

Do We Need a Forensic Science Teaching Network?

Keywords: forensic education, network

The worldwide lockdowns and restriction of access to university campuses that higher education has seen since March 2020 have caused many in academia to re-evaluate and adapt their teaching practices. For many this has been an opportunity to take a fresh view of the way material has been delivered in the past, and to critically reflect on how it might be delivered in the future. The explosion of teaching innovation has led to the development of the excellent '#RemoteForensicCSI' network with a programme of webinars to help share ideas and examples of good practice. The emergence of this network has shown the value of such collaborations, but has mainly focused on remote delivery, not on education as a whole. This leads to the questions: why is there no UK forensic science teaching network and do we need one?

Some might argue that these are not new questions. To an extent this is true, but the review of teaching practices brought about by the pandemic, combined with a shift for universities to hire more teaching-only staffⁱ, provides a unique impetus to support the steps needed to bring such a network into existence. More importantly, there is an opportunity to harness these changes to supply the ongoing momentum to ensure that such a network doesn't fizzle out.

Teaching networks within the UK exist for related disciplines, such as the Royal Society of Chemistry's Higher Education Chemistry Teaching Network, but no network focuses on the teaching challenges specific to forensic science or the development of pedagogical research in this area. The term pedagogy may not be familiar to those outside of education research and development. However, anybody who is delivering teaching or training will employ pedagogical theory even if they are not aware of it. Pedagogy can be defined as the "method and practice"ⁱⁱ of teaching, and pedagogical theory details the different teaching methods that can be applied. Pedagogical research looks at the development and implementation of teaching methods. Some of this research will be applicable to teaching of all subjects and education levels, some will be specific to different qualification levels and some will be specific to the teaching of individual disciplines.

Just as forensic science techniques need a solid foundation of research data, so do our teaching techniques need the evidence that they are pedagogically robust. We therefore need effective methods for disseminating any educational research findings. This is something that '#RemoteForensicCSI' has helped to encourage within the area of remote teachingⁱⁱⁱ. However overall as a discipline, forensic science has been noted as lacking in extensive published pedagogical research^{iv}. There may be several reasons for this, including the vocational nature of the courses, which often have limited scope for flexibility in delivery (although the pandemic has shown that there is perhaps more flexibility than previously thought). For example, when teaching a specific process, such as blood presumptive testing, there are certain procedures that always need to be taught, leaving little scope for testing different teaching approaches. A lack of knowledge in how to conduct educational research could also be a limiting factor, as could a lack of time to develop and implement research projects in this area. An increase in pedagogical research could improve teaching delivery and provide a robust underpinning for new initiatives.

A forensic science teaching network would give a space to share pedagogical research and ideas that are specific to forensic science, and allow for the growth of educational research in forensic science. Such space does not appear to exist at present. In the current forensic science conference landscape, most of the larger forensic science conferences do not have a dedicated teaching track within their programmes, or at least have not had so consistently. When examining the Chartered

Society of Forensic Sciences Autumn Conference, EAFS, AAFS, IAFS and ANZFSS, only one conference series has consistently featured a teaching track over each of its past five iterations, ANZFSS. While educational research may still have been presented at the other conferences, it did not have a dedicated space. Those with educational research may therefore have felt that there was no scope for them to present it. This has a risk of perpetuating the cycle where this type of research is not shared as widely as it could be, forcing higher education staff who are under pressure to demonstrate the impact of their research to focus on research areas which do have more dedicated spaces.

A teaching network would also provide a point of contact for those interested in developing their educational research but unsure of how to go about it. Ideally a strong link to, or incorporation within, the Chartered Society of Forensic Sciences would allow for supporting educational research within the boundaries of the accreditation component standards. While many of us within the sector have experience of conducting research in various forms, experience of pedagogical research is less common. Pedagogical research falls firmly into the realm of social sciences, with a need to measure impact and ensure that you have the 'before' data prior to making any changes to teaching practices. As many changes may take the form of tweaks to small sections, rather than to full modules, it can be hard to fully evidence the benefits, or to structure the findings as a research paper. Support from those who have more experience in this style of research and publication could help to stimulate an increase in this type of research and publication. Such support could take many forms, such as workshops, online resources or mentoring.

The teaching of forensic science in higher education is not new. The Forensic Science MSc course at the <university name redacted for peer-review>^v has been running for over half a century. The subject has since grown widely, and the popularity of television shows such as *CSI: Crime Scene Investigation* has led to a proliferation of a wide range of forensic science courses, with the subject taught at undergraduate and postgraduate levels (561 undergraduate courses and 98 postgraduate courses listed on the UCAS website with the word "forensic" for the 2022/23 academic year^{vi}) as well as at further education colleges. The teaching of forensic science is multifaceted, with a need to strike a balance between practical skills and theoretical knowledge. Different courses may focus on different aspects of forensic science – for example, some may focus on crime scene investigation while others focus on forensic chemistry – whilst others may incorporate forensic science modules into a wider science course. This leads to a varying landscape with an exciting potential for collaboration and sharing of ideas, but only if given a forum to do so. This also highlights why a forensic specific network is needed, rather than (or in addition to) the more general teaching networks that exist.

