

Exploring the Individual Learning Style of a Student with Dyslexia and Examining its Future Implications in University Study

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Abstract

Nurse educators and practitioners aim to plan programmes which will prepare nurses with the knowledge, skills, decision making abilities and confidence to be accountable for the care they provide (Boore & Deeny, 2012). This article explains, by way of a case study, one situation where these skills were used for an individual learning opportunity to help a student (Miss A) with dyslexia, within the University, to complete her studies successfully. Resulting from the original case study is a future plan for an action research project questioning the assessment criteria and evaluation of learning styles of students with dyslexia. It is hoped that the action research project will lead to the implementation of changes, if needed, in the assessment criteria of students with dyslexia within the University environment.

Introduction

Historically nurse 'training' in the United Kingdom (UK) was based in schools of nursing within hospital environments. In the latter part of the 20th Century, this training was transferred into the university setting (Morrell & Goodman, 2012). Together with this change nurses were expected to reflect on and critically evaluate their practices, leading to evidence-based theories, rather than just doing tasks that were previously based on personal experiences (Morrell & Goodman, 2012). In light of this change, any achievement in clinical practice must also reflect the academic level expected. This is demonstrated through evidence-based practice impacting on the level of decision making by the use of critical thinking (Boore & Deeny, 2012). Critical thinking is a form of philosophy involving the rational and robust analysis of what is being thought about to create new knowledge and novel ways of using this knowledge (Morrell & Goodman, 2012). By using a critical reflection process (see figure 1), the educator aims to facilitate inspirational self-assuredness, the regular achievement of learning goals and move critically reflective and motivated students into the workforce (Brookfield, 1995). For the purpose of this article, the use of the action research model (see figure 2) takes this approach a step further. This is to provide a framework as an encouragement to practitioners to critically reflect their own and others' practice (Norton & Campbell, 2007). It should ideally lead on to safer practices in the clinical setting.

As previously stated, the basis of this future action research project is a case study involving Miss A, who was an adult learner on the Healthcare Foundation Degree Course at a university in England. The university had previously assessed Miss A as having dyslexia. According to Eide & Eide (2011: xvii), dyslexia is classed as a 'different pattern of brain organisation and information processing' that can lead to constantly failing at skills. They go on to say however, that the dyslexic brain does have its own kinds of strengths and benefits; this is termed a 'dyslexic learning style'. The dyslexic learning style includes learning little amounts as often as possible, therefore reinforcement in small chunks is called the 'dyslexic advantage' (Godwin, 2012).

Assessment Process

The assessment process for a diagnosis of dyslexia consists of a self-referral, or a referral from the tutor, to initially instigate a generic visual, auditory and kinaesthetic/tactile - VAK test (Godwin, 2012) (see figure 3). If this test shows signs of learning issues then the student is recommended for the definitive dyslexic test, which is conducted by an outside consultancy.

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Figure 1: Critical Reflection Model



(Brookfield, 1995)

Figure 2: Action Research Model



(Hargreaves, 2012)

The results can take a few months to be evaluated and these results not only confirm the student has a form of learning difficulty (e.g. dyslexia) but also the level of that difficulty. This could then lead on to the recommendation for extra considerations when sitting their examinations and assessments.

The original assessment taken by Miss A did not stipulate any extra help with the learning process during her course. However there are now some students within the nursing department who do have access to recording devices (supplied by the university) to help with their studies.

Figure 3: VAK Test

<i>When you..</i>	Visual	Auditory	Kinesthetic & Tactile
Spell	Do you try to see the word?	Do you sound out the word or use a phonetic approach?	Do you write the word down to find if it feels right?
Talk	Do you sparingly but dislike listening for too long? Do you favor words such as <i>see, picture, and imagine</i> ?	Do you enjoy listening but are impatient to talk? Do you use words such as <i>hear, tune, and think</i> ?	Do you gesture and use expressive movements? Do you use words such as <i>feel, touch, and hold</i> ?
Concentrate	Do you become distracted by untidiness or movement?	Do you become distracted by sounds or noises?	Do you become distracted by activity around you?
Meet someone again	Do you forget names but remember faces or remember where you met?	Do you forget faces but remember names or remember what you talked about?	Do you remember best what you did together?
Contact people on business	Do you prefer direct, face-to-face, personal meetings?	Do you prefer the telephone?	Do you talk with them while walking or participating in an activity?
Read	Do you like descriptive scenes or pause to imagine the actions?	Do you enjoy dialog and conversation or hear the characters talk?	Do you prefer action stories or are not a keen reader?
Do something new at work	Do you like to see demonstrations, diagrams, slides, or posters?	Do you prefer verbal instructions or talking about it with someone else?	Do you prefer to jump right in and try it?
Put something together	Do you look at the directions and the picture?		Do you ignore the directions and figure it out as you go along?
Need help with a computer application	Do you seek out pictures or diagrams?	Do you call the help desk, ask a neighbor, or growl at the computer?	Do you keep trying to do it or try it on another computer?

