

Forms of Knowing: emotion, creativity and play in learning

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Abstract: This chapter uses the example of play to draw out the complex relationship between emotions, creativity and learning. Taking a critical stance on the underlying systems of education that place value on easily compartmentalized forms of knowledge, we will explore how developing forms of knowing based on the relations between people can support creativity and learning.

The 2023 World Economic Forum Future of Jobs Report (World Economic Forum, 2023) puts creative thinking as one of the most important skills required to face the challenges of an uncertain future, next only to analytical thinking. It is commonly argued that this focus requires a shift in the way we educate the next generation of students¹. However, despite ample evidence for the importance of relational intelligence in the implementation of these skills it receives little focus. Here, we address the role of emotional education in teaching for creativity and in learning more generally. We make the argument that granting emotions and values a core role in educational systems should not be implemented separately to teaching for creativity. Instead, we demonstrate that this form of learning *increases* creative expression through awareness of the self and other. This is in contrast to Western rhetoric of rationality where competitive individualism and hard data promote narrow ideas of materialistic success furthered by public policy, systems and educational programmes that take a transactional view of education (Beghetto, 2023). Western discourse arguably undervalues the ineffable and relational aspects of human knowledge. The idea that creative thinking is encouraged in the service of this rhetoric of linear development is problematic. This view casts education as an investment: If the student works hard they will acquire information which can be used later when needed – knowledge is viewed as transmittable and storable units. From this perspective, human complexity and diversity are reduced to the easily measurable, and education to a transactional contract. This limits the bounds of human creative possibilities, since creativity is reliant on uncertainty and play, which flourish in a place of emotional safety. Teaching for creativity and for emotional learning is likely to encounter similar problems until a relational pedagogy is adopted. The overemphasis on measurable, rational knowledge is not conducive to creativity.

The Value of Relational Thought in Education

The processes and methods of educating are formed by decisions and value judgements about what is worthy of being taught, and such processes are inherently political (Biesta, 2007). Supposedly objective data-led and evidence-based attitudes to learning are driven by emotion and by value judgements, rooted in opinions about what

¹ Western education systems are often claimed as universal. Here, we discuss the nature of mature education systems developed in the neo-liberal mould in the 20th Century. We embrace the heterogeneity of even Western education systems. Both authors draw on experience as academic researchers and teachers in the UK education system and urge our proposals to be read in this light.

should and should not be taught. This reasoning is informed necessarily by emotions and values. Creative thinking risks falling into this trap if taught in a similar vein. Freire's critical pedagogy (2004) reminds us that prescriptive teaching can serve to oppress, and that equitable education requires teachers to critically engage and reflect on their beliefs, motivations and practices to develop meaningful teacher-student dialogue and pedagogical relationships. Once we accept that values, power dynamics and biases are implicit in all educational designs, we must also accept the joint need for critical reflection about education's purposes, and the skills and capacities we want to cultivate in young people for them to thrive (Burbules 2004).

Asking critical questions empowers educators and learners to be actively involved in education, to expect, not passive conformity, but critical and creative thought that questions and disrupts the status quo (Freire, 2004) and considers the systems acting on and around people (Bronfenbrenner, 2005). This requires us to pay attention to their heterogeneous developmental, social and emotional contexts, diverse communities and strengths, complexities and experiences (Almerigi et. al, 2005). This lack of attention manifests in ways of relating to others, which are therefore limited (De Jaegher, 2021). This lack has also been highlighted in public policy by Unwin (2018), who argues that skills such as kindness are sorely missing in public policy which seeks to effect behavioral change. Behavioral change requires emotional intelligence and trust and can only be fostered via kindness. Kindness is thus a radical force for change, rooted in solidarity and human connections and essential to exploit creative potential.

If knowledge is produced by power structures, then there is space for alternatives to the narrative. Moshman (1990) offers an alternative, flexible understanding of rationality in education that incorporates developmental and cognitive thinking skills approaches, and places knowledge and curriculum content in a social, philosophical and historical context. He suggests we need a new understanding of rationality that permits ambiguity and nuance, necessitates self-reflection and champions critical engagement with learning content. What passes for rationality in schools is often the uninterrogated acceptance of facts, norms, or thinking strategies. True rationality is not about teachers instilling valuable 'knowledge' in students, but training students to be discerning in their employment of appropriate deductive and inductive thinking skills as they mature. While content-heavy curricula perpetuate goal-focused knowledge consumption and rigid learning by rote over deep engagement, debates over content versus skills are unhelpful since the two are interrelated (Oates, 2011). Interactions between curriculum content and subject-specific reasoning skills, alongside metacognitive awareness of thought processes, potential pitfalls and uncertainties, are central to the goal of rationality in education (Moshman, 1990).

