Dyslexia-friendly educational software
Guidelines for software designers and ICT coordinators

These guidelines are intended to provide initial guidance for designers of educational software for children with dyslexia. The guidelines can be used to ensure it is appropriate for dyslexia-specific difficulties. They can also be used to help school ICT coordinators evaluate existing educational software, to determine how appropriate it is for pupils with dyslexia.

Structure

There should be small steps with explicit links as well as a logical progression within the software, to help maintain focus, enable an understanding of the learning process as well as allowing children to utilize previously learned skills and strategies.

1. A series of short focused activities is preferable to a longer more complex activity as children with dyslexia can become tired and/or distracted more easily. This also provides more opportunities to experience small successes instead of potentially getting one thing wrong and failing the entire activity.

2. At the start of any learning activity the learning aim should be made explicit to ensure children understand why they are undertaking the activity, what it will achieve and how it links to previous activities they have completed.

3. Beware of mixing multiple skills within a single activity as this can become confusing for children with dyslexia who have multiple difficulties – focus on a single skill where possible.

Multi-sensory

The learning activities within the software should engage multiple senses by including visual, auditory, kinesthetic and tactile elements where appropriate.

4. Use images to support text to reinforce the meaning of what is being read and provide hints/prompts where children experience reading difficulties.

5. Choose a dyslexia-friendly font that is plain, evenly spaced and sans serif, e.g. Century Gothic, Comic Sans; and a large font size to make it easier to read.

6. Make sound optional during learning activities for children who may find it distracting.

Metacognition

The software should provide opportunities to reflect on learning, such as through the provision of detailed feedback or by including the flexibility to practice and evaluate different learning strategies/approaches.

7. If a child fails an activity, highlight where the failure occurred, why and suggest what could be done about it next time to help them understand how to improve. Also allow opportunities to recover from errors.

8. If a child completes an activity correctly, provide feedback to explain why it was correct to enable them to reapply the same skills/strategies in future.

9. Integrate some form of scoring mechanism to provide a measurement of progress, to allow the child to reflect on their learning.

Memory

The software should be designed to reduce information overload and avoid any unnecessary burdens on memory.

10. Keep any supportive text short and simple as well as keeping the screen clutter-free to make it easier for a child to remember what they need to do and not become distracted.

11. Make learning activity instructions available during the activity as a reminder for the child in case they forget what they should be doing.

12. Provide additional supports for any potential memory difficulties as well as including activities to help build spatial and working memory.

Reinforcement

Opportunities to practice previously mastered skills should be provided to help reinforce them.

13. Allow for multiple attempts at the same activity to help reinforce particular skills as well as provide an opportunity for children to learn from their mistakes.

14. Present the same content within different learning activities to reinforce the same skills within a different context.

15. Integrate rewards or add on further layers of difficulty to encourage children to return to previously completed activities.

Confidence

Take into account the low self confidence and anxiety that children with dyslexia can often experience and enable the building of self-efficacy.

16. The usability of the software is paramount, it should be user-friendly and interaction needs to be as straightforward as possible – it is important that a child who is already struggling does not fail an activity because of bad interaction design as this can be extremely damaging.

17. Integrate lots of positive and supportive feedback to help build self-confidence.

18. Make the timing element of any learning activity optional to ensure children are not put under undue pressure.