Adapted from Colin Rose(1987). Accelerated Learning.

Miss A joined the class studying the clinical practice unit module for a third attempt in the second year of the course, after previously being unsuccessful at passing this module twice before. Miss A was employed (as in the course admittance criteria) in a healthcare setting and Miss A had successfully completed the other units and modules of the Foundation Degree Course previously. She was very motivated with a proactive attitude to pass and to achieve success this time. Miss A, like many other adult learners, was less focused on study for the sake of learning, but was studying the Foundation Degree to enhance her chances of furthering her future employment prospects within the healthcare environment (Boore & Deeny, 2012). With this third attempt, Miss A was introduced to me and integrated into the unit as an extra student to the class. Sometimes it can be difficult for a new learner to join an existing class but an important factor in aiding this integration should be a positive relationship between me, as the facilitator, and Miss A as the new learner (Hughes & Quinn, 2013).

As stated, the assessment criteria for this unit were to evaluate Miss A's competence in clinical healthcare skills and rationale and how they related to clinical practice. These were assessed by an Objective Structured Clinical Examination (OSCE) and a Multiple Choice Questionnaire (MCQ) Examination respectively. The OSCE was skills based clinical examination, consisting of assessing fundamental clinical tasks, which included performing blood pressure, pulse, temperature and respirations on a patient. To underpin the practice a thorough understanding of the rationale for the use of these clinical examinations were also assessed. The MCQ Examination was a two hour examination paper evaluating the practitioners' skills at recognising health deterioration and what interventions and referrals they would instigate, to aid recovery and better health for their patients. As educators and practitioners, we are constantly being challenged to integrate classroom and clinical learning to help students understand the knowledge skills needed in practice settings. (Flood & Robinia, 2014) In order to successfully do this, collaborative learning is needed and this includes good communication, cooperation, equal responsibility to uphold the practice standards, openness to all ideas, flexibility, respect, honesty, commitment and good planning are all essential components (Trueman, Osuji & El-Hussein, 2014).

During the clinical practice sessions Miss A and I acknowledged that she continued to have difficulty in assimilating the skills and information needed to pass both the OSCE and the MCQ

exam. As her tutor it was important for me to have an effective way of engaging Miss A with the topic and identifying approaches to help her learn by including her in the decision making process (Boore & Deeny, 2012). Miss A's involvement in decision making was a valuable step in helping her develop a sense of personal value and worth (Hughes & Quinn 2013). We jointly identified that we needed to nurture and properly use her strengths and this would in turn help her in her individual efforts to achieve success in passing this unit (Eide & Eide, 2012). We decided to investigate her individual learning style (see figure 4) and hoped this would lead onto an effective solution to the problem.

Figure 4: Dyslexic Learning Styles

Visual	Auditory	Kinaesthetic
Posters	YouTube clips	Note taking
Mind maps	Dictaphone	Copying out notes
Post it notes	Discussions	Games
Note taking	Question/Answer sessions	Talking-Walking Study
YouTube clips	Mnemonics	Re-enactments
Colour coding	Revision songs/rhymes	Trace words with finger
Timelines	TV Programmes	Doodling
Grids/Tables/Charts	Revision Videos	Trips and Visits
Fact Lists	Listening to music whilst revising	Construct posters and other revision resources
Facebook Profiles	Study Groups	

