherrod, Torney-Purta & Flanagan, 2010), linking individual experiences to collective experiences. Indeed, previous research has underlined that high levels of self-efficacy are associated with pro-social behaviour, sharing

and helping others (Bandura, 2001). Recognizing shared social values and norms, in turn, could empower individuals to engage in collective action to bring about social change.

For example, a student might notice that one of her peers is being bullied or discriminated against (e.g. due to their race, religion, physical appearance, or skill level). She might then question her own behaviour, i.e. if she is behaving in ways that might harm or disadvantage her peers, and aim to change it (personal agency). She might befriend the peer and engage in joint activities inside and outside school, showing her solidarity. She might also talk about her observations to the teacher and ask for the bullying to be stopped. Both forms of action reflect co-agency, i.e. initiating a change of behaviour through collaborating with others. Recognizing that bullying or discrimination is not a singular case, but is a common concern across the whole school, they could start an initiative to raise awareness with the aim to call a halt to these unvalued practices generally (collective agency).

Similar engagement might be initiated not only in the social sphere, but also regarding environmental or economic challenges. For example, a student notices and is annoyed by the amount of litter they encounter on their way to school. They might change their own behaviour (i.e. stop throwing litter), convince others to stop doing it, or start a local campaign raising awareness and calling for a change in behaviour. Or they might notice that there is a need for a new technology or practice of how to handle their lives. They might, for example, develop a new app to facilitate the coordination of different time-tables, try it out themselves, get others to test it, and if they consider it as a useful tool, market it on a larger scale.

Parents, teachers and caregivers can support this process of civic engagement by creating opportunities for learners to understand contradictions, interlinkages and interdependencies of modern society. The learning process can be adapted to the learner's own needs and relevant opportunities, asking students for example to reflect on what they find meaningful, worthwhile and valuable, and what they think is valuable to others. This should not only be on an abstract level, such as discussing concepts (e.g. respect, empowerment, or freedom), but also in terms of specific behaviours and practices using images and objects used in everyday life, and giving visibility to alternative approaches or perspectives (Thoeresen, 2017). It could involve approaches using peer mentoring and tutoring, or service learning where teachers utilize volunteer activities outside of the classroom to guide students' understanding of concepts specific to academic courses and disciplines (Sokol et al., 2015).

In summary, the manifestations of agency change over time and they address different concerns, ranging from personal, social, economic or environmental issues. The development of agency depends on processes of individual maturation regarding physical, cognitive, social and emotional competences, as well as changing social relationships and a changing social context. It is a relational process, build on reciprocal interactions with others. As such the development of agency can be learned through guided instruction, providing opportunities for action, initiative and reflection, and conveying a feeling of belonging. Moreover, agency involves the capacity for working together, i.e. the capacity to offer support and asking for support from others (Edwards, 2005a).

Agency has to be understood as a dynamic and relational process that emerges through interaction with others and develops over time. Agency is shaped through early interactions with caregivers in the family, and with increasing age through interactions with a wider range of people and institutions, including teachers, peers, community members, employers as well as wider social systems which will be discussed next.

4. The social embeddedness of agency

Individual lives do not unfold in a social vacuum. The wider social and historical context matters in how individual lives develop (Elder, Shanahan, & Jennings, 2015), what resources one has available and what experiences one makes. Individual development is shaped by historical settings, social institutions, social rules, norms, values, social structures and networks of relationships that exist independent of the individual, and which can vary across countries.

4.1. Historical conditions

From a historical perspective, societal contexts differ substantially as settings for individual agency due to a number of factors, including economic conditions (i.e., boom or bust), the current cultural climate or "Zeitgeist" (for example as represented in an aspirational mindset versus depressive mood), political circumstances (i.e., political stability versus unrest, war or rapid political change), demographic changes (i.e. longer life expectancy, changing family structures), globalisation versus nationalism, and technological innovations. The impact of historical conditions on the development of individual agency has been demonstrated by Elder's pioneering work on Children of the Great Depression (Elder, 1974), the study of risk and resilience in times of social change (Schoon, 2006; Schoon & Bynner, 2017; Schoon &

Mortimer, 2017), or research conducted following the dissolution of the communist order in Europe after 1989 (e.g., (Diewald, 2007; Silbereisen, 2016). The impact of the historical conditions on the manifestation of agency thereby strongly depends on the specific socio-cultural conditions in which certain events are experienced. For example, institutional settings regulating access to education and employment are important levers to buffer potential negative effects of events, such as a sudden economic downturn.

4.2. Social institutions

Social institutions (i.e. family, school, university, work place) structure the life course and generate an age-graded and sequentially organized pattern of opportunities and pathways regarding the assumption of social roles and positions (Heckhausen et al., 2010; Levy & Buhlmann, 2016). For example, societies regulate the timing of major educational transitions, such as the age at entering primary school, the transition to secondary school, the end of compulsory schooling, and the duration of tertiary education. Social status transitions (e.g. entering primary education, the move to secondary or tertiary education and the labour market) are part and parcel of the institutionalised life course and imply changes in individual status, social affiliations and access to valued assets and social participation. These structures can vary across countries (Blossfeld, Klijzing, Mills, & Kurz, 2005; Schoon & Bynner, 2017), yet are typically transparent and are reflected in cultural beliefs and social norms about age-appropriate behaviour and individuals' expectancies, i.e. that they have to graduate from upper secondary school before gaining admission to tertiary education. On-time transitions, such as entering university after the completion of upper secondary education are well prepared offering optimal opportunities for a smooth transition. Off-time transitions, such as applying for tertiary education after early school leaving or extended periods of full-time employment, are less common. They require greater effort and initiative of the individual and can be more risky.

4.3. Social norms

In additional to institutional structures, social norms regarding appropriate conduct govern individual behaviour. For example, social norms about age-appropriate behaviour, for example the timing of transitions can influence individual's goal setting (Heckhausen et al., 2010; Neugarten, 1996; Settersten, 1997). Social age norms are generally defined as social rules for age-appropriate behaviour, including everyday actions (such as walking unattended by an adult to school, school attendance and absence, consumption of alcohol or smoking) and the timing

and sequencing of major life events (e.g. entering pre-school, age at school leaving, age at first child or marriage) which can vary across different cultural contexts. These age norms constitute a social clock, or a 'script of life' (Buchmann, 1989). They are associated with positive or negative sanctions, and can potentially influence individual attitudes and behaviours. Individuals internalize such norms and compare themselves and their standing with regard to important developmental tasks (e.g., entering pre-school, completing education, starting full-time employment) as well as other people's standing with these norms.

Another example are gender norms, i.e. ideas about how males and females should be and act. These include a range of expectations, such as how females should dress, what they are good at, what interests them, what occupations they choose. A persistent assumption is that females are nurturing, while males are striving for independence; that females are good in languages, while males are good in math, etc. It's important to note that these gender stereotypes are not necessarily true; they are assumptions that a critical mass of people generally believe about male and female genders, guiding individual behaviour, self-concepts, aspirations and attainment (Schoon & Eccles, 2014). Gendered beliefs become apparent in early childhood, as for example in classroom behaviour and the competences manifest at school entry. Early gender beliefs become more stereotypical over the life course and are shaped by multiple influences experienced in interactions within the family, the school, peer groups, as well as in the labour market. They are recreated through everyday social relations with significant others as well as interactions with the wider social context, accumulating over time. These cumulative experiences are internalized and can become self-fulfilling prophecies, leading to biased perceptions about one's own competence which in turn can affect engagement and performance, as well as aspirations, preferences and values.

