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'Get readers on the wavelength of emotions': A preliminary thematic survey.

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Abstract: *This article will introduce and discuss a new research project being piloted by the University of Gloucestershire, in Cheltenham, UK (funded by the European research funding body ERASMUS); and carried out in collaboration with research partners and NGOs in Italy, Romania and Lithuania. The title of this project is: 'get readers on the wavelength of emotions' (abbreviated to the acronym 'GROWE'). In addition to introducing the project, this article also aims to critique a wide range of contemporary sources reflecting the key ideas and objectives central to 'GROWE'. We will argue the case for the importance of the development of disciplinary literacy taught in the context of social and emotional literacy skills development, as they relate to a secondary school context. In addition to this, we wish to reveal potential 'gaps' in the current research that our curriculum and associated 'toolkit' (devised in the form of an 'open educational resource' [OER]) will seek to fill.*

Keywords: literacy, policy, practice, secondary schools, curriculum.

Ostensibly, GROWE will develop both teacher trainers' and teachers' competences to address students' literacy and emotional learning needs. Teachers of diverse disciplines (not just language and literature teachers) will develop their skills to implement disciplinary literacy and students will use meaningful reading and writing activities and master these strategies using diverse authentic texts for young people. The European

Literacy Policy Network (ELINET) recommends that all teachers receive effective initial teacher education and professional development in literacy teaching and learning in order to be suitably prepared for the tasks of ensuring all Europeans are able to read and write at a level that enables them to function and develop in society, at home, at school and at work, in order to achieve their aspirations as individuals, family members, workers and citizens (ELINET, 2016). This recommendation makes the case for the necessity of disciplinary literacy approaches in achieving the stipulated goals.

Disciplinary literacy focuses on the specifics of reading, writing, and communicating within a discipline. Essentially, the concept is interested in the ways of thinking, the skills, and the tools used by experts in the disciplines (Shanahan & Shanahan, 2012). Each discipline has a specialized vocabulary and components unique to that discipline and secondary students need to be therefore taught the “nuanced differences in producing knowledge via written language across multiple disciplines” (Moje, 2007, p. 9), which can be best achieved by using authentic (i.e. not school textbook) texts – high quality fiction and non-fiction literature for young people.

Dunkerly-Bean & Bean assert that: “Disciplinary literacy is based upon the idea that literacy and text are specialized, and even unique, across the disciplines. Historians engage in very different approaches to reading than mathematicians do, for instance. Similarly, even those who know little about maths or literature can easily distinguish a science text from a literary one...” (2017).

Disciplinary literacy then, emphasises mastery of the key knowledge, abilities and language inherent to specific academic disciplines. It implies that literacy skills must span the curriculum and not be purely the domain of English classes. In keeping with the current ERASMUS agenda as well as our beliefs as a partnership of educators driven by a mutual sense of shared social responsibility, our research and intervention will notably also be focused on supporting young peoples’ development in contexts of socio-economic disadvantage. Uniquely however, our project will endeavour to ‘tie’ disciplinary literacy teaching to social and emotional learning development. Our main objective in GROWE is essentially to increase our partner organisations’ capacity to support teachers in developing their students’ literacy and social-emotional skills in tandem. In so doing, we aim to develop and test an in-service

teacher training course to prepare teachers for addressing students' literacy and social-emotional learning needs and subsequently to this, to develop the aforementioned 'toolkit' (OER) indicative of good practice, to inspire teachers to adopt effective strategies for developing their students' literacy and social-emotional skills in lower-secondary settings.

In terms of assessing the ultimate impact of our project, we anticipate that 12 teacher educators will be trained how to deliver the teacher training programme. As a result of this, 100 trained teachers will become highly skilled in developing literacy and social-emotional skills in the classroom while teaching various age groups and disciplines. 2500 students will therefore improve their literacy and social-emotional skills as a result of participating in classroom activities that pursue these goals explicitly, in addition to discipline-related learning objectives. Overall, 4 schools in four different European countries will adopt school-wide practices to improve literacy and social-emotional skills in an integrated manner, to support their students' academic success and personal growth.

