

## Dyslexia: A Wide Realisation

### Models of Disability

Both the Medical Model and the Social Model of disability have been applied to dyslexia. The Medical Model emphasises within-person factors as disabling and has a drive for diagnosis (Brisenden, 1986; Shah & Mountain, 2007), whereas The Social Model emphasises the societal barriers that disable the individual (Thomas, Gradwell & Markham, 1997; Shah & Mountain, 2007). There are problems with both conceptualisations – as each unequivocally limits the range of factors that we need to address if we are to support people effectively. These shortcomings have been openly broached by The World Health Organisation (see WHO, 2002), which has led the way in conceptualising disability in a more integrated way:

*Disabilities is an umbrella term, covering impairments, activity limitations, and participation restrictions. An impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations.*

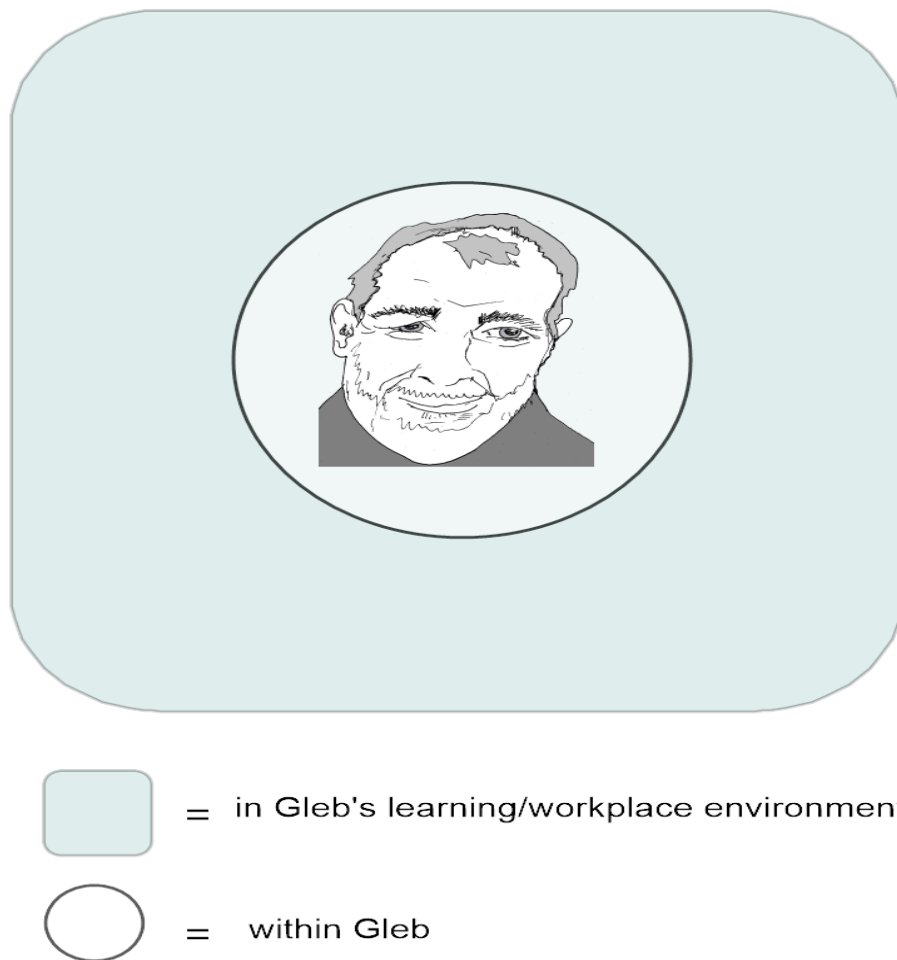
*Disability is thus not just a health problem. It is a complex phenomenon, reflecting the interaction between features of a person's body and features of the society in which he or she lives. Overcoming the difficulties faced by people with disabilities requires interventions to remove environmental and social barriers. (<http://www.who.int/topics/disabilities/en/>, paras 1 and 2)*

This sort of model of disability synthesizes aspects of the medical and social models of disability. The challenge is to ensure that this conceptualisation is adopted by all educational practitioners and employers, as the extent to which they adopt it will affect their ability to promote independent lifelong learning and a productive working life in those they support.