Moreover, individual behaviour is guided by social norms regarding appropriate 'agentic' regulation which can differ across cultural contexts (Jaramillo, Rendon, Munoz, Weis, & Trommsdorff, 2017; Trommsdorff, 2012). Evidence from cross-cultural studies suggest that in Asian cultures, the regulation of behaviour, emotions, and cognitions is generally subordinated to the preservation of social harmony with the group and nature, while in the European American culture, self-regulation serves to improve the autonomy of the individual and the opportunities to fulfil personal goals (Trommsdorff, 2012). These differences in social norms imply different views of the self as an agent that develops, either in close connection and interdependence with others, or as a separate, unique entity. In the first case, the self is viewed

as malleable and adjustment to social expectations and the given environment is promoted. Values of duty, respect, self-restrained and obligation acquire great relevance because they allow to adjust personal goals to the goals and expectations of others and to maintain community ethics. In the second case, the self is considered as individual and fixed, expressing itself and reaching its own goals. Accordingly the goal of socialisation practices is to help children to achieve independence and self-enhancement. The emphasis is in the differentiation, but not in the coordination among selves.

4.4.   Social Structures

To fully comprehend the manifestation of individual agency, we also have to consider the role of social structures that influence the available socio-economic resources, the likelihood of access to a quality education, as well as the goals individuals set for themselves. For example, family background assessed in terms of parental social class, parental education, social status or income has shown to impact on the development of agency among their offspring and is associated with attainment across multiple domains (BrooksGunn & Duncan, 1997; OECD, 2017c; Yoshikawa, Aber, & Beardslee, 2012). Even in highly developed countries there is concern about persistent rates of children growing up in poverty and social inequality in educational opportunities.

Across all OECD countries 13.5% of children on average live in families experiencing income poverty (OECD, 2015). Poverty rates differ considerably from country to country, pointing to the role of institutional leverage and regulation. In some countries, including the United States, more than 20% of children live in poverty, compared with less than 5% in Denmark and Finland. Moreover, between 2004 and 2014, child income poverty rates have increased in nine of the 16 OECD countries with available data (OECD, 2015). This is against the background of rising unemployment and precarious employment in the aftermath of the 2008 recession, including long-term unemployment and labour market insecurity (OECD, 2017b). Moreover, growing sections of the population, including those with academic qualifications, encounter low paid temporary jobs, underemployment or zero-hour contracts (Schoon & Bynner, 2017; Standing, 2011).

Children growing up in relatively disadvantaged families show, in general, lower levels of educational achievement motivation and aspirations (Duckworth & Schoon, 2012; Mortimer, Zhang, Hussemann, & Wu, 2014; Schoon, 2014), self-confidence and locus of control (Ahlin

& Antunes, 2015; Battle & Rotter, 1963; Flouri, 2006; Moilanen & Shen, 2014), lower levels of educational and occupational attainment (BrooksGunn & Duncan, 1997; Engle & Black, 2008; OECD, 2017c; Schoon & Lyons-Amos, 2017) and wellbeing (Bradshaw, 2016). Inequality in educational attainment starts early in life. A report examining educational inequalities across different OECD countries identifies gaps in attainment already at school entry and points to the important role of schools to reduce inequalities rather than exacerbate them (Reardon & Waldfogel, 2016).

Explanations of association between socio-economic resources and individual attainment refer to cumulative risk effects including poor housing conditions, lack of a place to study, lack of access to quality education institutions, lacking financial resources to provide extra tuition or support prolonged education participation, lack of familiarity about how to engage with different cultural institutions (i.e. being the first in the family to go to university), lack of connections to social networks facilitating access to important information and contacts (DiPrete & Eirich, 2006; Levy & Buhlmann, 2016; Schoon et al., 2002), or lack of time and energy of parents to engage in warm and supportive parenting (Conger, Conger & Martin, 2010). Moreover, the horizon of perceived possibilities regarding education and career pathways among children from less advantaged family background is foreshortened, as they feel constrained by perceptions of limited opportunities and resources (Gottfredson, 1981; Hodkinson & Sparkes, 1997; Schoon & Heckhausen, submitted).

There have, however, been significant changes regarding the association between parental socio-economic background and manifestation of agency in their offspring. In the aftermath of the massive education expansion since the 1980s and changing employment opportunities, young people have become more ambitious regarding their education and career aspirations. Increasingly young people from disadvantaged background aspire to go to university and to enter a professional career, thus climbing the social ladder (Reynolds & Johnson, 2011; Schoon, 2010, 2012; Shane & Heckhausen, 2017). Indeed, a new norm of 'college for all' (Rosenbaum, 2001) has emerged, encouraging high education expectations regardless of academic aptitude or social background. Indeed, most young people in the Global North are striving to obtain degree level qualifications, and the association between parental socio-economic status and achievement orientations has weakened (Johnson & Reynolds, 2013; Reynolds & Johnson, 2011; Schoon, 2010, 2012). Moreover, associations between indicators of family SES (such as parental education, social status, income) and indicators of individual

agency, such as control perceptions and self-regulation among recent cohorts are only small – while associations between family SES and academic attainment are considerably higher (Kay, Shane, & Heckhausen, 2016; Ng-Knight & Schoon, 2017). However, within a context of generally expanded higher education levels and reduced value of educational credentials, current cohorts of young people will need higher levels of educational qualifications to maintain the social status of their parents and avoid downward social mobility (Suton Trust, 2017; Schoon & Bynner, 2017).

4.5. *Can individual agency potentially compensate for socio-economic disadvantage?*

Individuals are not passively exposed to structural constraints, but shape the context that shapes them. Moreover, it has been argued that individual agency can potentially function as a protective resource, even in conditions of socio-economic adversity, and enable individuals to achieve against the odds (Ng-Knight & Schoon, 2017; Schoon & Heckhausen, submitted; Schoon & Lyons-Amos, 2017). The term 'resource substitution' (Ross & Mirowsky, 2006) has been used to describe thus potential compensatory effects, where one resource (e.g. economic, social, or personal resources) can substitute for another or can fill the gap if the other is absent. The 'resource substitution' hypothesis predicts the worse outcomes for those with neither resource.

Evidence regarding potential compensatory effects of agency suggests a mixed picture and is not clear cut. For example, achievement goals, such as aspirations to participate in further and higher education or to enter a professional career are associated with subsequent educational and occupational attainment, over and above the influence of social background and cognitive ability (Domina, Conley, & Farkas, 2011; Johnson & Reynolds, 2013; Schoon & Polek, 2011; Villarreal et al., 2015), as are subjective expectations of success (Ashby & Schoon, 2010; Hitlin & Johnson, 2015) and indicators of self-regulation and self-efficacy (Moffitt et al., 2011; Ng-Knight & Schoon, 2017). However, while high aspirations among relative disadvantaged students enable them to do better than their less ambitious peers from a similar background (Schoon & Parsons, 2002; Schoon & Polek, 2011; Schoon, 2014), educational attainment for these students is at least as strong, if not a stronger predictor of career attainment than individual aspirations. This is especially the case for young people born in later cohorts, who made the transition from school-to-work after the expansion of higher education in the late 1980s (Duckworth & Schoon, 2012; Schoon, 2007, 2012), pointing to the important influence of a changing labour market insisting on higher level qualifications.