The 'European Pillar of Social Rights' states that European citizens have the right to 'quality and inclusive education, training and lifelong learning in order to maintain and acquire skills that enable them to participate fully in society' (European Parliament, Council of the European Union and European Commission, 2017, p.11). The document's emphasis on education and opportunity aims to address a perceived shortfall in social capital across the European Union. The European Commission has identified eight key competencies which will equip its citizens with the knowledge, skills and dispositions necessary to engage in lifelong learning (European Commission, 2018), and thereby becoming active citizens who will thrive in an increasingly complex world. Two of these mutually reinforcing competences are 'Literacy' and 'Personal, Social and Learning'. The GROWE project's integrated model of intervention will support disadvantaged students in the four participating countries to build their competences in these two key areas. The reason for this stems from our belief as a research partnership, that improved literacy skills and improved social and emotional skills, whilst ensuring lifelong learning capacities, will, in turn, foster more engaged citizens who will lead healthier and more meaningful personal and working lives in the future.

The recently announced scores from the Programme of International Student Assessment (PISA) revealed that over 10 million students across the 79 participating countries were unable to complete the most basic reading tasks and that the top 10% of students in terms of socio-economical advantage outperformed the bottom 10%, a statistic of particular relevance to the GROWE project. This gap in literacy achievement, equivalent to approximately three years of schooling, has remained largely unchanged in over a decade (Schleicher, 2018). There is evidence that this gap is mirrored within European countries and that the trend of underachievement has worsened over the last decade (European Commission, 2018). One in five 15-year-olds lacked basic literacy skills in 2016 (European Literacy Policy Network [ELINET], 2016), whereas the figure has now increased to one in four (Schleicher, 2018). The Organisation for Economic Cooperation and Development (OECD) identified, partly in response to this disturbing picture, that students will need a 'broad mix of skills, including strong cognitive and socio-emotional skills' to thrive in our rapidly changing knowledge-based society (OECD, 2019).

The 2018 revision to the European framework outlining the key competences for lifelong learning reveals some significant modifications from the recommendations adopted and disseminated to member states in 2006. Two of its eight original competences, 'Learning to Learn' and 'Social and Civic Competences' (European Commission, 2007), have been partly amalgamated, but also reconceptualised: the 'Learning to Learn' competence has been updated to a 'Personal, Social and Learning' competence, and 'Social and Civic' competence to 'Civic' competence (European Commission, 2018). In isolating civic competences from social competences, greater prominence has understandably been given to the need for democratic and engaged citizenship in today's increasingly connected and globalised societies. In regrouping and blending personal and social competences with learning competencies, however, greater emphasis has been awarded to the widely accepted need for developing strong life-skills in today's uncertain and complex world (Council of the European Union, 2017; UNICEF, 2012). In addition to this however, and perhaps more significantly for the GROWE project, in aligning the knowledge, skills and attitudes associated with personal and social competences more closely with the learning process, the affective and social dimensions of learning itself can be more

firmly acknowledged.

Extensive research has been carried out over the last two decades examining the role social and emotional skills play in facilitating academic growth, in preparing young people more effectively for the world of work and in ensuring deeper personal fulfilment (Zins et al., 2004; Cefai and Cavioni, 2014; Park et al., 2017), and much work has been done to develop programmes in each age phase of the education systems across the European Union which help support students' social and emotional development (Cefai et al., 2017). A careful review of this combined body of research will be necessary to ensure its recommendations form the basis of GROWE's integrated approach to literacy and socio-emotional needs. However, it is first necessary to narrow our focus to look at social and emotional development, to initially understand how it can be conceptualised, to then be able to examine in greater detail, why it is so critical in supporting academic learning.

