Executive summary

This report summarises an investigation into the challenges and opportunities in supporting disabled students in chemistry with a particular focus on how those challenges might be reduced though digital tools. The key aims of the investigation were:

- to identify and critically appraise research into the accessibility landscape for chemistry education and practical work at Key Stage 4 and 5 (age groups 14–18);
- to present an accessibility benefit assessment that will recommend good practice in presenting online resources for disabled students.

This report included a wide range of topics, whose key factors are reported below:

The number and characteristics of disabled students at Key Stage 4 and 5 (age groups 14–18) were evaluated. It was found that:

- There is no evidence to suggest that, in general, disabled students are put off chemistry at university level.
- There is evidence to suggest that disabled students regularly have to deal with inconsistent levels of support, resource, and equipment compared to their peers.

Recommendation:

- It follows that the provision of accessible resources by a platform like Learn Chemistry (or other digital platform) is more important to disabled students than it is to mainstream students.

The accessibility of chemistry practical work was considered. It was found that:

- There is some confusion between teachers, academics, and exam boards about the learning outcomes that practical work is intended to achieve.
- If performed correctly, in some cases simulated experiments are capable of achieving the educational goals of classroom practicals (where those goals are as recommended by SCORE).

Recommendation:

- Disabled students are likely to benefit more from accessible online simulated experiments than their mainstream peers.

The accessibility benefit assessment of digital resources was completed (using Learn Chemistry as an example platform) and it found that:

- There are many examples of good practice with Learn Chemistry.[1]
- A range of design principles that should be foregrounded when making future decisions have been made.

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1. The author will be using it as an example of good practice in other work