Compensatory effects of individual agency were also evident in studies examining the effect of the Great Recession on young people making the transition from school-to-work. When young people held onto a more positive outlook for the future, their parents' economic troubles posed less risk to their socioeconomic functioning as young adults (Mortimer, Zhang, Hussemann, & Wu, 2014; Vuolo, Staff, & Mortimer, 2012). Even among young people growing up with workless parents (Schoon, 2014), high levels of academic achievement orientations were associated with a reduction in the time spend not being in education, employment or training (NEET). Similar buffering effects were observed for young people maintaining high levels of control perceptions in situations of family socio-economic adversity, although control perceptions could not provide protection against long-term inactivity, i.e. being more than 6 months NEET (Ng-Knight & Schoon, 2017).

However, young people from higher socioeconomic status families were more likely to hold onto their high education expectations then their less privileged peers, and these more persistent high expectations might help explain the greater success of young people from higher socioeconomic status backgrounds in earning a 4-year degree (Johnson & Reynolds, 2013). In addition, parental resources, in particular parental education can buffer the effect of economic hardship, and in an interesting twist to the story there is evidence to suggest that the academic orientations of parents back when they had been adolescents themselves, appeared to be protecting their children from the risks of economic troubles many years later (Mortimer et al., 2014).

These findings drive home the fact that individual agency (i.e. achievement goals, career aspirations, expectations for success, or self-regulation) can provide a motor to push individuals to carry on, even in times of hardship and potentially enable them to do well in school as well as in the transition from school to work. The findings also suggest that individuals tend to hang on to their hopes and dreams even in times of adversity unless socio-economic conditions are overpowering their ability to cope, or changing circumstances require them to change the course of their action and the associated aspirations.

There is however also a potential 'dark side' to high levels of agency beliefs. For example, while life goals focused on self-acceptance, affiliation and community feeling were associated with higher levels of wellbeing and low distress later on in life, the reverse was the case for aspirations focused on financial success wealth - suggesting that not all goals are equivalent in

their relationship to wellbeing (Kasser & Ryan, 1993). Moreover, there is evidence to suggest that unrealistic optimism can harm individuals by promoting inappropriate persistence and overconfidence, which in turn hinder performance and attainment (Armor & Taylor, 1998; K. Salmela-Aro, 2017; Schoon & Lyons-Amos, 2017). This is particularly the case in situations where the demands of the task are higher than individual capabilities, or where agency beliefs are not matched to individual competencies. There are however also variations by socio-cultural context. For example, the less structured and more permeable educational system of the USA provides better opportunities for highly ambitious students than the highly structured education system in Germany, where educational aspirations need to be closely calibrated to one's social status and prior school achievement (Heckhausen & Chang, 2009).

In summary, the manifestation of individual agency cannot be understood without considering the social conditions in which it is enacted. Structural and cultural conditions shape the situations that individuals encounter. Yet, the structural conditions should not be taken to determine individual action and behaviour – they are always mediated by the emergent reflective powers of agents (Archer, 2000). Social and cultural structures do not impact directly on the individual, they are subjectively interpreted and mediated through the agent's perceptions and evaluations of them, opening up a 'horizon for perceived action' (Schoon & Heckhausen, submitted). Actions can then lead, within the structurally conditioned space of perceived possibilities, to either the reproduction of existing structures or to their transformation. For example, individuals becoming aware of injustice or unfairness in their society, of persisting inequalities such as gender differences in pay, precarious working conditions, social inequality or discrimination of minorities might try to get other people (such as their community representatives) who have more expertise or influence to act on their behalf, or they might work together with other likeminded individuals to achieve a shared desired goal of a fairer society through collective action. The resulting social structures then become again the preconditions for subsequent behaviour and action. Both agency and structure are interconnected through reciprocal interactions and one cannot be reduced to the other.

Within an integrated, socio-ecological developmental perspective, agency is not understood as a personality characteristic. It is a relational process, a phenomenon that emerges through the unique interplay of individual capacity and the socio-cultural structures in which it is enacted. Even highly capable individuals might fail to achieve agency if the conditions are difficult or non-supportive.

5. Implications for the OECD Learning Framework 2030

Global trends regarding social, economic and environmental change impact on individual lives. In particular rapid technological advances, widening inequalities and social fragmentation require a new orientation enabling young people to become agents of change (OECD, 2017). As pointed out in the OECD program regarding *The Future of Education and Skills 2030* (OECD, 2017, 2018) education systems thereby play a vital role in equipping young people with the competencies to mobilize relevant knowledge, skills, attitudes and values to meet complex and changing demands. They will need to apply their competencies in unknown and evolving circumstances, to develop and pursue future-oriented plans for action, and to actively engage with an ever changing socio-cultural context. In the previous discussion I have described a) how these agentic capabilities develop along processes of maturing physical, cognitive, social and emotional competencies; b) how they are shaped by influences from a wider socio-historical and cultural context; and c) how they develop through interactions with more knowledgeable 'significant others' (i.e. parents, teachers or peers) who provide developmentally appropriate input and support for learning. Here I shortly summarize how this evidence might be relevant for the OECD Learning Framework 2030.

5.1.   Developing Transformative Competencies

The OECD Learning Framework 2030 conceptualises learner agency as the ability to navigate through a complex and uncertain world. Learning has always been intentionally transformative. The demands imposed by a rapidly changing social and economic context require learners of tomorrow to acquire a broad set of knowledge, skills, attitudes and values that enable them to be active agents, to visualise and create new values, take responsible action, and reconcile tensions and dilemmas.

- **Creating new value.** Agency refers to the human capability to anticipate the unknown (based on prior experiences and current competencies, skills, knowledge, values, attitudes and beliefs), to set goals, to plan their pursuit and attainment, and to accept responsibility for one's action. To be an agent means to intentionally make things happen, to have a vision about what is possible (foresight, aspiration, goal), to evaluate one's own strengths and weaknesses, available opportunities and the adequacy of one's goals by taking into account the perspective of others (meta-cognition, self-reflection, expectations for success, perspective taking), to make plans of how to achieve the goal (intentionality, planning),

and to regulate one's own behaviour to stay on track with the set task (self-regulation, self-monitoring, persistence, grit, self-control) but also to recognize when it becomes necessary to disengage from a set goal or to change track when the opportunities become unfavourable, time is running out or the costs become too high.

The manifestation of agency can refer to changes brought about in one's own life (such as learning a new skill), changes in interaction with others (i.e. acting out of concern for others), and changes in the wider community (empowering oneself and others in the pursuit of a shared goal). That is, agency has different manifestations, ranging from personal agency (controlling one's own life), co-agency (collaborating with others) and collective agency (common goal). All these manifestations of agency are achieved through reciprocal interactions between a developing individual and others embedded in a changing context – they are the result of a dynamic relational and contextualised process.

