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From 4 to 104: The characteristics of effective learning

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Abstract:
In England, the pedagogic practice of those who work with children from birth to five is guided by the statutory framework for the Early Years Foundation Stage (Department for Education (DfE), 2024a), which sets out the characteristics of effective teaching and learning for children aged 0-5: active engagement; creative and critical thinking; and playing and exploring. In this article, we explore how these characteristics can guide effective practice and transformative learning regardless of the phase of education. Drawing on our research and lived experiences as educators working with young children through to adults in higher education, and feedback from colleagues who attended our session at St Mary's 2024 Sharing Stories: Pedagogy and Research conference, we explore where the characteristics of effective learning can be found throughout the educational journey and how taking this lens can lead to a transformative experience for all learners.

Keywords: Early Years; Higher Education; playing and exploring; active engagement; creating and thinking critically

Our professional context

The authors of this article began their teaching careers in the 1990's. We have worked in a variety of settings including homebased childcare, nurseries, primary schools, secondary schools, alternative provisions and special educational need and disabilities (SEND) settings in England and overseas, and are now based in higher education. Although we now work with adult learners, we retain the lessons we learned while working with young children

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under the age of five, in what is known in England as the Early Years Foundation Stage (EYFS). The period from birth to five is a time of rapid growth, critical learning and development (Sylva, Melhuish, Sammons, Siraj-Blatchford, and Taggart 2004; Tickell, 2011; Nutbrown, 2012; DfE, 2017). However, throughout our careers we have been confronted with the challenge that, while many profess to value the work that takes place in EYFS, few really understand Early Years pedagogy. Indeed, there is a perception that our practice is viewed as less rigorous than that of our colleagues in other phases (Veale, 2023). It seems that although those who lead learning in Reception Classes in England share the same qualifications as those who work with older children (DfE, 2024b), a false distinction exists between the value attributed to pedagogic practice in different Key Stages.

International comparisons of educational outcomes at the end of secondary schooling have led to high stakes testing and downwards pressure to formalise learning in order to produce comparative data (McDowall-Clark, 2017). The neoliberal drive to standardise education practice has led to the introduction of the Initial Teacher Training Core Content framework (DfE, 2021). Largely informed by research conducted with older learners (as explored by Veale, 2023), this framework promotes adult-centred, didactic strategies which are pedagogically inappropriate for younger learners. Although these strategies serve the dual purpose of supporting some students to accrue knowledge and enabling policy makers to measure that directed content has been taught, there is an important difference between teaching and learning that bears further examination.

In crude terms, teaching can be described as the transmission of specific knowledge or skills from one person to another. By contrast, learning involves a lasting change in thinking or understanding (Bruner, 1957). Rather than a one-way exchange between teacher and pupil, learning is a transformative act which involves critical reflection (Mezirow, 2003) within a community of practice where knowledge is constructed and negotiated (Wenger, 1998). In each of the settings we have worked in, we have aimed to create democratic learning spaces where students from 4 to 104 (we admit that neither of us has yet worked with a student who has reached this grand age, but we have worked with adults in their seventies) can co-construct knowledge and understanding. For this to happen, we follow the principles that underpin practice in the EYFS (DfE, 2024a): we get to know our students as unique individuals, build positive relationships with them and provide an environment in which they feel safe to take risks and engage in critical reflection, regardless of the age of our students. In doing so, our aim has been for our learners to develop a positive image of their own abilities, to stimulate their intellectual curiosity and to foster a love of learning. In doing so, we constantly return to the three characteristics of effective learning: active engagement; creative and critical thinking; and playing and exploring.

The characteristics of effective learning

The origins of the characteristics of effective learning can be traced back to the Tickell review (2011), which noted the need to think about not just what children learn but how they learn and what motivates their learning (Evangelou, Sylva and Kyriacou, 2009). They were introduced in the 2012 revision of the statutory guidance and warmly welcomed by the sector. While subsequent revisions of these guidelines have continued to include them, as Dubiel (2024) points out, the influence of the knowledge-based curriculum introduced for older learners has resulted in a decline in the emphasis they are given.

Our argument is that these characteristics are part of effective learning at any age. To help us think about this, at St Mary's 2024 '*Sharing Stories: Practice and Research' c*onference we asked fifteen colleagues who work in higher education, and three who work in other educational sectors, in what ways they use the characteristics of effective learning in their professional practice. Their responses provided further food for thought about pedagogy in higher education and how these characteristics are present in learning 'from 4-104'.