### Dyslexia

Some educational practitioners think of dyslexia as solely existing within the learner: arising because of the attributes that the learner has. This is a narrow realisation of dyslexia and practitioners who have this perception will typically attribute difficulties with learning as arising from characteristics of the learner. Conversely, a wide realisation of dyslexia and language-related difficulties sets a difficulty with learning within a context: the learning environment is part of what must be considered (Wilson, 2001). Figure 1 demonstrates how when we start to unpick it, the limitations of the Medical Model applied to dyslexia (i.e. a narrow realisation) become apparent. If we consider dyslexia to have a wide realisation then we must look at both within-learner factors, context factors and the interactions between the two. We need to explore the possible constraints and potentials within the person and

certain constraints and potentials within the operating/learning environment to provide effective strategic support.



**Figure 1**

In the Appendix, you will find the Constraints and Potentials Table<sup>1</sup>, this is not intended to be complete and the list-like format does not begin to do justice to the complex factors that are captured within it. It is designed to be used as a discussion or consideration document – to get across a summary of the very wide range of factors that need to be considered when we examine the constraints and potentials that people with dyslexia face. Many of these factors are very large areas of study in their own right. It is important to note the sorts the ‘within-person’ and ‘within-operating-environment’ factors that can come into play (as shown in the Constraints and Potentials table) and how, when carefully considered, dynamics between the two categories appear. For example, some of the ‘within-operating-environment’ factors if present within a study or workplace context will create within-learner (person) potentials for individuals. For example, the way that feedback is given within learning or work-based contexts is important. If it gives constructive information about the process involved or about

<sup>1</sup> This table was originally devised by Gill Cochrane, as part of the resources an EU funded Erasmus Plus Project

features of performance that can be regulated by the learner (person), it is likely to enhance motivation and perseverance and enhance self-efficacy – all important ingredients in lifelong learning (Henderlong & Lepper, 2002; Loveland & Olley, 1979). The consideration of the interplay between these different pools of factors is an effective way to deepen our professional understanding of the dynamics of learning and work-based performance.

It is also important to note how some factors (like the language being spoken, read etc.) are almost invisible to many practitioners, but can have a significant impact upon the learner's (or worker's) potential to thrive – the features of the orthography or subject-specific/technical language (acronyms etc.), as well as academic register are examples of this.

### **Barriers within Organisations**

Thinking about dyslexia within organisations, people can be blamed or ridiculed for poor performance whilst the barriers that have been made manifest through their difficulties are left untackled. In such cases the barriers become invisible except to those who experience them. It also means that working conditions are not fair, that working conditions are not humane and that the organisation is not seeking to develop its workforce holistically. Evidence suggests that whether we are trying to address dyslexia, or more widely language literacy and numeracy skills (including those faced by workers with English as an additional language) the same solution comes up again and again, namely that a systemic approach is necessary.

Another factor we must consider is that not only will more people in future perform poorly if barriers to competent performance have not been sized up and dismantled, but also the deeper problem for the business or workplace or community, is that a blame culture emerges. How do people feel in blame cultures? They feel insecure and have diminished self-efficacy (Lunenburg, 2011). And if people feel insecure, they don't speak up and question working conditions or practices for fear of being victimised or being made to feel foolish – this is how inherently hostile workplaces are perpetuated. This is also how discrimination becomes institutionalised and productive learning environments shrivel. In their work *What Makes a School a Learning Organisation?* Kools and Stoll (2016) examine the role of trust and collaboration in developing professional growth amongst colleagues and quality of provision for the children attending the school. They cite Senge's notion of 'systems thinking' as being important – "[that is] the ability to see the bigger picture, to look at the interrelationships of a system as opposed to simple cause-effect chains; allowing continuous processes to be studied rather than single snapshots" (Kools & Stoll, 2016, p.17). A writer with a particularly useful insight into 'pre-judgments' as we might call them, is Sidney Dekker, who works in the field of accident prevention/safety management. The key assumption of his *The Bad Apple Theory* (Dekker 2017) is: complex systems would run