- **Taking responsibility**. The manifestation of agency does not imply that individuals impose their will on others. It involves to recognize the consequences of one's actions on others, to be able to take the perspective of the other and to develop modes of self-regulation in accordance with valued and shared social norms, e.g. not harming others. This also includes the recognition that by taking action in a world that one does not wholly determine that actions can bring unexpected and sometimes unintended consequences. Being a responsible agent implies to take ownership for one's actions and to be accountable, even if an outcome was not intended.

- **Reconciling tensions and dilemmas**. Balancing the urge for independent action and collaboration with others, being able to reconcile diverse perspectives and interests and to manage interpersonal or intergroup conflicts is a key characteristic of effective agency. This is particular relevant for collaborative or collective action, which depends on developing a joint vision and objective. It is however also relevant in learning a new skill For example, learners have to recognize that there might be different approaches that lead to the same objective and evaluate which one to go for. They also have to learn how to cope with failure - and when to let go of a desired goal, change track, or wait for improved conditions to complete a task. This could also involve that they recognize the need to ask for help or to acquire additional competencies to be able to succeed, i.e. they need to

recognize that their will does not corresponds to their skills or available opportunities and support.

More generally, in developing one's own plans, the individual has to learn to reconcile different interests, i.e. that it is not possible to pursue too many goals at the same time and that opportunities might be more favourable regarding one goal versus another. They also have to recognise that often there is not one possible solution to a problem that different paths can lead to the same anticipated outcome, requiring the ability to understand manifold interconnections and interrelatedness of different ideas, and being able to deal with tensions, dilemmas and trade-offs.

They also should be able to take the perspective of others, recognize potential conflicts of interests, respect the position of others and resolve disagreements and differences amicably (see for example Schulprojekt der Deutschen Stiftung Mediation).

These competencies emerge through interactions between a developing individual and others in a changing social context. Agency is not a fixed personality characteristic but is shaped and develop through reciprocal interactions with others. Beginning with early interactions characterising the parent-child relationship, and with increasing age, through interactions with a wider range of people and institutions, the individual acquires a repertoire of skills and competencies that enable self-directed activity, i.e. to act independently of stimuli in the immediate situation, to be creative, proactive, reflective and not just reactive.

Educators play a central role in facilitating this process by providing developmentally appropriate instruction which is matched to existing skills and at the same time offers challenges for further development (Eccles & Midgley, 1989). They should help the learners in the establishment of goals and guide them toward achievement of these goals. The challenge for learner and teacher is to discover and develop a common interest, i.e. to advance learning and the growth of competencies, to interact effectively with each other, to build joint agreements for classroom goals and shared responsibility for their enactment.

5.2.   *Challenge for educators – Developing teacher agency*

Teacher–student relationships constitute the core of instruction, providing the primary context of both teachers' and students' learning (Heikonen, Pietarinen, Pyhältö, & Soini, 2017; Spilt,

Koomen, & Thijs, 2011). To facilitate student learning, teachers themselves need to actively learn from and reflect on their interactions with students. This requires teachers' professional agency, i.e. they have to acquire the capacity to intentionally manage learning in classroom interaction (Pyhältö, Pietarinen, & Soini, 2012).

As any form of agency, teachers' professional agency is relational by nature and embedded in the reciprocal interactions with students and other members of the school community (Lipponen & Kumpulainen, 2011). It refers to the teacher's capacity to intentionally and responsively manage their own teaching and learning in order to enhance student learning in the classroom (Pyhältö et al., 2012). Professional agency consists of teachers' will and motivation to learn, their self-efficacy beliefs about teaching and learning and intentional activities towards learning in the classroom (Edwards, 2005b; Soini, Pietarinen, & Pyhältö, 2016).

Teachers who experience professional agency perceive themselves as being in control of their everyday pedagogical and practical decisions and actions, which are based on their goals, interests and motivations (Heikonen et al., 2017). Furthermore, they draw on their experiences with others (e.g., pupils and peers) as resources for learning how best to provide support for learning (Edwards, 2005b; Edwards & D'Arcy, 2004). This, in turn, requires the capacity to create and sustain functional teacher–student relationships, and to perceive instruction as a reciprocal process (Martin & Dowson, 2009). It also implies continuous reflection on teacher–student interaction and intentional transformation of classroom practices (Soini et al., 2016).

5.3.   *Challenges for Curriculum Development*

To facilitate teacher agency, teachers should be empowered to use their professional knowledge, skills and expertise to deliver the curriculum effectively. Yet, the development of teacher agency does not occur in a social vacuum. There is evidence to suggest that the development of teacher agency can be undermined by educational policy aiming to impose prescriptive curricula and oppressive regimes of testing and inspection (Biesta, Priestly, & Robinson, 2015; G. J. J. Biesta, 2010). To enable the development of teacher agency it is thus necessary to involve teachers in the design of a new curriculum for *The Future of Education and Skills 2030* Framework, to clarify underlying concepts and principles and how they can be implemented in the classroom.

Moreover, to achieve a joint vision, empowering teachers, students, and the wider community, it is necessary to involve other key stakeholders in the design and development of a new curriculum. These include students, teachers, school leaders, parents, national and local policy makers, academic experts, unions, as well as social and business partners. A key challenge in aiming to integrating different needs and demands into a coherent and manageable program of education, is to avoid curriculum overload.

As a basic requirement it is crucially important to make sure that students acquire a solid foundation of knowledge in key disciplines such as literacy, numeracy, the sciences, languages, history, social and cultural studies as well as the arts and sports. The central aim of *The Future of Education and Skills 2030* Framework should thus be to ensure that all students have a solid foundation of knowledge and skills. Young people should emerge from school being able to read and write, to add and subtract, be familiar with modern technology and IT, and be familiar with their culture and national history (Leadbeater, 2018).

However, aiming to support the development of agency it is not enough to have the curriculum focused on the transmission of subject specific knowledge – it should also aim to develop the whole person, to enable students to take initiative, to apply their knowledge in novel situations and to reflect on and take responsibility for their actions.

Programs to encourage student agency could be tied appropriately to the student's acquisition of relevant curricular knowledge and socially responsible conduct (Cleary & Zimmerman, 2004; Martin, 2004). This could be achieved through engaging students in well selected tasks that encourage self-directed experimentation with alternative possibilities that challenge their existing understandings. For example, teachers can agree with students the learning goals in advance, identify what matters to the students, demonstrate new material, provide opportunity for practice and reflection, encourage search for likely alternatives, use group projects and group learning, peer tutoring, as well as strategic use of reinforcement (see for example Kay and Kibble (2016), or Thoresen Wyszynski, 2017).

Through the process of instruction, students should be encouraged to recognize potential difficulties and concerns raised by the tasks and to experiment actively with possibilities to address these difficulties and concerns. They should feel comfortable with taking risks, i.e. the possibility of being wrong, and be encouraged to focus on the issues, concerns and difficulties

at hand. In addition students be provided with opportunities for evaluating the results of their experimentation and reflection of the learning activity.

In addition, instruction needs to be developmentally appropriate – matched to existing skills and offering opportunity for development (Eccles & Midgley, 1989). It also needs to be relevant to the interests and needs of the student, and establish meaningful connections between the learning content and their daily lives, e.g. regarding the usefulness of mathematics in everyday lives and for future careers (Dicke, 2017).