We propose that education be seen as emotional and relational, involving trust, care and subtle forms of knowledge, and call for a move away from the underlying hierarchy of rational versus relational knowledge. There is a disconnect in over-emphasising the rational which places limits on relational capacity and stifles creative growth. Responding meaningfully to the urgent challenges we encounter such as climate change and global inequality will require critical thinking and creative solutions, and

these must be founded in emotional intelligence to avoid traps of the past. Fostering emotional intelligence should be the focus of our educational systems. This, then, is the mechanism through which we can increase creativity, but a wise creativity.

Relational pedagogy provides an alternative to individualistic ideologies of education, putting relationships, ethics of care and connectedness at the heart of thinking about education (Aspelin, 2011; Biesta, 2010). It considers teachers and learners within a complex landscape of relations and connections, the internal and the reflective alongside external 'content', the subjective as well as objective (Fairchild et al., 2021). In this context in which relationships with self and Other are valued, creativity and emotion focused education might flourish. Relational thinking extends wisdom on supportive relationships in education and moves beyond individualistic or collectivist views of education to wider thinking about dynamics of co-operation and co-existence (Aspelin, 2011). It acknowledges that fundamental to educational reform is **relational** learning, that is learning how to see the world from other perspectives, how to engage in self-reflection, and fostering the critical analysis of processes and systems (Gallego et al., 2001).

Relational thought enables a new focus and the possibility of amplifying and prioritising the emotional *and* creative within learning. Responding to future challenges by making transformative change for a sustainable future requires that we pay attention to interconnectedness, involving both internal relationships with ourselves and external relationships with others (Siegal, 2022). Relational knowledge in education provides hope for such change and paves the way to a wider societal shift away from individualistic, self-promotion and consumerism to human connection (Henderson & Wamsler, 2020). Creativity that comes through emotional connection, should be recognised for its potential and nurtured.

The Importance of Emotions in Learning

Creativity, emotional literacy and relational skills are vital components of a holistic education (UK Social Mobility and Child Poverty Commission, 2015), essential to 'future proof' young people against challenges of a rapidly changing world (Basarkod et al., 2023). Yet, in education, such skills are secondary to the main business of "learning". **Hammer** et al. (2024) found that teachers' beliefs and intentions reflected the importance of social and emotional learning but competing top-down demands and priorities hindered provision. This reflects similar worries reported by teachers about constraints on the implementation of teaching for creativity in the classroom (Bereczski & Karpati, 2018). This is consistent with a framework that posits reason as the means to beliefs and ideas that constitute true knowledge, and so education has favoured rational, measurable knowledge. This linear view of knowledge in the rationalist tradition can serve to create normalisation and conformity, reproducing knowledge that benefits systems of power rather than the student (Ball, 2019; Deacon, 2006). It also creates a dangerous duality between cold and hot forms of cognition (Pessoa, 2023).

In the UK, accountability agendas have created a climate of education which squeezes out creativity, increases teacher stress, demotivates teachers and causes workforce attrition (Leavey et al., 2021). The introduction of the English Bacchalaureate or EBacc school performance indicator in 2010 heralded a neoconservative focus on certain curriculum subjects at the expense of both creative and socio-emotional skills, and served to solidify a hierarchy of traditionally academic subjects above other creative and arts subjects (Gewirtz et al., 2020). There are tangible negative outcomes of the state of education at present, with student mental health suffering in line with mounting academic pressure from exam-focused, results-driven education systems (Azzi et al., 2020). Almost 80% of school leaders believe that the current system limits opportunities for pupils who are inclined towards more technical or creative subjects; that the onus on academic testing students is failing students and creating fear of failure; and that more focus should be placed on life skills (The Key, 2017).

Students need to creatively engage with the subject matter in order for learning to take place, making creativity a key component in producing the right emotional conditions - the positive affect - needed for learning. This positive affect can be achieved by harnessing the potential of play in the classroom through relatable, engaging activities which evoke positive emotions, and this then encourages further creativity in a reciprocal feedback loop (Parker & Thomsen, 2019). Students need regular opportunities to marvel at new learning, to take risks, experiment, fail, persevere and to reflect on the learning process. Creativity makes sense, then, not as an add-on in service of increased economic growth but as a habit of learning, embedded in processes of teaching and learning, rather than a skill referred to only within certain curriculum domains. In fact, developing metacognitive awareness of the creative and emotional learning process is linked to the promotion of successful non-domain specific learning (Booth, 2013), in other words, it is beneficial to learning in general. Despite this, in education creativity and emotions are often neatly parceled up and timetabled into discrete subjects so that the creative arts are taught separately to social and emotional learning interventions or PSHE (personal, social and health education).