Active engagement

Active engagement is a concept which encompasses not only engagement but also motivation. Initial motivation comes when interest in an activity is aroused. This interest may be triggered by novelty, curiosity or the learner's need for consistency (Laevers, 2020). In other words, when our interest is piqued, the activity becomes meaningful and motivating. For effective learning to take place, it is not enough for an activity to merely pique our interest: interest must also be sustained. Stewart (2011) points out 'the most satisfying and motivating activities always involve a degree of challenge' (p. 52). Effective learning is not always easy but instead requires us to be motivated to persist and keep trying until we reach our goal. While we have an innate drive for competence, autonomy and relatedness (Ryan and Deci, 2020), Beswick (2017) explains that highly curious people have a willingness to accept the limits of their knowledge and a desire to learn something new which enables them to remain actively engaged in situations where there is a degree of uncertainty.

The ability to sustain engagement enables deep learning to take place. This concept is supported by Laevers' (2000) work on motivation and is described by Csikszentmihayi (2000) as a state of 'flow'. In the state of flow, the learner becomes totally absorbed, focused, engaged, in control of their learning and enjoying the activity for its own sake rather than for any perceived reward. A key factor in ensuring the active engagement necessary for deep learning to take place is choice. Skilled teachers are able to provide not only a choice of what to do but also how to do it, giving learners the autonomy necessary to experience the sense of competence and joy (Kingston-Hughes, 2024), which reinforces the drive to learn more.

Several of our respondents from higher education discussed the importance of active learning and having students explore ideas in practical sessions. For example, one undergraduate lecturer wrote,

> I use the iterative design process to help the students design and make through a trial-and-error practical process. This is often a whole hour of maintaining concentration on new skills being developed.

In this case the students are deeply involved in the design process and keep trying with sustained concentration over a significant time period. While Beswick (2017) may not have been referring to university students, this example highlights the importance not only of willingness to engage with situations where there is a degree of uncertainty, but also to sustain engagement so that deep learning can take place (Laevers, 2000). Our colleague's example illustrates that, even at the higher education level students need to engage in active learning and be given the time to make sense of and develop their learning.

Creativity and critical thinking

Creativity and critical thinking have been identified as crucial in all areas of human activity (NACCCE, 1999) and described as key 21st century skills (Vincent-Lancrin et al, 2019). Critical thinking can be defined as the conscious self-regulated decision-making process that sustains progress towards a specific goal (Bronson, 2000). This metacognitive process enables learners to draw on prior experience to make connections with what they already know in order to decide how to proceed. It involves being able to make predictions and find novel ways to solve problems. Critical thought is supported through sustained shared thinking where learners are encouraged to articulate their ideas to others, making the thinking visible (Brodie, 2014). Skilled pedagogues will use careful questioning to draw out ideas and support metacognition and may develop or extend learning through planning linked experiences.

Despite critical thinking being a key 21st century skill (Vincent-Lancrin et al., 2019) only one higher education lecturer actually used the word "critical thinking" in their response,

> Teaching placements and experiences where we let students take responsibility for planning and delivering lessons and allow them to make mistakes and learn from them as opposed to trying to micromanaging these. This of course only works when students are supported to engage in critical reflection during this process.

Criticality is one of the things that St Mary's lecturers explicitly mark students on, being a part of the assessment criteria from at least Level 4. The marking guidelines state that for students to achieve a 2:1 they must show "good analytical ability" (Assessment Policy Review Working Group, 2016, p. 3) and to get a 1st they must demonstrate "critical engagement" (p. 4) with reading. Critical thinking is so embedded in our programmes that it is probable that these university lecturers value and teach critical thinking even if they did not use the words.

Three of the lecturers did discuss the importance of collaboration and discussion, and it is possible (although not guaranteed) that students engage in and develop their critical thinking through these discussions. This would align with Brodie's (2014) observations about the importance of making one's thinking visible to others and engaging in sustained shared thinking. Stewart (2011) suggests that the process of sustained shared thinking also fosters creativity as it encourages students to explore different perspectives and generate new ideas. The ability to think divergently and creatively enables the learner to suspend judgement and explore a range of possibilities, focusing on the process of learning rather than a specific product. Amabile (1999) insists that freedom, security and challenge are all essential in fostering creativity, cautioning that without these elements, we tend to simply replicate what is familiar, tried and tested.