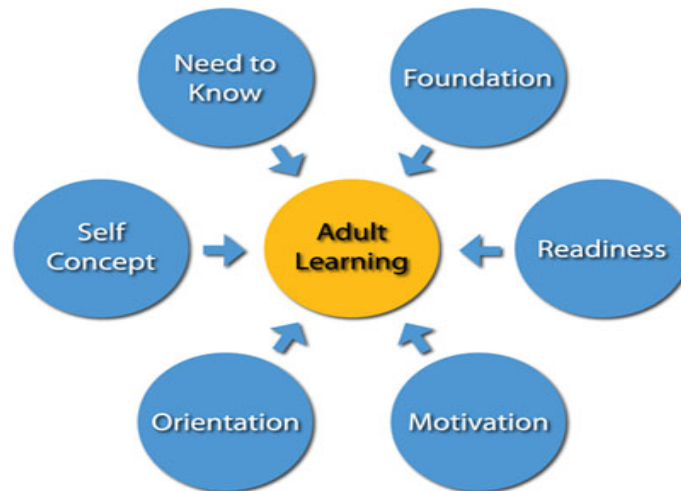
(Hargreaves, 2012)

Background

Conducting a review of the literature there is a considerable amount concerning different learning styles of students with dyslexia and knowing which type of learner Miss A was could help with an individualised adaption for her own self-directed learning (Zanchetta *et al*, 2012). From the university perspective, it helps to recognise any obvious difficulties and explore organisational strategies to overcome them in an effective manner (Hargreaves, 2012). Learning styles are classed as personal learning approaches that individuals naturally prefer in order to maximise their own personal learning (Honey & Mumford, 1982; Hattie & Yates, 2013). Ultimately it is advisable that each learner should try to understand their own learning style, to seek out opportunities to learn using that style and to become equipped with information about their learning preferences leading to an expansion in their individual beneficial experiences (Honey & Mumford, 1982; Hattie & Yates, 2012). Ideally they should become an all-round learner by improving their learning skills and processes and the awareness of how they learn by self-scrutiny and improvement (Honey & Mumford 1982; Hattie & Yates, 2012). All this is to enhance their future practice. However, for some students the academic and personal demands are considerable and they need extra support to overcome these challenges as when moving into higher education some students find difficulty with the academic skills needed for studying at the level and becoming a self-directed learner can feel daunting for them (Boore & Deeny, 2012).

Looking at the research concerning different learning styles, the Andragogy model of learning (see figure 5) seemed appropriate to the situation. This model emphasises involving students in their own learning process, and assumes the self-concept of autonomy, self-direction, the role of the learner's life experience, the readiness of an adult to learn, and the orientation to learning (Curren, 2014). In practice, Andragogy means that adult learners need to focus on the learning process rather than specifically the content of the learning (Hughes & Quinn, 2013).

Figure 5: Andragogy Model of Learning



(Curren, 2014)

By facilitating Miss A's autonomy in the decision making process it helped to inform her competence and ultimately the quality of care that she provides to her patients (Trueman, Osuji & El-Hussein, 2014). With this in mind, we both questioned which one (or combination) of the kinaesthetic/tactile, auditory or visual dyslexic learning style she was more comfortable with when learning information (Godwin, 2012). Miss A expressed a preference for auditory input as she found some visual processing difficult (Hargreaves, 2012). We decided that to enable us to rectify the root of her problems, I would record the information for her (Zanchetta *et al*, 2010). The essential point of all memory techniques is to transform the kinds of memories we are not very good at into the kinds of memories we were built for (Hargreaves, 2012). Knowing what type of learner Miss A was allowed us to adapt how she could assimilate the information needed (Godwin, 2012). Of considerable importance to both of us was to make certain that by incorporating an activity which would stimulate her interest she would have a better understanding and retention of the information required (Boore & Deeny 2012). Also by making myself available for extra practical support, if needed, she may be successful at the assessments in the future. With the recording Miss A was able to listen to the unit information and rationale at her leisure and more often, and it was easier for her to assimilate this information in her own time with no undue stress. Giving the freedom to Miss A to be able to take more responsibility and ownership of her own learning needs was empowering for her practice (Davis & Surajbath, 2014).

