**Visual stress and its impact on students with MLD**

**A paper on the impact of visual stress on students and suggestions in how to support them by Andrew Sykes – Interventions Lead Marshfields School.**

As educators we are always looking for the barriers that prevent the students in our care from achieving their potential. These could be termed as ‘anything that can prevent them from fully engaging in their daily lessons or activities.’ *Olivia McGarry*, in her article ‘barriers to learning,’ suggests that there are three main areas that act as barriers for learning: these are emotional, motivational and environmental barriers’ and more can be read about these following the link in the references.

In the following paragraphs though, I would like to consider one of many health barriers to learning that we come across in our teaching lives. HBLs are ‘untreated health conditions that can undermine a child's ability to succeed in school.’ Visual stress is one of these conditions.

**What is visual stress?**

Visual stress is also known as Meares-Irlen Syndrome or Scotopic Sensitivity Syndrome and is a common condition of the visual cortex. This condition is hard to accurately detect by medical or psychological examination and can affect anyone.

*Eyesite Opticians* in their article on visual stress, state that ‘visual stress is a perceptual processing condition that causes reading difficulties, headaches and visual problems from exposure to patterns in a text.’ Surprisingly, they estimate that 20% of the population may suffer with this condition to some degree, as the severity of symptoms can vary from person to person.



**Identifying students with visual stress**

Working within the education sector, teaching and support staff are in an ideal position to observe the learning behaviours of students and how each child’s behaviour can differ from the next. From these observations we can often detect where there is a need for intervention to support/guide the student so that we set them up to succeed.

*Helen Collins* in her article ‘What do educators need to know about visual stress,’ quotes Professor Irlen who suggests that ‘visual stress can present similar symptoms as to those of ADHD. But unlike ADHD, the environment the student is in, and lighting conditions are what create the over-activity in the brain that lead to difficulties in focus and concentration.’

The following are considered to be some of the major indicators of visual stress:

* Poor attention and concentration
* Behaviour – reluctance to engage with tasks
* Sensitivity to light and brightness
* Difficulties reading
* d/b reversal
* Squinting when looking at a text and moving it up and down before the eyes to focus
* Headaches and discomfort
* Sensitivity to some colours
* Difficulty keeping place in text
* Difficulty tracking across lines of text
* Underachievement

This is not an exhaustive list and some of these could point to any number of problems, but this is the starting point. This is the point when we need to use our knowledge of the child, ask questions like what do you see? What is happening to the words? Is the page to bright? and then listen to what they have to say about their experience with text and reading, and how they are feeling. The last thing we need is for the situation to carry on and the student be ‘turned off’ from reading and books.

From this point you can use one of the number of screening tools available commercially to carry out the screening yourself and to ascertain visual stress and the best colour to be used to alleviate the problems this causes. Remember that all students are individual and could need one of a number of different colours to stop symptoms. If you are not confident doing this then ask parents to book a test through the optician.

The screening pack we use is listed in the references section. It is also best practice to keep parents informed and to suggest a check-up at an optician to rule out other problems.

**Student experience of visual stress**

From my own experience, many students with visual stress, when questioned, often think that they see what everyone else is seeing and it is completely normal. They think that everyone sees letters moving about all over the place, or see blurry lines and get headaches when they focus on reading a text for too long. Some may also think that it is normal for this to happen. They feel stupid for not being to do what their peers do. Is it any wonder then that suffering from visual stress in our increasingly busy and cluttered classrooms, can cause some students to become frustrated, distracted and disaffected?

**Dyslexia and Visual Stress**
Dyslexia is a term used to describe various specific learning difficulties that affect the ability to learn to read and spell correctly. *Edmonds and Slatter* in their article Visual Stress and Dyslexia state that Visual Stress is NOT Dyslexia but people with Dyslexia may suffer with visual stress and can therefore be helped by colour. Equally there are a large percentage of children and indeed adults who are not identified as being Dyslexic, but still suffer with these symptoms. The appropriate coloured overlay or Precision Tinted Lenses can also help this group of individuals too. Being supported with a coloured overlay for visual stress is not a diagnosis of dyslexia. It is just to support the HBL visual stress.

**Case study**

This was the case for a student that I worked with a number of years ago. They would often present poor attention and concentration behaviours, where they struggled to focus on the task given them. They had poor motivation and struggled with reading and writing, leading to underachievement across many subjects. It was noted that as the day progressed, their reluctance to engage and instances of poor behaviour began to increase more and more as they got tired.

There could have been many reasons for this and indeed many different strategies were employed throughout the student's educational life to combat issues that the student said that they had.

It was a chance observation as I was carrying out a reading assessment with the student that led me to ask the questions… ‘what do you see when you look at the text? What is happening?’ This seemed to open the ‘flood gates’ and a barrage of emotions came pouring from their mouth. There was frustration that they couldn’t do things that their peers were doing. Anger that they felt tired all the time and it hurt to read and then the tears came.