smoothly if it weren't for the erratic behaviour of a group of unreliable employees (otherwise known as 'bad apples'). How often have you heard enquiries into accidents report that "human error was to blame"? Dekker argues that it is simple to blame a person or group of people for an accident within a system, but that this simplicity is misleading and potentially dangerous as it covers up underlying systemic conditions that will remain unaddressed. He says: "Reprimanding 'bad apples' is like peeing in your pants. You feel warm and relieved at first, but soon look like a fool" (Dekker, 2006, p. 9). The problem is, in such situations the person conducting the review (analogously that person could be a trainer, a teacher, a manager, a lecturer) hasn't done anything to remove the barrier that "exhibited itself through" the ['bad apple'] thus leaving the same set of problem-causing conditions in place for the next unsuspecting person (Dekker, 2006, p. 10) to fall foul of.

### **Beginning to Break Down Barriers**

There are things that we can do to start breaking down these, often transparent, barriers. One key aspect of this deconstruction is to be able to break down the tasks we ask people to do into sub-units, so we can analyse where the person is experiencing difficulty. A simple example would be if a young person can't kick a ball well enough to shoot a penalty, then will more kicking practice help? It's likely that you would only ask this question if you were already an inveterate task analyser. Many would not even consider the question, but simply go down the line "practice makes perfect" line of support. 'Practice' might make 'perfect' but only if the appropriate thing is being practised. In this case it could be balancing on one foot.

What sorts of questions could we ask when we see that someone is struggling in some respect? Some suggestions:

1. Why is the person struggling with this task?
2. Are the challenges faced in doing this task symptomatic of a deeper problem?
3. How are things from the other person's perspective?
4. Am I part of the problem or part of the solution?
5. What part does the setting play?

Such questions begin to structure constructive learning and work environments, as they help us to analyse the task and its constituent parts and the way in which the person slots into the situation. We, as educators, instructors, managers and colleagues need to minimise the bias we bring to a situation and to acknowledge that "the level of accuracy of understanding is determined by the level of freedom from those presuppositions and thus understanding cannot be absolute" (Williams and Stickley, 2010, p. 753). We must all be mindful that, as Reason puts it in his classic book on human error: "To a person with only a hammer, every

problem looks like a nail” (Reason, 2007, p. 78). To ensure that we have more than ‘a hammer’, we need a consistent way of approaching how we support learners with dyslexia and co-occurring difficulties in a range of settings.

A useful place to begin any appraisal of a person’s performance is to consider their own perceptions of their capabilities and their motivation for doing their job, studying on their course, changing something in their lives etc. Table 1 sets out some of the factors<sup>2</sup> that it might be useful to consider, and frames some person-centred questions that may be of use in strategic learning support contexts. The questions can be flipped to create questions for managers, teachers, learning support tutors etc. These ‘flipped’ questions can then generate potential areas of support and themes for consideration in learning and work-place situations.

Table 1

<b>Beliefs about own capabilities</b>	<b>Person-centred questions about capabilities</b>
Self-efficacy	Is my performance enlightened? Am I able to self-monitor what I do?
Control – of own behaviour; of material and social environment	Am I in control of my own behaviour? Am I in control of my interactions with those around me?
Perceived competence	Do I feel competent to undertake these tasks? Do those around me consider me to be competent?
Self-confidence/professional confidence	Do I have confidence in my own performance? Do those around me have confidence in me?
Empowerment	Do I feel empowered? Do I feel I can make a difference by doing these tasks?
Self-esteem	Do I feel that I can hold my head up and take pride in what I do?
Optimism/pessimism	Am I optimistic about my future opportunities? Am I pessimistic about my future opportunities?
<b>Motivation and personal goals</b>	<b>Person-centred questions about motivation</b>
Intention; stability/certainty	How sure am I that I intend to do this?