What is required is a perspective shift. Learning is not a solely cognitive process but an emotional experience, and the particular emotions stimulated in response to learning events and activities can either help or hinder learning. Whilst there is widespread recognition of the emotional component of learning in schools in the form of increased mental health literacy, social and emotional intervention programmes, post-covid19 recovery initiatives, and the everyday emotional labour and hard work of school staff, this recognition of the emotional is not yet echoed in the values prioritised by education systems at a broader level (Hannon & Peterson, 2021). It is true that children need to learn how and when to employ thinking skills. Yet, discernment requires emotional intelligence, and developing a form of 'rationality' involves learning how to make value judgements about what constitutes good or poor use of reason. While Moshman (1990) acknowledges the interrelatedness of rational and emotional thought, and that emotion is inherent in reasoning, this does not go far enough. This chapter argues that emotion should be brought to the fore and discussed alongside rationality in education rather than being subsumed within it, not only in terms of reasoning but in social and emotional

development of the whole learning person. Emotion is inherent in human value judgements and decisions about when, how and why to reason. Emotional intelligence then must be seen as embedded in the reasoning process. Once we consider that emotion is inextricable from reason, we must also consider the hierarchies of knowledge implicit in our education practices and systems, and open to the question, what is it that we mean by 'knowing'? Emotion is a fundamental aspect of child development, influencing mental health and the ability to engage creatively and critically with the world. Lack of attention to emotion means we risk neglecting a key area of development.

This perspective shift requires us to challenge the binary notion of what constitutes 'knowing' and 'not knowing'. While discussion of the content of education is common, there is less agreement on its purpose (e.g. Cole, 1990), and of course bound up with ideas of purpose are value judgements about knowledge. To ensure social and emotional learning does not drop off the agenda it must be woven into curriculums and truly embedded within school cultures. Doing so would also equip students (and teachers) to face the pressures and demands of school (Gedikoglu, 2021). Such change is needed soon. In a survey by The Children's Society (2023) children reported decreased overall happiness, increased academic stress and worries about the state of the world. This is echoed in reports from the wider European context of increased mental health issues in children and young people, decreased happiness and rising depression (WHO 2018).

Understanding Learning as an Emotional Experience

There is robust evidence that in order to learn, students need to connect with the content; their interest must be aroused in order to assimilate information and integrate it into their schemas about the world and for sense-making to take place (Eliassen et al., 2023; Gottlieb et al., 2016). For learning to be successful requires that useful, motivating emotions be evoked in the learning process. Emotions impact how and how effectively students learn and remember what they have learnt (Amin et al., 2017). When emotions such as pride, curiosity, wonder and enjoyment are elicited, there are gains in cognitive capacities, attention, focus, motivation and engagement, and resultant better learning outcomes (Gao et al., 2021). When students are emotionally motivated to learn they are more able to employ executive functions in flexible thinking, self-regulation, and working memory that are necessary for skills integral to learning like problem-solving and perseverance (Booth, 2013; Gao et al, 2021). Motivation which is intrinsic, and based in personal curiosity, wonder and connection to the subject matter is more likely to foster deep learning for learning's sake as opposed to learning driven by external motivating factors such as exam results or achieving a particular qualification (Ferlazzo, 2023; Núñez & León 2016). Conversely, negative emotional responses such as feeling anxious, upset or unsafe may cause disengagement and are detrimental to learning and motivation to learn (Pekrun, 2006). Understanding the connectedness of emotion and learning, and the value of emotion in learning, should inform the development of meaningful learning experiences and classroom practices.

There are certain current interventions which allow students to take responsibility for their emotions. For example, the Zones of Regulation (ZOR) is a systematic framework which promotes self-regulation by helping students identify, understand, manage and communicate their feelings, emotional reactions and bodily sensations (Kuypers, 2008). Teachers deliver a developmental series of lessons according to student need, and lessons can be adapted to children and adolescents of all ages. Emotions are grouped into colour-coded zones. The yellow zone relates to high, distracted energy, the blue zone relates to low, also distracted energy, and in the red zone we are out of control, and our amygdalas have taken the driving seat (Siegal, 2011). ZOR is based on the logic that learning can only happen in the right emotional conditions, or, in ZOR speak, we need to be in the 'green zone' to learn best. However, a key belief is that experiencing all zones is a natural part of being human. Such interventions are widely recognised as valuable, and remind us that teachers have a vital role to play in creating the conditions for learning. Yet, interventions are typically used retroactively to address issues with social and emotional skills, rather than preemptively embedded in general learning (Bohlmeijer et al., 2019). If emotions are important for all learning, they should not been introduced as an intervention when other forms of learning have gone "wrong" but should be open to all.

Understanding emotion is not just the responsibility of the students. Our emotions occur in response to events and experiences, and always in interaction with the others' emotions. In school settings the emotions of students and teachers play off each other, mutually reinforcing and transferring emotional states in constant dynamic movement. The etymology of the word emotion means to be moved (Müller, 2016), and it is this constantly changing, uncontrollability of emotion that makes it so unsatisfactory to rationalists as a form of knowing. In schools and classrooms emotions need to be carefully managed, and this means paying close attention to them. This also presupposes a level of emotional awareness on the part of the teacher, and requires regular reflection as part of the teaching practice. Students must feel psychologically safe in order to employ the executive functions necessary for learning, and this includes meeting the basic psychological needs of relatedness, competence and autonomy as posited by self-determination theory (Deci & Ryan, 2017). If the brain and body do not feel safe, it becomes very difficult for other psychological needs to be met (Maslow, 1943), and may result in maladaptive, negative learning behaviours in school (Delahooke, 2020).