Formal learning in the classroom is not the only aspect to be considered as part of the curriculum. Clubs, sports, and other co-curricular activities are significant contributors to the development of a total individual and to curriculum effectiveness. Learning and personal growth do not take place strictly within the confines of a classroom or laboratory. Students develop skills and competence through a variety of learning activities and experiences, and instruction can be offered in school or extra-curricular programs, opening up a wider space for students to experience feelings of autonomy, competence and belonging.

References

Ahlin, E. M., & Antunes, M. J. L. (2015). Locus of Control Orientation: Parents, Peers, and Place. *Journal of Youth and Adolescence, 44*(9), 1803-1818. doi:10.1007/s10964-015-0253-9

Alessandri, S. M., & Lewis, M. (1996). Differences in pride and shame in maltreated and nonmaltreated preschoolers. *Child Development, 67*(4), 1857-1869.

Archer, M. S. (2000). *Being human: The problem of agency*. Cambridge: Cambridge University Press.

Armor, D., & Taylor, S. (1998). Situated optimism: Specific outcome expectancies and self-regulation. . In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 30, pp. 309-379). New York, NY: Academic Press.

Ashby, J. S., & Schoon, I. (2010). Career success: The role of teenage career aspirations, ambition value and gender in predicting adult social status and earnings. *Journal of Vocational Behavior, 77*(3), 350-360. doi:10.1016/j.jvb.2010.06.006

Atkinson, J. W. (1964). *An introduction to motivation* Princeton, NJ: Van Nostrand.

Bandura, A. (2000). Exercise of human agency thruogh collective efficacy. *Current Directions in Psycological Science, 9*(3), 75-79.

Bandura, A. (2006). Toward a Psychology of Human Agency. *Perspectives on Psychological Science, 1*(2), 164-180. doi:10.1111/j.1745-6916.2006.00011.x

Battle, E. S., & Rotter, J. B. (1963). Children's feelings of personal control as related to social class and ethnic group. *Journal of Personality, 31*(4), 482-490. doi:10.1111/j.1467-6494.1963.tb01314.x

Baumrind, D. (1978). Parental disciplinary patterns and social competence in children. *Youth and Society*(9), 229-276.

Biesta, G., Priestly, M., & Robinson, S. (2015). The role of beliefs in teacher agency. *Teachers and Teaching: theory and Practice, 21*(6), 624-640. doi:10.1080/13540602.2015.1044325

Biesta, G. J. J. (2010). *Good education in an age of measurement: Ethics, politics, democracy*. Boulder, CO: Paradigm.

Blossfeld, H. P., Klijzing, E., Mills, M., & Kurz, K. (Eds.). (2005). *Globalization, Uncertainty and Youth in Society*. London: Routledge.

Bradshaw, J. (2016). *The well-being of children in the UK. 4th Edition*. Bristol: Policy Press.

Brandstatter, V., & Herrmann, M. (2016). Goal disengagement in emerging adulthood: The adaptive potential of action crises. *International Journal of Behavioral Development, 40*(2), 117-125. doi:10.1177/0165025415597550

Brody, G. H., McBride, V. M., McNair, L., Chen, Y. F., Gibbons, F. X., Gerrard, M., & Wills, T. A. (2005). Linking changes in parenting to parent–child relationship quality and youth self-control: the Strong African American Families Program. *Journal of research on adolescence, 15*(1), 47-69.

BrooksGunn, J., & Duncan, G. J. (1997). The effects of poverty on children. *Future of Children, 7*(2), 55-71. doi:10.2307/1602387

Buchmann, M. C. (1989). *The Script of Life in Modern Society: Entry Into Adulthood in a Changing World*. Chicago: Chicago University Press.

Cannon, E. N., & Woodward, A. L. (2012). Infants generate goal-based action predictions. *Developmental Science, 15*(2), 292-298. doi:10.1111/j.1467-7687.2011.01127.x

Carlson, S. M. (2005). Developmentally sensitive measures of executive function in preschool children. *Developmental Neuropsychology, 28*, 595-616.

Cecil, C., Barker, E., Jaffee, S., & Viding, E. (2012). Association between maladaptive parenting and child self-control over time: Cross-lagged study using a monozygotic twin difference design. *British Journal of Psychiatry, 201*, 291-297.

Choe, D. E., Olson, S. L., & Sameroff, A. J. (2013). Effects of early maternal distress and parenting on the development of children's self-regulation and externalizing behavior. *Development and psychopathology, 25*(02), 437-453. doi:10.1017/S0954579412001162

Cleary, T. J., & Zimmerman, B. J. (2004). Self-regulation empowerment program: A school-based program to enhance self-regulated and self-motivated cycles of student learning. *Psychology in the Schools, 41*(5), 537-550. doi:10.1002/pits.10177

Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic Status, Family Processes, and Individual Development. *Journal of Marriage and the Family, 72*(3), 685-704. doi:10.1111/j.1741-3737.2010.00725.x

Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological bulletin, 113*(3), 487.

Deci, E. L., & Ryan, R. M. (2000). The ''what'' and ''why'' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227-268.

DeutscheStiftungMediation. (2017). Clever streiten fur Kids. www.stiftung-mediation.de.

Diaz, A., & Eisenberg, N. (2015). The Process of Emotion Regulation Is Different From Individual Differences in Emotion Regulation: Conceptual Arguments and a Focus on Individual Differences. *Psychological Inquiry, 26*(1), 37-47. doi:10.1080/1047840x.2015.959094

Dicke, A. L. (2017). Educational Interventions based on Motivational Theories: The Case of Relevance Interventions In I. Schoon & R. K. Silbereisen (Eds.), *Pathways to adulthood: How do social inequality, individual motivation, and social change matter*. London: UCL IoE Press.

Diewald, M. (2007). Agency or constraint? The mutual shaping of control beliefs and working lives in East Germany after 1989. *International Journal of Psychology, 42*(2), 77-84. doi:10.1080/00207590600991195

DiPrete, T. A., & Eirich, G. M. (2006). Cumulative advantage as a mechanism for inequality: A review of theoretical and empirical developments *Annual Review of Sociology* (Vol. 32, pp. 271-297). Palo Alto: Annual Reviews.

Domina, T., Conley, A., & Farkas, G. (2011). The Link between Educational Expectations and Effort in the College-for-all Era. *Sociology of Education, 84*(2), 93-112. doi:10.1177/1941406411401808

Duckworth, K., & Schoon, I. (2012). Beating the odds: Exploring the impact of social risk on young people's school-to-work transitions during recession in the UK. *National Institute Economic Review, 222*(October), 38-51.

Eccles, J. (1999). The development of children ages 6 to 14. *The Future of Children, 9*(2), 30-44.

Eccles, J. (2009). Who Am I and What Am I Going to Do With My Life? Personal and Collective Identities as Motivators of Action. *Educational Psychologist, 44*(2), 78-89. doi:10.1080/00461520902832368

Eccles, J. S. (2008). Agency and structure in human development. *Research in Human Development, 5*(4), 231-243. doi:10.1080/15427600802493973

Eccles, J. S., & Midgley, C. (1989). Stage/environment fit: Developmentally appropriate classrooms for early adolescents In R. E. Ames & C. Ames (Eds.), *Research on motivation in education* (Vol. 3, pp. 139-186). New York: Academic Press.