Social and emotional learning (SEL) concerns the holistic development of young people which will enable them to relate to the world and navigate its opportunities and challenges successfully (Yoder, 2014). It is a process, according to the Collaborative for Academic, Social and Emotional Learning (CASEL), through which they will acquire and apply the necessary knowledge, skills and dispositions to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships and make responsible decisions (CASEL, 2019a). CASEL has identified five core competencies which underpin this process. They cover affective, social and cognitive competences and the emphasis falls on intrapersonal skills and interpersonal skills. The five competences are: self-awareness; self-management; social awareness; relationship skills; and responsible decision-making. CASEL defines each competence and sets out a range of associated skills (CASEL, 2019b). Intrapersonal skills (emotional regulation, impulse control, goal setting and self-efficacy, for example) are needed for effective functioning as an individual whilst interpersonal skills (communication, empathy, relationship building and teamwork, for example) are needed to interact successfully with others (Domitrovich et al., 2017).

This model has been widely adopted internationally and has been used as the basis for universal whole-school approaches to SEL (Weissberg and Cascarino, 2013).

Variations of these competencies have been proposed and examined under a range of different labels, such as life-skills (Council of the European Union, 2017; Botvin and Griffin, 2004), 21st Century skills (Puerta, Valerio, and Bernal, 2016; Silva, 2009) or non-cognitive skills (Puerta, Valerio, and Bernal, 2016; Dweck, Walton and Cohen, 2014), but whatever terms for these competences are used, they have been associated over the last two decades with a wide range of outcomes spanning physical and mental health, employment and income (Goodman et al., 2015; OECD, 2015; Domitrovich et al., 2017). The case for whole-school SEL programmes indicates, however, that whilst the mastering of these core competencies supports emotionally literate young people, it also supports more academically successful young people.

Durlak et al.'s (2011) landmark study documents the multiple benefits from SEL and builds on earlier investigations into the link between SEL programmes and academic achievement conducted by Zins et al. (2004). Durlak et al.'s meta-analysis of 213 school-based universal SEL programmes found that such programmes unsurprisingly led to improvements in socio-emotional skills. An increase in prosocial attitudes and behaviours was identified, which, alongside a greater school connectedness, resulted in a simultaneous decrease in conduct issues, emotional distress and reduced drug use. Significantly, however, this study found that these benefits were accompanied by an 11-percentile point gain in academic performance. The more recent longitudinal study, conducted by Taylor et al. (2017) investigated whether such gains were short-term or long lasting. This international meta-analysis of 82 school-based SEL interventions found similar improvements in socio-emotional skills, attitudes and behaviour and similar decreases in conduct problems and emotional distress 6 months to 18 years after the SEL programmes ended. A striking 13 percentile difference on average was found, however, in the academic achievement of those students who had been involved in SEL programmes over those who had not over three years later. The meta-analysis therefore makes a strong case for the lasting benefits of SEL, not only with regards to socio-emotional skills but also with regards to academic skills.

Further European-based studies have confirmed these findings. Wigglesworth et al.'s (2016) UK study, a complement to and extension of Durlak et al.'s earlier work, echoed the 2011

meta-analysis, finding similar short-term and immediate benefits of SEL. Sklad et al.'s Dutch study looked at the longer-term benefits and focussed on more recent school-based SEL programmes than Durlak et al.'s meta-analysis, limiting its analysis to the 13 years previous to publication. The benefits over the longer term were found to be stronger for social and emotional skills and prosocial behaviours, but increased academic performance was also identified. Thus, the benefit of schools focussing on SEL is irrespective of national and cultural contexts. A further pertinent finding from this meta-analysis is the effectiveness of promoting SEL in secondary education. Despite a wealth of evidence which suggests that laying firm social and emotional foundations in the preschool and primary years is vital (Jones, Greenberg and Crowley, 2015; Goodman et al., 2015), the findings from Sklad et al.'s study suggest that secondary schools can offer just as effective a context to develop SEL as pre- and primary schools. Indeed, the importance of SEL and the affective dimensions of learning have long been acknowledged in early years curricula. The 2012 revision of the English Early Years Foundation Stage, for example, identified Personal, Social and Emotional Development as a 'prime area' of learning to be focussed on in the earliest years, and set out the Characteristics of Effective Learning, a set of affective and cognitive skills to underpin the learning process, which practitioners have the statutory duty to promote across all areas of learning (Department for Education, 2012). However, Dusenbury et al. (2014; 2015) make the compelling case that SEL instruction should continue beyond the preschool and primary years. The GROWE project aims to focus on students who are in the early stages of their secondary education.