When the student was able, they talked about dancing words and that they couldn’t keep up with where the words were, that the page was very bright, and it hurt their eyes and made them feel tired. I was then able to carry out a visual stress screening test (I use the one provided by Crossbow – see references). The result of this was almost instantaneous. As I put the coloured filter over the page of text, they exclaimed ‘Wow’ and said, ‘it’s still, not moving’ and then asked, ‘is that what it’s supposed to be like?’ They then proceeded to read the given text with little difficulty. The smile on the student’s face was amazing and their sense of achievement.

**What was the impact of this?**

Over the next few months, the student’s attitude and confidence grew and grew. Whilst some of the incidences of behaviour didn’t go completely away, the student began to feel more successful in classes, eventually studying for higher level qualifications. Reading test results showed that they had improved from a reading age of 6 years prior to screening to a reading age of 11 years in the space of 6 months.

This is not an isolated occurrence, and screening for visual stress at Marshfields School has resulted in improvement of learning behaviours and reading abilities across all who have been supported. We now ask if students have been supported by reading through coloured filters when students transition into our school. This supports them when coming to a new school and ensures that we remove one of their barriers to learning, enabling them to have a fresh start.

**So, what can we do to support students with visual stress in the classroom?**

First of all… don’t panic!

Many of the suggestions below will benefit most of your students. Remember, our classrooms are an important environment for our students, one in which they spend many hours.

Maria Oliviera in her article on ‘Exploring the impact of colour in our classrooms’ said that ‘colour can enhance or impair learning, morale and behaviours in our classrooms.’ So, if you get the chance to propose a colour scheme, then think about muted restful colours that are easy on the eye.

We should also try to declutter and make classes less ‘busy,’ particularly at the front where their focus is going to be during lessons. Too much clutter and this could create stress, in that the eye does not know what to focus on.

Think about the lighting in a classroom, is it too bright/not bright enough? Try to let as much natural light into the room as possible and cut glare where you can.

Other ways in which we can support students with visual stress are:

* If students should wear glasses, please make sure that they are wearing them. Check if they have regular ‘check up’s.’
* When students have been screened, they will be given an overlay or reading ruler in the correct colour so that they can use this when reading. Students should be encouraged to use it at home too when reading.
* It would be helpful if the background colour could be changed on a word processor to match the colour they need or simply put an overlay over the computer screen.
* If you are providing worksheets, then try to copy these onto the correct colour paper.
* Books of the correct colour for writing are also available commercially that students can use (see references below to what we use at Marshfields School).
* Keep a register of students who have visual stress. This could have the colour needed and the class the student is in.
* Remember that when applying for exams, you can ask that exam papers are provided in the colour the student needs and with the size of font required as this is the normal way of working for the student. If they can’t provide this, then permission to open exam papers up to 30 minutes before should be sought so that papers can be copied onto the correct colour paper. Please remember when applying to exam bodies they usually need eleven weeks or more notice to make alterations – advice should be sought from exam board.
* RNIB Book share is available to all students with a visual impairment. This can be texts that can be enlarged for the student to read on screen and then use an overlay or change background colour to improve access. Also, if the student needs a larger font size to access text. For further information and support contact the VI team at Peterborough City offices.
* During transition from one educational establishment to another, please let them know all the things that constitute a student’s normal way of working. This will allow for a seamless transition for the student who can carry on using the same resources as before.
* Keep parents informed of what you are doing to support their child and how it is helping to improve their child’s experience of school.
* And lastly… talk to the student and keep them involved in decisions, this will empower them and keep their confidence growing.

**Famous people with visual stress**

**Suffering from visual stress is not a barrier to excelling in all aspects of life. Famous people who have/had visual stress/dyslexia include… actors Johnny Depp, Tom Cruise and Orlando Bloom, musicians Bono, Cher and John Lennon, artists Andy Warhol and Leonardo da Vinci, author Agatha Christie, prime minister Winston Churchill, head of the Virgin empire Richard Branson and Albert Einstein to name but a few… So, with help… the sky is the limit!**

**References**

Allaa Gawish (SEN Specialist) - <https://www.structural-learning.com/post/barriers-to-learning-a-teachers-guide>

Olivia McGarry - <https://www.learnupon.com/blog/barriers-to-learning/>

Eyesite Opticians - <https://www.eyesite.co.uk/childrens-eyesight/what-is-visual-stress/>

Helen Collins - <https://www.twinkl.co.uk/news/what-do-educators-need-to-know-about-irlen-syndrome-and-visual-stress>

Maria Oliviera - <https://communities.ppg.com/news/Exploring-the-Impact-of-Color-on-Classrooms-A-Q-A#:~:text=Color%20can%20enhance%20or%20impair,thinking%2C%20problem%20solving%20and%20creativity>.

Crossbow Education visual stress assessment pack - <https://www.crossboweducation.com/visual-stress-assessment-pack>

Crossbow Education visual stress resources inc. books overlays and paper

<https://www.crossboweducation.com/visual-stress-resources>

Edmonds and Slatter - <https://www.edmondsandslatter.co.uk/index.php/eye-health/visual-stress-dyslexia?jjj=1688925252928>