Teachers can positively influence the emotions of their students, which will have a knock-on effect on learning. Prosocial student behaviours, social skills and academic achievement are predicted by supportive and caring teacher-student relationships (Kennedy & Kennedy, 1992; Greenberg & Jennings, 2009). Students tend to be more motivated, engaged and exhibit more prosocial behaviours when they feel cared about, understood and that they matter to their teachers (Fairchild et al., 2021). Students must experience relatedness, a sense of belonging and security in order to learn, and teachers have a unique role in facilitating learning environments which are conducive to psychological safety. Relatedness essentially underpins the ability to act autonomously when learning something new which requires trust in the facilitator; and the ability to

trust rests on a positive, supportive teacher-student relationship. Likewise, learning requires students to feel a level of competence, which involves self-belief and positive affect, both qualities which can be nurtured by the teacher, and by the wider school climate. Conversely, students will also internalise the negative or critical emotions that caregivers and teachers consciously or unconsciously transmit to students (Cozolino, 2014). This highlights two things, the need for emotional awareness of both teacher and student, and the importance of recognising the connectedness of emotion and learning. With education in crisis, seeing many teachers leaving the profession, failure to properly examine emotional aspects of teaching and learning is irresponsible (Ainsworth & Oldfield, 2022).

The Relationship Between Creativity and Positive Affect

As it stands, the value of education appears to be instrumental rather than intrinsic: reliant on standardisation and memorisation, as opposed to the inherent value of the processes and joy of learning (Jopling & Williams-Brown, 2021). Creativity, as we argue in this chapter, is central to the valuing of learning for learning's sake. Part of nurturing creativity is paying attention to the risk-taking element of unstructured play as a key ingredient in creativity which leads to deep learning. In classrooms, as in outdoor play environments, through taking risks and making mistakes students build emotional skills, practice cooperation, turn-taking, collaboration, problem-solving and conflict resolution (Hromek and Roffey 2009; Sohrabi, 2021). In learning something, we make connections with prior knowledge in the space between teacher and student. Creativity is needed to transform the information offered up by a teacher into something the student understands and can make use of, and this insofar as it requires a leap of faith on the part of the student, also involves an element of risk. Taking risks, making mistakes and experimenting as processes of learning are fundamentally emotional and fundamentally creative. There are important implications here for teachers: the incorporation of play into the classroom will harness imagination and foster creativity, but must be treated with sensitivity and attention to the vulnerability at the core of creativity and risk-taking. This means creating classrooms in which learners feel able to playfully embrace uncertainty and ambiguity through activities which are meaningful and motivating (Tsai, 2012), which of course is preceded by emotional understanding.

To create a conducive safe environment, the teacher must engender positive affect. Positive emotions are useful in that they encourage creativity and are contagious, thereby also encouraging creative thinking in others (Fredrickson 2003). Positive emotion contagion may be encouraged in the classroom by seeking out positive meaning, for example highlighting the learning that has happened through overcoming a challenge (Fredrickson, 2003). The teacher-student relationship comes into play here: to enjoy learning, the learner must trust the teacher to keep them safe, comfortable and accepted within the learning environment and feel that they can fail safely without fear of ridicule. Furthermore, Fredrickson (2003) suggests that positive emotions enable us to think and apply attention more broadly and flexibly in the short term, with the positive long-term effects of strengthening social skills and problem-solving skills, and improving

resilience to failure. Different positive emotions lead to different variations of creative or open-mindedness in which skills are honed or discovered. Feeling joy for instance leads to play, while contentment encourages contemplation and enjoyment, and interest fosters a desire to explore. Caring, loving relationships, including those within schools and classrooms, enable this growth to happen and keep happening (Fredrickson, 2004)

When learning is fun and produces positive affect there is intrinsic motivation to learn. Valerio (2012) suggests that a playful approach can motivate students by providing intrinsic reward, but that the learning material should come from a place of caring, in that it responds to the students' interests, contexts and needs. When learning is fun and correctly pitched says Valerio, deep learning and creative thinking are activated. So, implicit in the successful application of playful teaching and learning is the emotional intelligence and relational pedagogical expertise of the teacher. For a student to learn through play, the teacher must exercise the correct amount of restraint and provide the right guidance at the right time so that the learner remains autonomous and learning through exploration can occur (Bonawitz et al., 2011). The value of play, and playful approaches to learning extends to learners of all ages since they foster creativity, problem-solving and collaboration (Erikson et al., 2020).