Although the studies further identified that the benefits of SEL are universal and are not limited by social, economic, cultural or geographic backgrounds (Taylor et al., 2017), promoting SEL may be of particular importance for students coming from socio-economically deprived backgrounds. Yoder (2014) recognises that disadvantage brings with it additional stressors which can impede effective learning, but Goodman et al. (2015) identify that students from disadvantaged backgrounds have, on average, weaker social and emotional skills than their more advantaged peers. This indicates that the benefits of SEL, and the resultant gains in academic achievement, will be disproportionately distributed, unless

particular focus is placed on closing the gap in social and emotional capacities between students from advantaged and disadvantaged backgrounds. This is of key significance for the GROWE project.

Ultimately then, long term academic progress can be supported by SEL programmes throughout all educational age phases, irrespective of the settings' geographical locations and the socio-economic communities they serve. However, the GROWE project is not proposing a school-wide SEL programme, but an integrated model whereby social and emotional competences are nurtured alongside literacy skills throughout the curriculum. This requires an understanding of the role emotional and social factors play first and foremost in the learning process, but also in the development of literacy skills more specifically.

The critical role emotions play in cognitive performance is becoming widely acknowledged (Pekrum, 2017; Pekrum et al., 2011; Pekrum and Linnenbrink-Garcia, 2012) and research is increasingly focussing on understanding the impact epistemic emotions (surprise, curiosity, confusion, frustration and boredom, for example) and achievement emotions (hope and pride in response to success and anxiety and shame in response to failure, for example) can have on the learning process and learning outcomes (Pekrun et al., 2017), especially with regards to adolescents' educational experience (Pekrun, 2017). Emotions can be evoked by information processing during a learning episode, but crucially will affect cognitive processes such as attention, memory, problem-solving and the use of learning strategies which are all critical in knowledge acquisition.

Learning is also at its heart relational and students learn and develop within a complex network of relationships spanning their teachers, their peers and their families (Zins et al., 2004). Studies have been conducted which have indicated that students learn more when working in groups than when they work independently (Darling-Hammond et al., 2008). The negotiation and construction of meaning through dialogue leads to deeper understanding (Lent, 2016). Therefore, students' abilities to not only regulate their emotions but also to manage their relationships will either facilitate or impede their engagement with the learning process and will thus ultimately drive success or failure in their academic achievement. Intrapersonal skills will enable students to maintain the positive

epistemic and achievement emotions, whilst regulating the negative emotions, and interpersonal skills will enable students to establish supportive, rewarding relationships, based on tolerance and respect, which will support collaborative working (Domitrovich, 2017; Hagelskamp et al., 2013; Weissberg and Cascarino, 2013).

Hill et al. (2008) highlight that academic growth is fostered more effectively by SEL programmes, than programmes focussing on academic skills alone. Equally, Elias (2004), in reviewing the impact of the particular SEL programme Social Decision Making and Social Problem Solving (SDM/SPS), concludes that pedagogical approaches need to infuse academic learning with social and emotional teaching across the curriculum. Explicit social and emotional skill instruction, followed by opportunities for application in order that the skills become generalised, needs to be situated throughout the curriculum. Promoting SEL is crucial, but discrete SEL programmes are not sufficient. Using Elias' metaphor of SEL offering students a beacon for safe passage through their school and future life, the light provided by a strong understanding and effective application of social and emotional skills should be kept alight across the curriculum. By integrating socio-emotional learning and literacy, the GROWE project will seek, through its teacher-training programme, to embed exactly this light throughout the curriculum.