<sup>2</sup> Adapted from *Motivation and Confidence: What does it take to change behaviour?* (Dixon, A, 2008). Published by the King’s Fund.

	How stable is my intention to do this?
Goals (self-directed or controlled)	Is this my goal – did I set it for myself? Has someone else set this goal for me?
Goal/target setting	Am I able to identify targets appropriately? Am I able to set targets effectively?
Goal prioritising	Am I able to prioritise my goals effectively?
Intrinsic motivation	Do I really want to do this? Is this inherently fulfilling?
Commitment	Am I committed/willing to doing this for sustained periods of time?
Long-term goal and proximal 'stepping stone' goals	Have I broken down my long-term goal into sub-goals?

## References

- Brooks, C., Carroll, A., Gillies, R. M., & Hattie, J. (2019). A Matrix of Feedback for Learning. *Australian Journal of Teacher Education*, 44(4). <http://dx.doi.org/10.14221/ajte.2018v44n4.2>
- Brisenden, S. (1986). Independent living and the medical model of disability. *Disability, Handicap & Society*, 1(2), 173-178.
- Dekker, S. (2006) *The field guide to understanding human error*. Aldershot: Ashgate Publishing
- Dekker, S. (2017). *The field guide to understanding human error*. CRC press.
- Henderlong, J. & Lepper, M.R. (2002) The Effects of Praise on Children's Intrinsic Motivation: A Review and Synthesis. *Psychological Bulletin*, 128, 5, 774–795
- Hulme, C. & Snowling, M. (2009). *Developmental disorders of language learning and cognition*. Chichester: Wiley-Blackwell
- Loveland, K.K. & Olley, J.G. (1979) The effect of external reward on interest and quality of task performance in children of high and low intrinsic motivation. *Child Development*, 50, 4, 1207-1210
- National Research and Development Centre for Adult Literacy and Numeracy (NRDC) Being me, Voices on the Page. <http://www.nrdc.org.uk/wp-content/uploads/2015/11/Voices-on-Page-2007.pdf>
- Reason, J. (1990) *Human Error*. Cambridge: Cambridge University Press
- Shah, P., & Mountain, D. (2007). The medical model is dead—long live the medical model. *The British Journal of Psychiatry*, 191(5), 375-377.
- Thomas, P., Gradwell, L., & Markham, N. (1997). Defining impairment within the social model of disability. *Greater Manchester Coalition of Disabled People's Magazine*.
- Williams, J. & Stickley, T. (2010) Empathy and nurse education. *Nurse Education Today*, 30, 752–755
- Wilson, R.A. (2001) Two views of realization. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, 104, 1, 1-31
- World Health Organisation (2002) WHO/EIP/GPE/CAS/01.3: towards a common language for functioning, disability and health: ICF (The International Classification of Functioning, Disability and Health)