Creativity in schools, and in life, occurs in collaboration with others and it presupposes a degree of empathy in engaging with ideas beyond our own. From a sociocultural, Vygotskian perspective child development occurs in an iterative process of collaborative meaning-making with supportive teachers (Vygotsky, 1962). This learning is emotional: it teaches the learner about their own emotions and the emotions of others through the very process of learning. However, before teachers can foster positive affect in the classroom and encourage creativity in their students, creativity must be encouraged first in teachers. This requires that teachers not only are afforded creative freedom, but that creativity is prioritised, valued and embedded within the school structure; and that there is spaciousness and time made for play, experimentation, risk-taking and thinking-through (McAvinchey, 2013). While the time investment involved may sit uncomfortably in time-poor school cultures with rigid curriculum expectations, the long-term benefits to learning and to teacher wellbeing and satisfaction, particularly in light of the current teacher retention crisis, should be prioritised. Schools are fast-paced and highly pressurised, driven by exams and data, so valuing and promoting creativity is often an uphill struggle (Olivant, 2015). However, reflection has been found by neuroscience to foster creativity (Bodner et al., 2016), and new school cultures might be imagined which allow time and space for the reflective thought, dialogue, and collaborative, creative engagement with curriculum content, which will develop the conditions for creative thinking in schools and classrooms. Creativity is a quality we need so desperately for today and for the world of the future, that Cropley (2014) deems teaching for creativity a moral imperative for teachers. Yet if the emotional and the creative in learning are not given the attention they deserve, then teachers and students alike will feel that their human needs for autonomy, belonging and competence are not prioritised (Jopling & Williams-Brown, 2021). Just as students must trust their teachers before they can emotionally and creatively engage in learning, schools must trust their teachers and create an environment in which they feel safe enough to employ their professional skills

and judgement to try new things. The creative engagement of teachers with the curriculum is a component of caring, they embody and transmit to their students the emotional and creative investment they have made in their students' learning, and as we know, this care is felt and internalised by the students (Cozolino, 2014).

Teaching for Relational Awareness is Teaching for Creativity: The Case of Play

Fostering a clear focus on the emotions that are necessary to produce learning will also, we argue, foster an environment which can scaffold creativity. As much as learning is an emotional experience that changes and moves us, it is also a creative experience, it produces something new in us that was not there previously. Creativity involves the imagination, the experiential processes of play and making, and is expansive in nature. It is for this reason we believe that a focus on scaffolding psychological safety and increasing relational awareness will naturally foster creativity. Education for creativity also presupposes education for social and emotional skills. Most important for the argument advanced in this chapter, a perspectival approach to creativity emphasises these interpersonal and relational qualities. The perspectival view provides a framework to understand the role of relational emotions in creativity. Creativity is not a property of the individual's thought processes, abilities or personality traits but found in the in-between of different perspectives; a creative person is therefore one who can manage these in-betweens. This interpretation is reflective of Glăveanu's (2020) perspectival view of creativity. At its heart, this approach requires us to take interaction seriously as a driver of creativity potential and as a marker of creative skill. The creative person needs to take on another perspective to generate thoughts and ideas which are beyond their own. Such a positioning creates a clear link between the role of socio-emotional learning in schools and creative invention. It is through the successful navigation of difference that creativity develops. We will begin by looking at the relationship between play, learning, emotions and creativity.

Play is a child's fundamental human right (United Nations, 1989), recognised to support and facilitate learning, emotional regulation, emotional literacy and creativity (Hoffman & Russ, 2012). However, western 'developed' societies have seen a marked reduction in child-led free play, as opposed to adult-led structured play, over the past fifty years (Gray, 2011). Unstructured play, Gray (2013), argues is the antidote to rigid schooling, yet it has decreased in the home and school lives of children, with UK schools losing out on three quarters of an hour of break time each week since 1995 (Ardelean et al., 2021). Nowadays, more than half the world's population of children live in urbanised environments, and parental concerns about traffic (Unicef, 2012), and dangers from strangers particularly in urban areas lead to reluctance to allow outdoor play (David et al., 2010). Adventurous play correlates with decreased fear and anxiety, and is both linked to more time spent in green spaces and access to age-appropriate outdoor play areas (Dodd et al., 2021). Yet there is greater societal perceived danger, with younger generations less likely to be allowed to go out unsupervised than their parents' generations. The deprioritisation of outdoor play is compounded by the wealth of games and technological devices that are now available which offer play opportunities from the

comfort of children's homes. As a result play is becoming more isolated and more sedentary (Kline & Kline, 2011) as well as more structured and controllable (Sohrabi, 2021). Unsurprisingly, a reliance on digital games is found to be detrimental to co-operative social skills when compared to physical play activities in groups (Sohrabi, 2021). False dichotomies in the language of learning and play serve to oversimplify and restrict meanings in health discourse as well as in education. As Burdette and Whitaker (2005) suggest, public health could successfully promote the developmental benefits of unstructured outdoor play for young children by focusing on the holistic benefits to physical, cognitive and emotional health.

