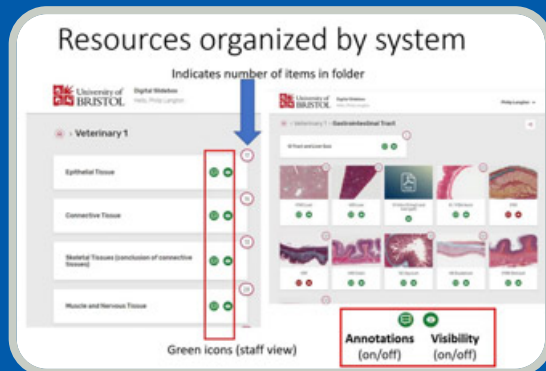




USE CASE

Teaching Histology at Bristol University



INSIGHTS

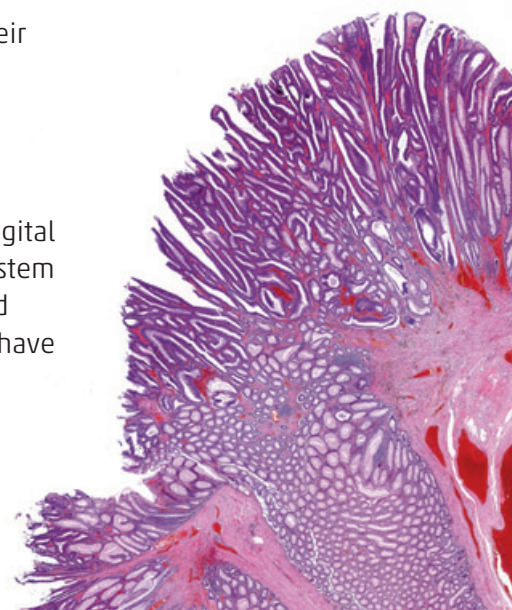
How working with SmartZoom® benefits the University and its students

In common with other medical schools (or at least those that still teach undergraduates histology), Bristol has a large histology lab, used for medical, dentistry, and veterinary students, with 125 microscopes and 125 sets of about 300-400 slides. The historical approach to teaching histology was a greater logistical challenge than teaching many other courses. All students had to be in the same room at the same time, and be looking at a slide from the same block of tissue, with 4-5 demonstrators needed for a full class.

Bristol has looked at various ways to streamline the teaching of this course over the years and began using virtual microscope technology in 2006. They had concerns about how their original supplier's support for this technology would develop, and began looking at alternatives in 2017, leading to a partnership two years later with German company Smart In Media, and the adoption of their SmartZoom® product.

Access online at any time

SmartZoom® allows teaching staff to set students' tasks based on a growing digital library (currently about 600 slides). Initially, students used the SmartZoom® system in the teaching laboratory, following a short plenary session with self-directed study, supported by peer discussion and demonstrators. Since Covid, students have been completing set tasks which they can access online at any time.



The system allows teaching staff to set learning exercises and comment on each student's reports and annotations of slides. Bristol instead set online quizzes, and use these to get feedback on students' learning. Planned developments include a test/exam module whereby the examiner wouldn't know the student's identity.

100 % preferred virtual microscopy

Teaching staff and students now use face-to-face time for more value-added discussion. Feedback from staff is that the SmartZoom® system has improved students' knowledge of histology relative to previous teaching methods and media. Feedback from 136 second-year medical students showed 100% preferred virtual microscope teaching to real microscopes.

The staff teaching histology does not have to worry about teaching students how to adjust and use microscopes. Discussing with students around details of a particular specimen is much easier. The 125 ageing microscopes won't need replacing at the end of their lives, and requirements for teaching and research space mean there is pressure to redeploy the histology lab for another use.

Far easier to engage the students

Dr Phil Langton, senior lecturer in physiology and responsible for teaching histology, summarised the benefits: "When we adopted an online 'virtual microscope' system I found that it became far easier to engage the students with the learning aims; simply, how histological structures relate to physiological function."



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