Eccles, J. S., & Roeser, R. W. (2004). Schools, academic motivation, and stage-environment fit. In R. M. Lerner & L. D. Steinberg (Eds.), *Handbook of adolescent psychology. 2nd edition* (pp. 125-153). Hoboken, NJ: Wiley & Sons.

Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology, 53*, 109-132.

Edwards, A. (2005a). Relational agency: Learning to be a resourceful practitioner. *International Journal of Educational Research, 43*, 168-182. doi:10.1016/j.ijer.2006.06.010

Edwards, A. (2005b). Relational Agency: Learning to be a Resourceful Practitioner. *International Journal of Educational Research, 43*(3), 168-182.

Edwards, A., & D'Arcy, C. (2004). Relational agency and disposition in sociocultural accounts of learning to teach. *Educational Review, 56*(2), 147-155. doi:10.1080/0031910410001693236

Elder, G. H., Shanahan, M. J., & Jennings, J. A. (2015). Human development in time and place. In M. H. Bornstein & L. T. (Eds.), *Ecological settings and processes in developmental systems* (Vol. 4 pp. 6-54). Hoboken, NJ: Wiley.

Emirbayer, M., & Mische, A. (1998). What is agency? *American Journal of Sociology, 103*(4), 962-1023. doi:10.1086/231294

Engle, P. L., & Black, M. M. (2008). The Effect of Poverty on Child Development and Educational Outcomes. *Ann NY Acad Sci, 1136*(1), 243-256. doi:10.1196/annals.1425.023

Evans, K. (2002). Taking control of their lives? Agency in young adult transitions in England and the New Germany. *Journal of Youth Studies, 5*, 245-271.

Fernyhough, C. (2010). Vygotsky, Luria, and the social brain. In J. Carpendale, G. Iarocci, U. Müller, B. Sokol, and A. Young (eds.), *Self- and social-regulation: Exploring the relations between social interaction, social cognition, and the development of executive functions*. Oxford University Press.

Flouri, E. (2006). Parental interest in children's education, children's self-esteem and locus of control, and later educational attainment: Twenty-six year follow-up of the 1970 British Birth Cohort. *British Journal of Educational Psychology, 76*, 41-55. doi:10.1348/000709905x52508

Gillespie, A. (2012). Position exchange: the social development of agency. *New Ideas in Psychology, 30*, 32-46. doi:10.1016/j.newideapsych.2010.03.004

Gottfredson, L. S. (1981). Circumscription and compromise - a developmental theory of occupational aspirations. *Journal of Counseling Psychology, 28*(6), 545-579. doi:10.1037//0022-0167.28.6.545

Grolnick, W. S., & Farkas, M. (2002). In M. H. Bornstein (Ed.), *Handbook of parenting. Practical issues in parenting.* (Vol. 5, pp. 89-110). New Jersey: Lawrence Erlbaum Associates.

Grusec, J. E., & Goodnow, J. J. (1994). Impact of parental discipline methods on the child's internalization of values: A reconceptualization of current points of view. *Developmental Psychology, 30*(1), 4-19. doi:10.1037/0012-1649.30.1.4

Gutman, L. M., & Eccles, J. S. (2007). Stage-environment fit during adolescence: Trajectories of family relations and adolescent outcomes. *Developmental Psychology, 43*(2), 522-537. doi:10.1037/0012-1649.43.2.522

Hamlin, J. K., Hallinan, E. V., & Woodward, A. L. (2008). Do as I do: 7-month-old infants selectively reproduce others' goals. *Developmental Science, 11*(4), 487-494. doi:10.1111/j.1467-7687.2008.00694.x

Heckhausen, H. (1967). *The anatomy of achievement motivation*. New York, NY Academic Press.

Heckhausen, J. (1988). Becoming aware of ones competence in the 2nd year. Developmental progression within the mother-child dyad *International Journal of Behavioral Development, 11*(3), 305-326. doi:10.1177/016502548801100302

Heckhausen, J. (in press). The motivation of developmental regulation In J. Heckhausen & H. Heckhausen (Eds.), *Motivation and action*. New York, NY: Springer.

Heckhausen, J., & Chang, E. S. (2009). Can ambition help overcome social Inequality in the transition to adulthood? Individual agency and societal opportunities in Germany and the United States. *Research in Human Development, 6*(4), 235-251. doi:10.1080/15427600903281244

Heckhausen, J., & Wrosch, C. (2016). Challenges to developmental regulation across the life course: What are they and which individual differences matter? *International Journal of Behavioral Development, 40*(2), 145-150. doi:10.1177/0165025415588796

Heckhausen, J., Wrosch, C., & Schulz, R. (2010). A Motivational Theory of Life-Span Development. *Psychological Review, 117*(1), 32-60. doi:10.1037/a0017668

Heikonen, L., Pietarinen, J., Pyhältö, K., & Soini, T. (2017). Early career teachers' sense of professional agency in the classroom: associations with turnover intentions and perceived inadequacy in teacher-student interaction. *Asia-Pacific Journal of Teacher Education, 45*(3), 250-266. doi:10.1080/1359866x.2016.1169505

Hilppo, J., Lipponen, L., Kumpulainen, K., & Rainio, A. (2016). Children's sense of agency in preschool: a sociocultural investigation. *International Journal of Early Years Education, 24*(2), 157-171. doi:10.1080/09669760.2016.1167676

Hilppo, J., Lipponen, L., Kumpulainen, K., & Virlander, M. (2016). Sense of agency and everyday life: Children's perspective. *Learning Culture and Social Interaction, 10*, 50-59. doi:10.1016/j.lcsi.2015.10.001

Hitlin, S., & Elder, G. H., Jr. (2007). Time, self, and the curiously abstract concept of agency. *Sociological Theory, 25*(2), 170-191. doi:10.1111/j.1467-9558.2007.00303.x

Hodkinson, P., & Sparkes, A. C. (1997). Careership: A sociological theory of career decision making. *British Journal of Sociology of Education, 18*(1), 29-44. doi:10.1080/0142569970180102

Illeris, K. (2014). Transformative learning and identity. *Journal of Transformative Education, 12*(2), 148-163. doi:10.1177/1541344614548423

Jaramillo, J. M., Rendon, M. I., Munoz, L., Weis, M., & Trommsdorff, G. (2017). Children's Self-Regulation in Cultural Contexts: The Role of Parental Socialization Theories, Goals, and Practices. *Frontiers in Psychology, 8*. doi:10.3389/fpsyg.2017.00923

Johnson, M. K., & Reynolds, J. R. (2013). Educational expectation trajectories and attainment in the transition to adulthood. *Social Science Research, 42*(3), 818-835. doi:10.1016/j.ssresearch.2012.12.003

Kasser, T., & Ryan, R. M. (1993). A dark side of the American Dream: Correlates of financial success as a central life aspiration *Journal of Personality and Social Psychology, 65*(2), 410-422. doi:10.1037//0022-3514.65.2.410

Kay, D., & Kibble, J. (2016). Learning theories 101: application to everyday teaching and scholarship. *Advances in Physiology Education, 40*(1), 17-25. doi:10.1152/advan.00132.2015

Kay, J. S., Shane, J., & Heckhausen, J. (2017). Youth's Causal Beliefs About Success: Socioeconomic Differences and Prediction of Early Career Development. *Journal of Youth and Adolescence, 46*(10), 2169-2180. doi:10.1007/s10964-017-0708-2

Kochanska, G., Murray, K. T., & Harlan, E. T. (2000). Effortful control in early childhood: continuity and change, antecedents, and implications for social development. *Developmental Psychology, 36*(2), 220-232.