Similarly, there is also a substantial amount of variation in the backgrounds and experience of those who deliver forensic science teaching. As is common with many vocational subjects, the involvement of practitioners is important but there is also a need for teachers from a more traditional academic background, in order to continue to incorporate new research and teaching methods into the delivery of the course content. This range of backgrounds can result in some tension, as those unfamiliar with the quirks of higher education may be frustrated by the pace of change and the hoops that need to be jumped through before changes can be made. Others may be resistant to changing material that has 'done the job' in the past. However while there is the potential for tension, there is also the potential for innovative new ideas to come out of this melting pot of backgrounds and experiences. The key is to then see how these ideas could be shared to the wider forensic science teaching community, and where appropriate the wider higher education teaching community, and this is where a teaching network would be a suitable venue. A network could

also provide peer support for this diverse community of teachers, and in particular a structured mentoring scheme would allow those from different backgrounds to closely support each other.

One might be tempted to ask the question: why isn't there already a forensic science teaching network in the UK? To explore this further, it is worth looking at what has come before. There have been various networks and initiatives within the forensic science arena, although not many of them have had a specific teaching and education focus. The '#RemoteForensicCSI' initiative has already been mentioned and is a great example of how a group of people with a shared aim can come together to create something without significant funding. However, the initial focus of this network is on remote or hybrid delivery, rather than the broader aspects of forensic science teaching. Therefore, there should be space for a teaching network and '#RemoteForensicCSI' to co-exist or for '#RemoteForensicCSI' to expand. This was the topic of a '#RemoteForensicCSI' webinar workshop on the 22nd March 2022, where participants were invited to consider how a teaching network could support them in their current roles. The response from this community was positive, with particular support for mentoring and opportunities for training and sharing good practice.

Between 2014 and 2017 there was a Horizon 2020 supported project, the European Forensic Educational Network^{vii}. Several UK higher education institutions were involved in this, but unfortunately any momentum created from the project concluded at the end of the funded period. This unfortunately raises the thorny issue of funding, something that would need to be considered during the development of a teaching network. Linking to a wider forensic science organisation such as the Chartered Society of Forensic Sciences could give a network the required stability of funding, as well as the buy-in of those with powerful voices within the forensic science community. However, at its most basic level a network could be created as an online community with the only costs being any web hosting fees and the time of enthusiastic volunteers, so funding should not be seen as a significant stumbling block to getting the ball rolling.

In the USA there is the Council of Forensic Science Educators (COFSE)^{viii} and this would be an organisation that a UK-based network could aim to link with, as well as providing a potential organisational model to follow. The importance of global collaboration cannot be underestimated but having a network specific to the UK would provide members increased support for the challenges specific to UK higher education. The COFSE has been in existence since the 1990s and forms a community of teachers from colleges and universities primarily within the USA. As with the suggestion that a UK teaching network could be linked with the Chartered Society of Forensic Sciences, the COFSE has ties to the American Academy of Forensic Sciences (AAFS) and the COFSE annual meeting takes place in conjunction with the AAFS annual meeting. The COFSE has its own publication, *The Journal of Forensic Science Education*^{ix}, which is open access and first appeared in 2019. It is hoped that this Journal continues to grow and could provide a method of disseminating outputs from a UK teaching network, along with Science and Justice and more general teaching-focused publications such as the *Journal of Higher Education*. In addition to the journal, the COFSE hosts workshops and presentations as well as fostering a sense of community amongst educators. A UK forensic network could start with a focus on community building, including mentoring and grow to include presentations and opportunities for CPD activities.

Another group that could be used as inspiration for the structure of a UK forensic teaching network would be the Heads of University Biosciences, a special interest group within the Royal Society of Biology. Again there is a link to a learned society, and while a teaching network would want to be open to more than just programme heads it does demonstrate the potential need for a structured group to allow discussion and sharing of good practice.

The innovation and resilience shown by teachers of forensic science during the pandemic has been heartening, but its isolated nature has highlighted the lack of a defined route for sharing ideas and best practice amongst this community in the UK. A forensic science teaching network would give an opportunity to address the lack of forensic specific pedagogical research, and support those with an interest in educational research. It would provide a network of peer support and help create a feeling of community for those who fall outside the normal categories of 'practitioner' or 'academic', such as those on a dedicated teaching track. A network could help to increase the quality of forensic science teaching, particularly if linked with the Chartered Society of Forensic Science. It could also improve the student experience through support for the introduction of new teaching initiatives, and improve the teaching staff experience through the establishment of peer support links. The pandemic has highlighted the gap, and this commentary hopes to have issued a clarion call to those working in this area to push for a UK Forensic Teaching Network.

ⁱ <university name redacted for peer review> [accessed 29/5/22]

ⁱⁱ <https://www.tes.com/news/what-is-pedagogy-definition> [accessed 31/10/21]

ⁱⁱⁱ Rachel S. Bolton-King, Leisa J. Nichols-Drew, Ian J. Turner, RemoteForensicCSI: Enriching teaching, training and learning through networking and timely CPD, *Science & Justice*, 2022, ISSN 1355-0306, <https://doi.org/10.1016/j.scijus.2022.01.004>.

^{iv} Tim Thompson, Choose your own murder: Non-linear narratives enhance student understanding in forensic science education, *Forensic Science International: Synergy*, Volume 2, 2020, Pages 82-85, ISSN 2589-871X, <https://doi.org/10.1016/j.fsisyn.2020.01.009>.

^v <university name redacted for peer review> [accessed 01/11/21]

^{vi} <https://www.ucas.com/search/explore?keywords=forensic> [accessed 01/11/21]

^{vii} https://www.up2europe.eu/european/projects/european-forensic-educational-network_104803.html [accessed 01/11/21]

^{viii} <https://www.cofse.org/> [accessed 01/11/21]

^{ix} <https://jfse-ojs-tamu.tdl.org/jfse/index.php/jfse/index> [accessed 03/6/22]