Outdoor play is a natural inclination, it decreases stress, and may also reduce cognitive load due to the evolutionary propensity of the human brain to process natural environments; being in green spaces allows our brains to rest (Benedetti et al., 2019). Imaginative outdoor play is linked to faster maturation of the developing brain, which leads to increased language acquisition, better social and emotional skills and enhanced wellbeing (Ardelean et al., 2021). Allowing periods of uninterrupted play outdoors in safe environments benefits children in ways traditionally associated with cognition and learning such as fostering curiosity and problem solving, and also has important benefits much needed for a well-rounded life connected with the world, such as encouraging connection with nature, and fostering physical health and emotional resilience (Elkind, 2008). Extended, uninterrupted outdoor play in green spaces also encourages creativity, in solving problems and overcoming challenges using the natural environment; and literacy, in the wealth of environmental and outdoor vocabulary children will naturally encounter and use (Ellard & Valtchanov, 2015). As well as the various emotional, physical and cognitive benefits to individuals, outdoor play also benefits the planet, with nature connection and positive, caring attitudes towards the planet linked to spending time in green spaces (Colleony et al., 2019).

Neuroscience has linked features of play such as interaction and joy to cognitive processes of learning such as reward and emotional regulation. Play is seen to facilitate learning and promote favourable conditions for further learning (Hirsh-Pasek et al., 2017). Contrary to typical notions of play belonging to the very young, playfulness and a playful approach promotes learning throughout the lifespan since it produces positive affect and brings about the conditions needed for creativity to flourish (Booth, 2013). Research shows that playfulness and creativity overlap in learning (Proyer, 2018), and playful approaches which encourage choice-making have been found to foster a sense of autonomy and empowerment and encourage metacognitive awareness (Laevers, 2000; Fullan & Langworthy, 2014).

While dominant traditions agree that play is children's way into learning about the world, they tend to neglect the importance of emotion. Play is primarily viewed as a vehicle for cognitive development; even Vygotskyian social constructivism with its emphasis on the social and contextual has often been interpreted in the cognitivist tradition, despite the focus on social interaction as the drive for learning (Hedegarrrd, 2016). When children begin Year 1 in the UK at age 5, play gives way to formal learning with the introduction of the Key Stage 1 curriculum. Playtime becomes antithetical to worktime, and fun

becomes unhelpfully pitted against the serious business of learning. Underlying the separation of learning and play is a deeper false dichotomy which sees emotions as separate from cognitive processes. By trivialising play and permitting its value only in very early child development we forget that play is essential to the vulnerability of letting go needed for transformation to happen. In play there exists the uncontrollable element of learning and creativity, which goes against an education climate characterised by measurable and controllable targets and criteria. Through risky play children test their limits and learn to manage risk. They develop resilience, self-confidence and executive functioning skills (Bienenstock et al., 2015); risk through play is an essential, creative and emotional component of children's holistic development, and parents who are aware of the developmental importance of risky play are more likely to prioritise play and permit outdoor independent play, although this is influenced by practical factors such as the working hours and age of parents (Dodd et al., 2021).

The tendency to assign play to the remit of very young children is bound up with traditional views about the purpose of play being mainly to serve cognitive function, views which are reproduced in the structures of our educational establishments (Hedegarrrd, 2016). Actually, more and more research is demonstrating the reverse, that play is necessary for creativity and application of creative thinking skills throughout life (Henriksen et al., 2020). Play helps learning in adulthood as in childhood (Gray, 2013), and promotes emotional bonds through social connection. Play makes tangible the important interconnection of the emotional and the creative in processes of learning. This makes sense when we consider that adults, like children, learn through experience, we learn best through doing. In adulthood we play via structured games, or playful interactions. As with children, play is characterised as a non-goal oriented, voluntary activity which is enjoyable or exciting and captures one's attention (Clackson et al., 2018). Playfulness involves transformation of activities or ideas into play to produce positive affect, and might manifest in creative or imaginative thinking or experimentation as well as humour (Brauer et al., 2019). In learning, there is always an element of play, in exploration and opening to newness and transformation, and this remains true at all stages of life. Moreover, learning as play, is correlated with cognitive benefits in later life in that it encourages newness, enjoyment, social connection and engagement (Brown, 2010), reduced stress and positive relationships (Feeney & Van Vleet, 2015).

The argument of this chapter that learning is inherently creative is evident in traditional constructivist theories of learning through play. Children naturally learn through play, and from a Piagetian perspective, play progresses from functional play at the sensorimotor stage to constructive play, followed by symbolic, imaginative play and finally to rule-based games at the formal-operational stage (Piaget, 1962). Piagetan thought has become embedded in educational received wisdom on age-related needs and development of play, supportive environments for play, and harnessing social interactions and misconceptions in classroom activities (Britain & Plowden, 1967; Dasen, 1994).