Kopp, C. B. (1982). Antecedents of self-regulation: a developmental perspective. *Developmental Psychology, 18*(2), 199-214.

Leadbeater, C. (2018). *Student Agency*. Retrieved from

Levy, R., & Buhlmann, F. (2016). Towards a socio-structural framework for life course analysis. *Advances in Life Course Research, 30*, 30-42. doi:10.1016/j.alcr.2016.03.005

Li-Grining, C. P. (2007). Effortful control among low-income preschoolers in three cities: Stability, change, and individual differences. *Developmental Psychology, 43*(1), 208-221. doi:10.1037/0012-1649.43.1.208

Lipponen, L., & Kumpulainen, K. (2011). Acting as accountable authors: Creating interactional spaces for agency work in teacher education. *Teaching and Teacher Education, 27*(5), 812-819. doi:10.1016/j.tate.2011.01.001

Mahajan, N., & Woodward, A. L. (2009). Seven-Month-Old Infants Selectively Reproduce the Goals of Animate But Not Inanimate Agents. *Infancy, 14*(6), 667-679. doi:10.1080/15250000903265184

Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and educational practice. *Review of Educational Research, 79*(1), 327-365. doi:10.3102/0034654308325583

Martin, J. (2004). Self-regulated learning, social cognitive theory, and agency. *Educational Psychologist, 39*(2), 135-145. doi:10.1207/s15326985ep3902_4

Martin, J. (2006). Reinterpreting internalization and agency through G.H. Mead's perspecti val realism. *Human Development, 49*, 65-86. doi:10.1159/000091333

Mead, G. H. (1934). *Mind, self & society: from the standpoint of a social behavioralist*. Chicago: University of Chicago Press.

Merzirow, J., Taylor, E. W., & &Associates. (2009). *Transformative learning in practice*. San Francisco, CA: Jossey-Bass.

Mischel, W., Ayduk, O., Berman, M. G., Casey, B. J., Gotlib, I. H., Jonides, J., . . . Shoda, Y. (2011). 'Willpower' over the life span: decomposing self-regulation. *Social Cognitive and Affective Neuroscience, 6*(2), 252-256. doi:10.1093/scan/nsq081

Mischel, W., Shoda, Y., & Rodriguez, M. L. (1989). Delay of gratification in children. *Science, 244*(4907), 933-938. doi:10.1126/science.2658056

Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., . . . Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences of the United States of America, 108*(7), 2693-2698. doi:10.1073/pnas.1010076108

Mortimer, J. T., Zhang, L., Hussemann, J., & Wu, C.-Y. (2014). Parental economic hardship and children's achievement orientations *Longitudinal and Life Course Studies, 5*, 105-128.

Neugarten, D. (1996). *The Meanings of Age: Selected Papers of Bernice Neugarten* Chicago University of Chicago Press.

Ng-Knight, T., & Schoon, I. (2017). Can Locus of Control Compensate for Socioeconomic Adversity in the Transition from School to Work? *Journal of Youth and Adolescence, 46*(10), 2114-2128. doi:10.1007/s10964-017-0720-6

Ng-Knight, T., Shelton, K. H., Riglin, L., Mcmanus, I. C., Frederickson, N., & Rice, F. (2016). A longitudinal study of self-control at the transition to secondary school: considering the role of pubertal status and parenting. *Journal of Adolescence, 50*, 44-55. doi:10.1016/j.adolescence.2016.04.006

Niemi, R., Kumpulainen, K., & Lipponen, L. (2015). Pupils as active participants: Diamond ranking as a tool to investigate pupils' experiences of classroom practices. *European Educational Research Journal, 14*(2), 138-150. doi:10.1177/1474904115571797

OECD. (2015). In it together: Why less inequality benefits all. OECD, Paris www.oecd.org/els/social/inequality.

OECD. (2017a). *Education 2030 - Conceptual lerning framework: New narratives and contextual trends towards 2030. EDU/EDPC(2017)25/ANNI1 JT03420782*. Retrieved from

OECD. (2017b). *How's Life? Measuring Well-being. http://dx.doi.org/10.1787/how_life-2017-en*

OECD. (2017c). Understanding the socio-economic divide in Europe. https://www.oecd.org/els/soc/cope-divide-europe-2017-background-report.pdf.

OECD. (2018). The future of education and skills. Education 2030.

Pessoa, L. (2009). How do emotion and motivation direct executive control? *Trends in cognitive sciences, 13*(4), 160-166. doi:http://dx.doi.org/10.1016/j.tics.2009.01.006

Pintrich, P. R., & Degroot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology, 82*(1), 33-40. doi:10.1037/0022-0663.82.1.33

Pyhältö, K., Pietarinen, J., & Soini, T. (2012). Do comprehensive school teachers perceive themselves as active professional agents in school reforms? . *Journal of Educational Change, 13*(1), 95-116. doi:10.1007/s10833-011-9171-0

Reardon, S., & Waldfogel, J. (2016). *International inequalities. SuttonTrust. https://www.suttontrust.com/wp-content/uploads/2016/12/International-inequalities_FINAL.pdf*.

Recchia, H. E., & Howe, N. (2008). Family talk about internal states and children's relative appraisals of self and sibling. *Social Development, 17*, 776-794

Reynolds, J. R., & Johnson, M. K. (2011). Change in the Stratification of Educational Expectations and Their Realization. *Social Forces, 90*(1), 85-109.

Rosenbaum, J. (2001). *Beyond college for all: Career paths for the forgotten half*. New York: Russel Sage Foundation.

Rosenbaum, J. E. (2011). The Complexities of College for All: Beyond Fairy-tale Dreams. *Sociology of Education, 84*(2), 113-117. doi:10.1177/0038040711401809

Ross, C. E., & Mirowsky, J. (2006). Sex differences in the effect of education on depression: Resource multiplication or resource substitution? . *Social Science & Medicine, 63*, 1400-1413.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*(1), 54-67. doi:10.1006/ceps.1999.1020

Salmela-Aro, K. (2009). Personal goals and well-being during critical life transitions: The four C's-Channelling, choice, co-agency and compensation. *Advances in Life Course Research, 14*(1-2), 63-73. doi:10.1016/j.alcr.2009.03.003

Salmela-Aro, K. (2017). Dark and bright sides of thriving - school burnout and engagement in the Finnish context. *European Journal of Developmental Psychology, 14*(3), 337-349. doi:10.1080/17405629.2016.1207517

Salmela-Aro, K. (2018). *Co-agency in the context of the life span model of motivation*. OECD 2030 Framework

Sameroff, A. J. (Ed.) (2009). *The transactional model of Development. How children and contexts shape each other*. Washington, DC: American Psychological Press.