Zins et al.'s 2004 investigation into the evidence-base for the role played by SEL in academic success concluded by identifying critical research issues for the future. The need to further examine pedagogical approaches and the implementation of SEL curricula were highlighted, alongside developing supportive and caring learning environments and fostering partnerships between parents and teachers (Wahlberg et al., 20014). The work done by CASEL has picked up on these threads. Its guide to school-wide SEL essentials (CASEL, 2019c) offers schools research-informed guidance and tools to achieve systemic implementation of SEL. Weissberg and Cascarino (2013) identify two mutually reinforcing strategies as being key: the systematic teaching and modelling of socio-emotional competences with opportunities for students to apply them throughout their school day and the establishing of safe, equitable and engaging learning environments involving students' peers, family and school community. Incorporating SEL strategies at class and school level will ensure rich and

supportive learning environments (Charles A Dana Center and CASEL, 2016). The Center on Great Teachers and Leaders (GTL) identified ten teaching practices, falling into two domains, which will promote SEL: social teaching practices and instructional teaching practices. A set of social teaching practices (TP), such as student-centred discipline [TP1] and responsibility and choice [TP3], focus on the explicit development of social and emotional competences, providing structures for students to acquire these. A set of instructional teaching practices, such as cooperative learning [TP5] and classroom discussions [TP6], seek to offer students opportunities to apply and further develop their SEL competences (GTL, 2019). These recommendations will inform GROWE's integrated model of intervention.

Taylor and Dymnicki (2007), in their response to Zins et al.'s conclusions, observe that ample research has been conducted on how to teach content-specific SEL curricula and how to develop supportive and caring learning environments, but that if SEL is to fulfil its promise to further support academic learning, more focussed research needs to be carried out into how to infuse SEL skills into existing curricula, as well as how to create opportunities for students to learn through authentic experiences. Some work on this is currently being undertaken, with SEL core competencies being mapped against subject specific standards and SEL strategies being integrated within subject-specific teaching (Charles A Dana Center and CASEL, 2016). A research project in the US, for example, found that integrating SEL strategies into instructional approaches within the mathematical curriculum led to specific gains in students' mathematical performance across a range of competences (Ravitz, 2013). A further study focussing on a mathematical intervention, 'Intensified Algebra', which covered core mathematical content, the application of mathematical reasoning and explicit teaching of key attitudes and behaviour essential to success, found that the students were two-and-a-half times more likely to succeed with this intervention, than with an intervention focussing on maths skills alone (Tidd et al., 2015). The GROWE project aims to build on this work by investigating how the explicit teaching of SEL skills can be embedded within the teaching of literacy skills across the curriculum, incorporating them into experiences of authentic texts.

There is overwhelming evidence that literacy plays a

significant role in individuals' happiness and success (Dugdale and Clark, 2008). There is a well-proven, if complex, relationship between literacy and a range of life outcomes, covering physical and mental health, economic well-being, family life, civic engagement and criminal offending (Morrisroe, 2014). Adults with poor literacy levels are more likely to have poorer health, to be financially worse off and to live in deprived communities (Gilbert et al., 2018). Poor literacy drives poverty, can lead to social, economic and cultural exclusion and therefore undermines social cohesion: it presents a barrier to social justice (Dugdale and Clark, 2008).

With these statistics in mind, the need to tackle poor literacy in education is a well-recognised priority across Europe (European Commission, 2018). Three out of four of the participating countries in the GROWE project achieved only a level 2 in the most recent PISA rankings for reading (Schleicher, 2019, p.6) and ELINET identified a 'long tail of underachievement' in lower achieving readers in the fourth (ELINET, 2016, p.8). Indeed, the gap in reading performance between students from high socio-economic backgrounds and low socio-economic backgrounds in this country was higher than the European average, although this gap has been recently narrowed (Schleicher, 2019), seemingly reversing the previously identified stagnation in literacy improvements (Kuczern, 2016). Nonetheless, in 2019, 120 000 disadvantaged 10-11-year-olds fell below the expected standard in reading at the end of their primary career (Quigley and Coleman, 2019). Literacy unlocks the curriculum; as academic success across the curriculum depends on sound literacy skills, these 10-11-year-olds will start their secondary school career from a severely weakened platform.