We can also see a creative drive in Dewey's learner-as-scientist, discovering the world in a continuous process of active inquiry, integrating real world experience and taught

information to make sense of the world. Proponents of experiential learning recognise that knowing occurs through doing, that is, through creating, and that any learning that is divorced from experience misses a vital creative component since when learning is abstracted it is essentially diluted, and risks substituting inculcation for real learning. While some abstraction is inevitable in classroom settings, elements of experiential, knowing through doing are needed for creative engagement in learning. This notion that children - as born scientists- learn naturally through experimentation in play, guided by an innate curiosity about the world around them (Dewey 1910) is embedded in early years education, while more widely in education, inquiry-based learning through curiosity is seen as education's driving force.

Through a Vygotskian lens, learning is a social process always occurring in interaction with others, and creativity and imagination are outcomes of play (Vygotsky, 1978). The creative potential of play may be harnessed by a teacher to guide the child on a learning journey which stretches them beyond their individual learning capacity (Vygotsky, 1967). Piaget believed creativity was more part of childhood than adulthood, and that creativity was lost in the development into adulthood which required adherence to structures and rules (Gallagher & Reid, 2002). However, the social constructivist tradition reminds us that such structures and rules are externally imposed and suggests instead that creativity progresses and develops throughout life. As such the creative and imaginative potential of children increases with their development and life experience (Vygotsky, 2004). This approach supports arguments for creativity throughout education at all ages rather than confining it to the very early years, and is in line with our argument in this chapter.

Via reinterpretation of Vygotsky's work, Hedegarrd (2016) suggests that emotion and creativity come together in tensions between the personal and the social. Essentially a creative transformation of meaning occurs in the navigating of one's personal motivations alongside the norms and expectations of play allowing new experiences of emotions to be formed (Hedegarrd, 2016). Take rule-based play for example in which children must defer their individual desires to follow the rules of the game, and in doing so children learn delayed gratification and develop the ability to move from reactive to more intentional action (Elkonin, 2005). These tensions are moments of potential learning and transformation that are illustrative of the dynamic partnership of emotion and creativity within processes of learning.

From a psychoanalytic perspective, play is a way of combining inner and outer worlds (Caper, 1996), and is the natural medium for children's expression of feelings and emotions (Ginsburg, 2007). Self and other regulation and metacognitive awareness are developed through rule based play in the holding in mind of the rules of the game, adhering to them and ensuring that others do likewise, and the bridging of external and internal intentions and motivations (Elkonin, 2005); through social interaction in play, children learn to generalise emotions beyond the individual and navigate conflicting emotional motives. Play is emotional as well as cognitive in that it involves bridging internal and external worlds in terms of not only facts but also values, feelings, and motivations. This notion is at the heart of play therapy, in which for young children, play

can serve the role later taken on by abstract thinking, of facilitating the expression of complex meanings and emotions (Frantzana et al., 2021).

In learning through play, emotion and creativity are always already intertwined. It is therefore impossible to talk meaningfully about creativity or emotion as distinct from one another in early learning and in learning generally; as Elkind (2008) puts it, play, love and work act as a dynamic trio for a balanced life. In imaginative play, children create through imagining, and in doing so learn various transferable skills; by trying on various roles they learn to take perspectives and imagine themselves into various situations which might reflect the real world. They learn for example, that their enjoyment of an activity might not be shared by their playmate, thus laying the foundations for reflexivity, compassion and empathy. In play, children develop theories of mind - the awareness that the thoughts and feelings of others might differ from theirs - through a process of inquiry; by questioning and following their curiosity in order to explain and interpret their experiences, forming predictions, and adapting their theories in response to their findings (Gopnik, 1996). This development in awareness of others as distinct entities happens in conjunction with developments in awareness of their own thoughts and feelings (Eisenberg et al., 2006). Imaginative play grants creative freedom, for instance the rehearsal of affect in imaginative play and subsequent ability to express affect in story-telling, is correlated with creativity and divergent thinking (Hoffman & Russ, 2012). Imaginative play permits children to move beyond what is known to them, into the realm of the unknowable, in which emotions are no longer tied to events in the ways they are in everyday life and so they are free to form new connections between event and affect (Hedegarrd, 2016).