From a facilitator point of view, the planning of the learning, which actively engaged Miss A in the processes of learning, increased the likelihood of the transfer of knowledge, particularly when the knowledge was meaningful and applicable to her practice, as this obviously was (Curren, 2014). Overall students who feel empowered have a licence to think critically and to trust their intuition which encourages growth both personally and professionally (Trueman, Osuji & El-Hussein, 2014). However, some students will have difficulty in converting learning outcomes to practice activities especially a dyslexic student (Boore & Deeny, 2012). The key for the dyslexic student is to ensure that all the material they need for examinations is in their long-term memory as opposed to their short-term memory (Hargreaves, 2010). With continued reinforcement, it was hoped that Miss A could retain the relevant information and rationale into her long-term memory in order to pass her assessments to be a safe practitioner.

Outcome

Miss A was successful at passing both the OSCE and the MCQ examination. With the assessment result she was deemed to be a safe practitioner with her sound clinical judgement being an essential element for every professional working in healthcare today (Ashley & Stamp, 2014). Miss

A provided subsequent feedback and evaluation of the experience and she emphasised that by recording the information, it enabled her to be comfortable with her learning and, she believed, was the reason for the success in passing the assessments.

From the case study, and ultimately the writing of this article, it showed how important it is for learners to become masters of their own education. They should be responsible for education projects which could be driven by their personal dreams, expectations, and any personal concerns to help with their practice (Zanchetta, Taher, Fredericks, Waddell, Fine & Sales, 2013). It takes enormous effort for dyslexic students to keep up with their studies at university and to encourage them to liberate themselves from any social oppression (Godwin, 2012). Ideally, they should question their own worlds by seeking answers to the roots of their problems and, thus analysing any power imbalances to rectify any prejudices against them (Zanchetta *et al*, 2013).

During the process it became apparent that future assessments of different learning styles for students and a greater understanding of their learning needs, including dyslexia, could lead onto an enhanced learning experience for those students studying at university, along with higher retention rates.

This case study shows that Miss A's awareness of her own individual dyslexic learning style, and an understanding of that learning style, helped her to assimilate better into the theoretical aspects of university learning (Godwin, 2012). The key was helping her to understand how to make the most of her strengths and to minimise her weaknesses as much as possible by using her auditory skills as opposed to visual or kinaesthetic skills (Hargreaves, 2012).

One of the findings to come from this case study was that individual learning styles were not considered in the initial dyslexic assessment for Miss A. The future action research project will examine the initial assessment processes of students with dyslexia and evaluate if an indication for individual learning styles could to be included in these processes. This empowerment will also enable previous students with dyslexia to become effective advocates for vulnerable clients at the university in the future (Zanchetta *et al*, 2013).

Most importantly for me were the elements of action research and reflective practice, which together encouraged me to evaluate my own development within my teaching strategies of dyslexic students (Norton & Campbell 2007). We as educators use reflection in exactly the same way as the students to learn from experiences (Boore & Deeny, 2012). Teaching students how to obtain, organise and use information to solve their education problems is an empowering activity for both the learner and the teacher (Hughes & Quinn, 2013). To produce changes in our educational practice should not only be the objective of further research, nurse educators should also talk openly about their commitment to creating healthy learning environments (Zanchetta *et al*, 2013). One of the most important aspects to excellent critical practice is looking beyond feedback. To achieve any changes in the learning environment educators need to alter some teaching methods and goals if needed. They need to document those changes and any progress towards goals, and by becoming a student-centred, flexible and innovative teacher to enhance the student experience of learning (Brookfield, 2007). There is a common perception that people with dyslexia cannot read and are therefore a risk in a caring environment. However, dyslexia varies from person to person and many people with dyslexia develop effective coping strategies over time. These include practices and procedures that can enhance safe working for everyone (Disability Rights Commission, 2007).

Conclusion

This case study provided a learning opportunity, which identified an individual learning style, to enable a students' eventual success. On reflection it is envisaged that any clinical faculty should constantly strive to maximise all teaching opportunities and balance multiple students' learning needs for the benefit of the student and teacher experience. The future action research project will

envisage the evaluation of learning strategies for students with dyslexia, by examining the assessment strategies, in order to enhance the future of the student experience within the University environment. Unfortunately according to the local University Assessment Office any future learning issue assessments are now being reviewed and there could be a reduction in the number of students with learning issues being admitted to the University.

In order to publish the case study I have gained informed consent from Miss A in line with University of Bedfordshire guidelines.

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All images are available at www.google.images.com (accessed 13/10/2014)