## CONSTRAINTS AND POTENTIALS TABLE

Within-learner(person)	Within-operating-environment
<ul style="list-style-type: none"> <li>• Perceptual (sound-based):               <ul style="list-style-type: none"> <li>◦ 'Catching' speech sounds and holding them in memory for short periods of time (short-term phonological memory; Cain, 2010)</li> <li>◦ Accuracy of the representations of speech sounds in memory (Vowels perception)</li> </ul> </li> <li>• Perceptual (visual):               <ul style="list-style-type: none"> <li>◦ Visual attention span – capturing 'snapshot' visual information</li> <li>◦ 'form constancy' – seeing something as the same from different perspectives/interpreting different fonts in text.</li> </ul> </li> <li>• Perceptual /cognitive (other processes):               <ul style="list-style-type: none"> <li>◦ Rapid automatised naming (involves naming letters or numbers at speed)</li> <li>◦ Word-finding (remembering the names of things)</li> <li>◦ Reflective habit of mind (explicitly considering own performance in order to inform future actions/learning)</li> <li>◦ Coping strategies – using experience to develop ways around barriers to performance.</li> </ul> </li> <li>• Working memory – consider the verbal, visual and spatial aspects:               <ul style="list-style-type: none"> <li>◦ Following instructions or procedures</li> <li>◦ Flexible attention – memory resilient to interruption or switching of attention during tasks</li> <li>◦ Filtering of task relevant information from irrelevant information</li> <li>◦ Monitoring tasks</li> </ul> </li> <li>• Long term memory:               <ul style="list-style-type: none"> <li>◦ Phonemic knowledge - forming lasting and automatic knowledge of grapheme to phoneme and phoneme to grapheme links</li> <li>◦ Vocabulary (receptive/expressive)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Learning environment characteristics<sup>1</sup>:               <ul style="list-style-type: none"> <li>◦ Encourages the consideration of different perspectives</li> <li>◦ Encourages participation to be intrinsically rewarding.</li> <li>◦ Learning frameworks are productive – allow learners to gain new knowledge by applying current knowledge</li> <li>◦ Enables learners to learn about how they think and learn</li> </ul> </li> <li>• Structure of learning:               <ul style="list-style-type: none"> <li>◦ Routines – established ways of practising and consolidating key information</li> <li>◦ Provision of a predictable structure to sessions and tasks (preview/review – checklist to monitor progress with task/s)</li> <li>◦ 'Metacards' – a means of summarising new understanding/information</li> <li>◦ Terminological clarity - explicit instruction in key terminology of the subject area</li> <li>◦ Discovery – high level of person-centred engagement – key information is discovered not 'told'. Involves sculpting the learning context</li> <li>◦ Feedback:                   <ul style="list-style-type: none"> <li>▪ Competence based so that clear performance enhancement indicators are known – self-efficacy</li> <li>▪ Attribution – focus on skills necessary to attain competence</li> <li>▪ Enhances autonomy of learner/person</li> </ul> </li> </ul> </li> <li>• Language enhancement:               <ul style="list-style-type: none"> <li>◦ Dialogue (meta-language; self-efficacy; debating skills etc.)</li> <li>◦ Language enrichment opportunities</li> </ul> </li> <li>• Teacher/therapist knowledge-base, teaching methods and conceptualisation</li> </ul>

<sup>1</sup> See Malone, T. W. (1981). Toward a theory of intrinsically motivating instruction. *Cognitive Science*, 4, 333-369.

<ul style="list-style-type: none"> <li>○ Terminology:           <ul style="list-style-type: none"> <li>▪ Everyday lexicon (level and quality of language experience)</li> <li>▪ Academic register</li> <li>▪ Metalinguistic knowledge</li> </ul> </li> <li>○ Retention of facts (instrumental versus relational understanding)</li> <li>○ Semantic knowledge</li> <li>• Analytical skills:           <ul style="list-style-type: none"> <li>○ Lexical/sub-lexical analysis (syllable structure).</li> <li>○ Morphological analysis (meaning units within words)</li> <li>○ Syntactic analysis (grammar)</li> <li>○ Orthographical analysis (how speech is represented in written form)</li> <li>○ Textual analysis (comprehension of text)</li> </ul> </li> <li>• Affective factors:           <ul style="list-style-type: none"> <li>○ Self-efficacy (self-perception as competent at particular tasks)</li> <li>○ Motivation (conation – resilience)</li> </ul> </li> </ul>	<p>of literacy and language learning as a multi-faceted process</p> <ul style="list-style-type: none"> <li>• Learnability of language:           <ul style="list-style-type: none"> <li>○ Transparency/opacity – are the links between the symbols and the sounds simple or complex?</li> <li>○ Speech dynamics – how phonemes change in speech streams, use of stress within words and sentences, elision (e.g. Danish language versus Swedish language)</li> <li>○ Agglutinative languages – meaning units clear but words very long.</li> </ul> </li> </ul>
---	--