Conclusion

In a climate of hyper consumerism, success is equated with self-centred self-reliance and our fundamental human need for connection is masked by excess and materialism (Segal & Taylor, 2015). The rise of online self-care cultures indicates our need for connection, yet the commodification of wellness promotes an individualistic breed of self-care which leads instead to greater isolation (Siegal, 2022; Blake et al., 2021). This individual focused self-reliant trend is echoed in an idea common in education and school cultures, the notion of having 'grit' - meaning resilience in the face of challenge, perseverance and hard work, which, when done well will pay off in the end. Stitzlein (2018) argues that this promotes a limited idea of success that places blame for ones failure on the individual and risks glorifying hardship, and suggests that schools would do better to adopt the notion of pragmatic hope, which also encourages perseverance and optimism but offers an alternative perspective on success. According to Stitzlein, a focus on hope rather than grit fosters flexible and critical thinking and emphasises learning as inherently social. It encourages a view of success that extends to the internal, personal, and also connects outwards to the communal. This promotes and relies on relational knowing, and our world now more than ever needs the depth, flexibility, compassion and self-awareness encouraged by relational forms of knowing. In a world where inequalities and disconnection are growing, we are required to turn

towards the ineffable and the complex with kindness and understanding (De Jaegher, 2021).

Departing from traditional views which celebrate academic forms of intelligence, De Jaegher (2021) argues that loving is in fact the highest form of knowing, and that in loving relationships one 'lets the other be', and it is this letting be of loving, that tension between the knower and the known object is remedied. There is something unknowable and ambiguous which is permitted. Knowing, framed in terms of letting be, therefore becomes a higher form of relational knowing. Accordingly, by neglecting the relatedness of loving and knowing, real belonging and self-knowing is prevented, and our relational capacities are limited. In our current digital age we have become more isolated from each other and from ourselves, our physical and sensory selves, so that knowledge rooted in loving, connection and relating, in the uniquely human, is in urgent need of nurturing (De Jaegher, 2021).

A shift to relational forms of knowing will encourage deep learning and permit a new conceptualisation of rationality which also allows creativity and makes space for emotion. From a relational perspective, knowledge of what is rational, true and ethical occurs within and through relationships, and is derived from human experience, interconnectedness and interpersonal relationships. Relational narratives disrupt individualism and connect us beyond our individual selves by valuing the human, the emotional and the social and placing emphasis on complexity, reflexivity and depth. Behavioural change requires emotional intelligence and trust, rooted in solidarity and human connections (Unwin, 2018), and accordingly, relational knowledge provides a powerful force for equity and inclusion. This shift is essential for developing empathy, relational skills, and a deeper understanding of oneself and others, and thereby enhancing learning processes overall. Contrary to competitive individualism, relational knowing urges that we see ourselves as connected, and identify instead with a shared humanity, which enables shared responsibility and collective action. Placing kindness and emotional intelligence at the very heart of learning will result in learners who are emotionally resilient, creative thinkers capable of contributing to a more connected and compassionate society.

The valuing of relational knowledge gives legitimacy to other, potentially more human ways of determining, assessing and evaluating knowledge, for example, the usefulness of experiential 'insider knowledge' of teachers as a method of assessment alongside traditional modes of assessment (Aposhian et al., 2002). A paradigm shift in educational values to relational knowing would embrace reflexivity, emotional intelligence and critical thinking on personal, interpersonal and meta systemic levels, and open up discussion about the purpose of education therefore making real change possible. Such a shift is urgently needed if we are to face global challenges such as climate change and increasing global inequality with the critical and creative thinking required (Böhme et al., 2020). Educational environments which emphasise creativity, emotional intelligence and empathy will nurture learners who are able to consider diverse perspectives, think flexibly and engage empathetically with others, thereby fostering a more innovative and compassionate approach to problem-solving.

Education is never apolitical since it occurs within and is produced by systems of power, and particular ideologies of knowledge, success and value are embedded in these systems. When we consider what is involved in learning we quickly see that emotion is there at its core. Creativity too is fundamentally part of deep learning and is inseparable from the emotional. Segal and Taylor (2015) argue that the distancing of culture from nature produced by the promotion of individualistic self-interest and self-centred views of success is symptomatic of a deeper lack: our fundamental need to belong, to connect and to experience love is in peril, and so we seek fulfillment and comfort in the material and the readily available. This false fulfillment has led to increasing intrapersonal and interpersonal disconnection (Siegal, 2022), and this is reflected in the narrow focus of our education systems on knowledge acquisition, qualifications, and material success and subsequent neglect of other vital student needs for wellbeing and holistic education (Fletcher, 2021).

We urgently need to turn towards the fundamentally human values of relational awareness, empathy, and kindness. This involves nurturing and elevating the creative and the emotional by challenging the values embedded in education and dismantling traditional hierarchies of rational versus relational knowledge. Educating for our creative future means educating for our emotional future, and this is exemplified in play as the natural human vehicle for learning cognitively and emotionally. Play and playfulness demonstrate the mutuality of creativity, emotion and relational forms of knowing in learning at all ages and should be recognised as politically important. In order that learners may overcome future challenges presented by a rapidly changing world and thrive emotionally and relationally, we must lay the foundations for creativity by developing learners as emotionally astute individuals and community members, able to empathetically relate to themselves, others and the world around them.

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