It is clear that literacy matters, and the GROWE project will build upon pedagogical approaches which will support students' developing literacy skills across the curriculum, drawing on the latest evidence-based recommendations. But what is meant by literacy? It is essential to first clarify the specific set of skills the project is hoping to nurture and what they might look like in the diverse curricular subject areas. For over two decades, researchers have been investigating the development of literacy skills, not within the literacy classroom, but across the curriculum within secondary settings. Early attempts to challenge the assumption that literacy instruction is solely the responsibility of literacy teachers, and to tackle poor

literacy rates by involving all subject teachers, were unsuccessful (Moje, 2008), as were attempts to improve secondary literacy levels by boosting primary children's literacy skills (Shanahan and Shanahan, 2008). A range of factors, spanning students' and teachers' knowledge and belief about literacy, school structures and the dominance of subjects in the division of the curriculum, have been identified for the former, but the failures of both prompted a consideration of what it means to learn in each distinct subject area and how knowledge is differently constructed within each. A reconceptualised view of literacy has resulted: literacy within secondary schools needs to be approached from the vantage point of disciplinary learning theory rather than literacy theory (Moje, 2008). Disciplinary Literacy (DL), a term coined in 2002 by the Institute for Learning at the University of Pittsburgh Learning Research and Development Centre, is consequently an approach which acknowledges that knowledge production, evaluation and dissemination is distinct in each subject area and thus requires distinct ways of reading, writing, talking and thinking to be explicitly taught (Shanahan and Shanahan, 2008). Key aspects of a DL approach, according to Moje (2008), are the discourses and practices each subject pursues, the identities and identifications each subject offers and the knowledge base each subject requires. These three central ingredients need careful consideration by teachers, teacher-trainers and researchers if the literacy needs of secondary school students are to be met. If secondary teachers felt previously that teaching literacy was the preserve of literacy teachers, they can now feel empowered: they are tasked with teaching literacy as it relates to their discipline in which they are expert (Lent, 2016).

The University of Pittsburgh launched a DL framework in 2002, which identified five key principles: knowledge and thinking must go hand in hand; learning is apprenticeship; teachers are mentors of apprentices; classroom culture socialises intelligence; instruction and assessment drive each other (McConachie and Petrosky, 2010, p.23-4). These principles, exemplified in Lent's (2016) guidance and suggested tools for implementing DL strategies, comprise a rigorous approach to supporting discipline-specific ways of reading, writing, talking and thinking, ensuring deep content expertise is achieved across the curriculum. The Education Endowment Foundation (EEF) has recently published seven evidence-

based recommendations for implementing DL (Quigley and Coleman, 2019) ranging from ensuring teachers build subject-specific academic vocabularies to a focus on supporting students' abilities to read and access subject-specific academic texts. The pedagogical approaches suggested for the latter revolve around teaching students to become strategic readers, able to draw on a suite of reading strategies, such as activating prior knowledge, questioning, clarifying and predicting. How these principles (McConachie and Petrosky, 2010) and recommendations (Quigley and Coleman, 2019) align with the teaching approaches identified as supporting SEL (GTL, 2019; CASEL 2019c; Weissberg and Cascarino, 2013; Charles A Dana Center and CASEL, 2016), discussed previously, will form a principal focus of the GROWE project.

The principles offer echoes of Claxton's Learning Power (Claxton, 2002), a dispositions-based approach to learning which seeks to empower students with transferable cognitive, affective and thinking skills. Claxton's 4Rs of resilience, resourcefulness, reflectiveness and reciprocity drive the learning process and enhance students' autonomy. Aspects of 'resourcefulness' (cognitive capacities such as reasoning, making links and questioning, for example) resonate with the need to master subject-specific habits of thinking in DL's first principle. Indeed, aspects of 'resilience' (affective capacities such as perseverance and focus, for example) would equally underpin and strengthen this process, mirroring the first two DL principles. This emerging overlap in pedagogies becomes clearer when the nature of teacher-student relationships in both DL and SEL is brought into the picture. Central to both DL and SEL is the understanding of the teacher as coach rather than didact, a pedagogical position which nurtures student autonomy. The requirement to observe democratic norms and offer meaningful choices, aspects of GTL's third social teaching practice 'Responsibility and Choice' (GTL, 2019) aligns well with the third DL principle 'teachers are mentors of apprentices' (McConachie and Petrosky, 2010). The need in both DL and SEL frameworks to consider the wider ecology of the settings pin-points further planes of alignment. DL's fourth principle, 'classroom culture socialises intelligence', acknowledges the relational aspect of learning and encourages a collaborative approach to engage in deep disciplinary learning. Indeed, Deakin-Crick et al.'s (2007) investigation into the various factors contributing to learner-centred classroom cultures identifies a