Only one lecturer explicitly mentioned creativity. Again, this surprised us, as creativity is also part of our university assessment criteria. Indeed, in order for a St Mary's student to get a 2:1 or above for their dissertation, our guidelines state that they must show "originality of thought" (University Assessment Criteria, 2019, p. 60). As creativity has been identified as crucial in all areas of human life (NACCCE, 1997), it seems that Higher Education lecturers would do well to value creativity and playing more, so that we encourage the original thinkers needed in the workforce (Vincent-Lancrin et al., 2019) to graduate from our universities.

Playing and Exploring

It is widely recognised that children use their senses to explore the world around them from birth, it is this exploration and play that allows children to learn and develop. However, play is an elusive concept (Stewart, 2011), which even those working with young children find it challenging to define (Adams, Alexander, Drummond and Moyles, 2004; Wood and Bennett, 1997). Bruner, Jolly and Sylva (2017) explain the concept of play well, describing it as an approach to action, rather than a specific activity. We agree that play is a mindset rather than an activity and that playful approaches may include open ended exploration, cooperative or collaborative activities, and any number of experiences which build neural connections and encourage flexible thinking.

From a scientific perspective, Einstein (1936, np) himself expressed the importance of play describing it as 'the highest form of research' and science itself as 'nothing more than the refinement of everyday thinking'. Like scientists, young children are constantly building theories about how the world works and refining these through exploration and experimentation (Stewart, 2011). Through play, we not only develop our understanding of the world around us, but also our resilience, confidence and ability to think flexibly and apply our learning when faced with complex problems (Bandura, 1994). As the cerebral cortex develops, play becomes increasingly complex and children are increasingly able to control their impulses, maintain attention and draw on their prior knowledge to find new ways of

doing things. The role of adults and other educators in supporting this playful learning involves managing the fine balance between interacting to develop and extend thinking, or interfering and destroying the learners' sense of autonomy and enjoyment (Fisher, 2016). The skill of educators in supporting playful learning should not be underestimated but, as Paley (2004) observed, the miraculous is often confused with the mundane and the skills involved in supporting play and exploration are all too easily overlooked.

Only one undergraduate lecturer participating in our conference session explicitly mentioned playing and exploring,

> It underpins my HE [Higher Education] teaching pedagogy, i.e. using playful approaches to exploring academia which brings about creativity and critical thinking.

However, we would argue that the active learning discussed earlier requires a stage of playing and exploring and that it is through active play-based approaches the deeper understanding and greater sense of ownership over learning associated with graduate level study are best achieved. Although Bruner, Jolly and Sylva (2017) describe play as an approach to action rather than a specific activity, maybe as academics we are not comfortable with the idea of frivolity that is implied by using the word "play", an attitude that seems strange as Einstein (1936) himself described play as the highest form of research. It may just be that the colleague who made this observation is more comfortable with using the same terminology as we use than the others attending the session. This returns us to our original point that there is an issue with the way the pedagogy and associated terminology of the EYFS are perceived.

Reflecting on the characteristics of effective learning in Higher Education

Two of our respondents reflected on their limited use of the characteristics of effective learning in their own teaching. One course lead lamented that they had "fallen into the HE trap". This comment implies a sense that there are ways of being in universities that may not align with our natural thoughts about how to lead learning and that these ways of being do not always encourage teaching that produces the most effective learning outcomes. What also struck us was that, in response to our invitation to consider how they used the characteristics of effective learning in their practice, a primary teacher also exclaimed, "Not enough if I'm honest! We are so pressured to get through the curriculum!" This response is an acknowledgement that effective learning takes time, but curricular and pedagogic pressures do not always allow for this exploration and there is a need to reconnect with pedagogy as leading learning rather than the technical act of teaching to a test.

Concluding thoughts

This reflection on practice has helped us realise that the characteristics of effective learning are important for all stages of teaching and learning. While most early years practitioners are aware of the importance of these characteristics, those who teach other stages of life may not be. Our, admittedly small and self-selected, sample of higher education lecturers and other colleagues tended to emphasise the importance of active learning, collaboration and discussions in promoting the learning of their students, but under-emphasised the importance of play, creativity and critical thinking. This surprised us because creativity and criticality are key 21st century skills (Vincent-Lancrin et al., 2019) and are explicitly mentioned in our university assessment criteria.

Our conclusion and contribution to thinking about teaching and learning is that educators at all stages of life need to slow down and play together, allowing the time and space for creative, critical thinking. In doing so, we acknowledge the foundations of transformative learning experiences to ensure that students develop the skills and characteristics necessary to thrive. We invite educators working with students from 4-104 to consider how they can embed the characteristics of effective learning in their practice.

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