Schoon, I. (2006). *Risk and Resilience: Adaptations in Changing Times* Cambridge: Cambridge University Press.

Schoon, I. (2007). Adaptations to changing times: Agency in context. *International Journal of Psychology, 42*(2), 94-101. doi:10.1080/00207590600991252

Schoon, I. (2010). Planning for the Future: Changing Education Expectations in Three British Cohorts. *Historical Social Research-Historische Sozialforschung, 35*(2), 99-119.

Schoon, I. (2012). Planning for the Future in Times of Social Change. *Child Development Perspectives, 6*(4), 335-341. doi:10.1111/cdep.12003

Schoon, I. (2014). Parental worklessness and the experience of NEET among their offspring. Evidence from the Longitudinal Study of Young People in England (LSYPE). *Longitudinal and Life Course Studies, 6*(6), 129-150.

Schoon, I., & Bynner, J. (Eds.). (2017). *Young People's Development and the Great Recession: Uncertain Transitions and Precarious Futures*. Cambridge: Cambridge University Press

Schoon, I., Bynner, J., Joshi, H., Parsons, S., Wiggins, R. D., & Sacker, A. (2002). The influence of context, timing, and duration of risk experiences for the passage from childhood to midadulthood. *Child Development, 73*(5), 1486-1504.

Schoon, I., & Eccles, J. S. (Eds.). (2014). *Gender differences in aspirations and attainment. A life course perspective*. Cambridge: Cambridge University Press.

Schoon, I., & Heckhausen, J. (submitted). Conceptualizing individual agency in the transition from school to work: A socio-ecological developmental perspective.

Schoon, I., & Lyons-Amos, M. (2017). A socio-ecological model of agency: the role of psycho-social and socio-economic resources in shaping education and employment transitions in England. *Longitudinal and Life Course Studies, 8*(1), 35-56.

Schoon, I., & Mortimer, J. (2017). Youth and the Great Recession: Are values, achievement orientation and outlook to the future affected? *International Journal of Psychology, 52*(1), 1-8. doi:10.1002/ijop.12400

Schoon, I., & Polek, E. (2011). Pathways to Economic Well-Being Among Teenage Mothers in Great Britain. *European Psychologist, 16*(1), 11-20. doi:10.1027/1016-9040/a000028

Settersten, J., R. A, & Gannon, L. (2005). Structure, Agency, and the Space Between: On the Challenges and Contradictions of a Blended View of the Life Course. *Advances in Life Course Research, 10*, 35-55.

Settersten, R. A. (1997). The salience of age in the life course. *Human Development, 40*(5), 257-281.

Shanahan, M. J. (2000). Pathways to adulthood in changing societies: Variability and mechanisms in life course perspective. *Annual Review of Sociology, 26*, 667-692. doi:10.1146/annurev.soc.26.1.667

Shane, J., & Heckhausen, J. (2016). For better or worse: Young adults' opportunity beliefs and motivational self-regulation during career entry. *International Journal of Behavioral Development, 40*(2), 107-116. doi:10.1177/0165025415589389

Silbereisen, R. K. (2016). Coping with perceived chances and risks associated with social change. In R. A. Scott, S. M. Kosslyn, & M. Buchmann (Eds.), Emerging trends in the social and behavioral sciences: An interdisciplinary, searchable, and linkable resource. Oxford: Wiley. Doi: 10.1002/9781118900772.etrds0395.

Slagt, M., Dubas, J. S., Dekovic, M., & van Aken, M. A. (2016). Differences in sensitivity to parenting depending on child temperament: A meta-analysis. *Psychological bulletin, 142*(10), 1068-1110. doi:10.1037/bul0000061

Smiley, P. A., Chang, L. K., & Allhoff, A. K. (2011). Can Toddy give ma an orange? Parent input and young children's production of I and you. *Language Learning and Development, 7*, 77-106.

Soini, T., Pietarinen, J., & Pyhältö, K. (2016). What if teachers learn in the classroom? *Teacher Development, 20*(3), 380-397. doi:10.1080/13664530.2016.1149511

Sokol, B. W., Hammond, S. I., Kuebli, J., & Sweetman, L. (2015). The Development of Agency. In R. M. Lerner (Ed.), *Handbook of child Psychology and Developmental Science. 7th Edition* (Vol. 8, pp. 1-39): John Wiley & Sons.

Spilt, J. L., Koomen, H. M. Y., & Thijs, J. T. (2011). Teacher Wellbeing: The Importance of Teacher-Student Relationships. *Educational Psychology Review, 23*(4), 457-477. doi:10.1007/s10648-011-9170-y

Standing, G. (2011). *The precariat: The new dangerous class*. London: Bloomsbury.

Steinberg, L. (2001). We know some things: Parent-adolescent relationships in retrospect and prospect. *Journal of Research on Adolescence, 11*(1), 1-19. doi:10.1111/1532-7795.00001

Stone, D., Patton, B., & Heen, S. (1999). *Difficult conversations. How to discuss what matters most*. Penguin Books.

Thoermer, C., Woodward, A., Sodian, B., Perst, H., & Kristen, S. (2013). To get the grasp: Seven-month-olds encode and selectively reproduce goal-directed grasping. *Journal of Experimental Child Psychology, 116*(2), 499-509. doi:10.1016/j.jecp.2012.12.007

Thoresen Wyszynski, V. (2017). How transformational learning promotes caring, consultation and creativity and ultimately contributes to sustainable development. *International Review of Education, 63*, 915-934. doi:10.1007/s11159-017-9688-4

Trommsdorff, G. (2012). Development of "Agentic" Regulation in Cultural Context: The Role of Self and World Views. *Child Development Perspectives, 6*(1), 19-26. doi:10.1111/j.1750-8606.2011.00224.x

Ury, W. (2008). *The power of a positive no*. London: Hodder & Stoughton.

Villarreal, B. J., Heckhausen, J., Lessard, J., Greenberger, E., & Chen, C. S. (2015). High-school seniors' college enrollment goals: Costs and benefits of ambitious expectations. *Journal of Adolescence, 45*, 327-340. doi:10.1016/j.adolescence.2015.08.012

Vuolo, M., Staff, J., & Mortimer, J. T. (2012). Weathering the Great Recession: Psychological and Behavioral Trajectories in the Transition From School to Work. *Developmental Psychology, 48*(6), 1759-1773. doi:10.1037/a0026047

Woodward, A. L. (2009). Infants' Grasp of Others' Intentions. *Current Directions in Psychological Science, 18*(1), 53-57. doi:10.1111/j.1467-8721.2009.01605.x

Yoshikawa, H., Aber, J. L., & Beardslee, W. R. (2012). The Effects of Poverty on the Mental, Emotional, and Behavioral Health of Children and Youth Implications for Prevention. *American Psychologist, 67*(4), 272-284. doi:10.1037/a0028015

Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal, 45*(1), 166-183. doi:10.3102/0002831207312909

Zimmerman, B. J., & Schunk, D. H. (2011). *Handbook of Self-Regulation of Learning and Performance*. New York: Routledge Press.