range of critical domains: teachers' abilities to facilitate positive personal relationships, encourage higher-order thinking and protect emotional safety within school structures and processes are three which ensure a student-centred psycho-social ecosystem. Links can be drawn to Weissberg and Cascarino's (2013) observations on the importance of learning environments to promote SEL, but also to GTL's fourth teaching practice 'Co-operative Learning' (GTL, 2019), which aims to support students' abilities to work collaboratively towards a collective goal to achieve meaningful understanding, and the fifth 'Classroom Discussions' (GTL, 2019), which aims to support students' abilities to listen attentively and build on each other's thinking. We can draw a tentative conclusion that the greater the SEL competences, the deeper the DL learning: the GROWE project will seek to explore, and potentially validate, this possibility.

McConachie and Petrosky propose a foundational model for DL: it requires teaching and learning 'on the diagonal' (2010, p.22). To achieve deep learning, where critical thinking and problem-solving flourish, disciplinary content knowledge needs to blend with discipline-specific habits of thinking. The integrated model of intervention that the GROWE project will be designing will similarly require teaching and learning 'on the diagonal'. For our students to achieve a desirable balance of the necessary knowledge, skills and dispositions to ensure their competences in literacy and in socio-emotional learning, DL needs to blend with SEL. Both teachers and students will need to consider the specific requirements and principles of DL alongside those of SEL so that students can develop across both dimensions, drawing on and maximising cognitive and affective skills and opportunities, to 'learn on the diagonal'. Elish-Piper et al. also consider how a DL approach can support learners in terms of what they term 'mastery of learning outcomes' (2016, p.87). Such an emphasis on 'mastery' does bring their research into closer proximity with UK-specific pedagogy - wherein the notion of 'mastery' is more established than DL. Mastery approaches are concerned with 'deep learning'; with the idea that the highest quality educational practices are concerned with mining the depths of a subject, rather than skirting their peripheries.

This constitutes some key food-for-thought in terms of our overall approach with GROWE. We need to consider how to ensure our integrated model of intervention becomes

'purposeful'. This approach would be less concerned with check-lists and success-criteria, and more with developing a masterful depth of learning that includes transferable elements across disciplines. Crucially too, we are committed to giving our students a range of social and emotional learning skills, in tandem with their mastering of the specific academic disciplines. Cain's volume on mastery privileges the notion of what he terms 'journey over destination' (2018, p.2). In this way, he considers the need for teachers to 'focus less on outcomes (measured by narrow assessment criteria)' and more on process' (2018). This again, will comprise an underpinning philosophy in terms of our approach to GROWE and its potential impact on young people. One of the key SEL traits we hope to embed is that of intrinsic motivation – of learning for its own sake, and therefore the requirement to assess needs to be secondary to the need for providing materials and approaches which are engaging, dynamic and likely to have a positive impact on an adolescent audience providing what Seel and Attewell term 'an important turning point in re-engaging [disadvantaged teenagers] in the learning process' (1998, p.255).

That said however, assessment for DL does need to be factored into our approach with GROWE, and how we achieve this / what this could look like, will become one of the primary focuses of the toolkit / OER development. With assessment in mind however, Peters et al. (2016) suggest the need for this in terms of DL to be highly consistent, systemic and 'coordinated' (2016, N.P.A) across the disciplines in question, to allow for the skills pupils need to respond to certain techniques (e.g.: questioning), to be reinforced and consolidated across classes. Peters et al. advocate for the need for: "Assessment tasks to be dynamic, vigorous, purposeful, ongoing and interactive [...] Assessment must be flexible; based on important strategies, methods, skills and techniques and based on significant, meaningful, and worthwhile disciplinary content." (2016, N.P.A)

We would also add to this, the cruciality of assessment having a self-reflexive component, wherein students are encouraged to reflect not just on their learning of disciplinary content, but also on the progress they are making in terms of their learning more generally, and specifically in terms of this project, their SEL and subject-specific reading skills. In addition to this however, Peters et al. also highlight the need for teachers of DL to have regular opportunities to think about and

reflect on their own practice, particularly in terms of the way they carry out assessment for learning. (To this end, they discuss the usefulness of 'video records of practice').

Embedded within theoretical discussions centring on DL, we also encounter the phrase 'threshold concepts' or 'threshold knowledge' appearing routinely in the literature. Introduced in the early 2000s by Meyer and Land (2001), the 'threshold' in this sense, is viewed as a 'portal' which the learner must pass through at a certain early stage of encountering a new subject, whereupon: "A new perspective opens up, allowing things formerly not perceived to come into view. This permits a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, or interpreting, or viewing something, without which the learner cannot progress, and results in a reformulation of the learners' frame of meaning." (Meyer, Land and Baillie, 2010, p.9).

Such shifts in 'perspective' are crucial in our mission for GROWE, and the affective aspects of this (its 'transformative' and 'reformulating' elements to cite Meyer and Land), we foresee as having a pivotal aspect on the identity development of learners. This will particularly be the case when we are able to reflect back to teachers and learners how far they have travelled, and how their conception of being a learner has changed as a result of their interaction with the GROWE model. Considering how children read and the relationship and transference of their existing reading skills to a DL programme, where they will be identifying and utilising entirely new reading skills unique to specific disciplines, in addition to further honing more traditionally 'literary' reading skills such as inference and deduction, will be a crucial aspect of our research and writing of the GROWE training curriculum and subsequent toolkit. There is also a danger however, that the temptation may be to apply an 'English-lens' to the way we read concepts and content across the disciplines. Avoiding this will be crucial, and one way of ensuring this is, as discussed previously, to seek content-specific advice from experts. In addition to this however, Lent suggests that at the root of engaging disadvantaged teenagers and / or reluctant readers with reading across the disciplines is the need to initially ensure that a good breadth of high-quality texts are available to cater for myriad interests, reading abilities and tastes in different curriculum areas; in addition to ensuring adolescent learners are encouraged to 'shape their own reading through autonomy and ownership' (2015, p. 126).

Lent also indicates the importance of reading constituting an 'active' and dynamic process in the DL classroom, highlighting the cruciality of 'deconstructing', 'stopping and talking', 'challenging' and 'writing questions'. In addition, the role of questioning in terms of DL is something that is raised routinely by Lent, as well as other texts listed in this literature review. With this in mind, we would advocate for the adoption of at least some of Chambers' taxonomy of questions designed to encourage 'book talk' with young people indicated in his book entitled: *Tell Me: Children, Reading and Talk* (1993). Whilst these are primarily intended to be used to unpack fictional texts, there are many questions that can be adapted to relate to both the overall experience of reading, in addition to the content knowledge students are developing through their engagement with texts, for example a question such as: Which aspects of the book helped you to understand the subject best and why? Which could help learners to elicit key content information from the text, to back up their newly-acquired knowledge of the subject?

We would ultimately suggest that the key thing we need to bear in mind, as researchers relatively new to this area of pedagogy, is the importance of maintaining a child-centred approach in our writing of the GROWE curriculum and associated tool-kit / OER. We believe this is particularly the case given our research and final product centres on young people in contexts of disadvantage, so seeking strategies to engage and, to quote Lent to 'give ownership' (2015, p.126) to young people over their reading (and; by proxy, their learning), is of considerable importance. This, we would argue, is particularly the case given that our target demographic has just passed the transition from primary to secondary school and, as the Woolcott Research findings demonstrate: 'something happens to the reading experience of young people to make it seem a lot less enjoyable when they reach secondary school than it was in primary school' (2001, p.19). With this in mind, we would therefore argue that with the inclusion of primary specialists within the GROWE partnership team at the University of Gloucestershire, we are in a potentially useful position in this regard, to consider which aspects of primary literacy (and cross-curricular combinations with literacy) practice may effectively translate to a lower-secondary setting, and how to bring about both 'enjoyment' and engagement in texts for the students who, we believe, will ultimately stand to

benefit from GROWE.

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