

# RETHINKING APPROACHES TO LEARNING

Senior Lecturer **Paul Orsmond** and Healthcare Science Course Leader **Ian Davies** reconsider practitioner learning, with the focus on the learner and their participation in practices.



**O**ver the last few months, the changes experienced by the biomedical science workforce in responding to COVID-19 have been beyond precedent. The rapid validation and implementation of new assays, the reconfiguration of pathways to manage demand and allow social distancing of staff, and repurposing of equipment and retraining of staff to work in new ways and support colleagues have been day-to-day occurrences, all set within the wider context of uncertainty and anxiety. Regulatory bodies have provided guidance on changing scopes of practice, and NHS England has issued advice on the deployment of the scientific workforce to support direct clinical care, reflecting the need for a dynamic response to changing circumstances.

## An agile workforce

The changes and challenges are an acute presentation of a developing, underlying trend – the drive towards a more agile workforce. This includes developing a more collaborative role, working

responsively with other healthcare professionals, and demonstrating greater autonomy for clinical practice. The Chief Scientific Officer's recent strategy document, *Science in Healthcare: Delivering the NHS Long Term Plan (2020)*, identifies the need for scientists to address the challenges of increasing clinical demand and inequalities in health through driving transformational change.

The response of biomedical scientists to the challenges of COVID-19 shows these ambitions can be realised, but to do so should not require continual retraining, but a greater awareness of our changing professional identity. This necessitates a fresh understanding of what learning is and how it is experienced.

Traditionally, biomedical science education can be thought of as learning in university and ongoing training and development in hospital laboratories, supplemented by postgraduate education and professional qualifications. This article presents learning focused on the learner and their participation in practices.

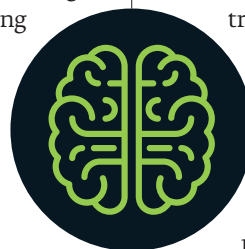
## Learning and training

University education is often considered to occur in a tutor-constructed curriculum, with learning through the acquisition of knowledge in lecture theatres, laboratories, and via digital learning platforms. Such learning teaches students material that they can not readily acquire in the workplace, such as underpinning cell biology, biochemistry and physiology. The learning acquired is acknowledged in passing examinations and progressing through different levels of study. Examinations are a way of ticking the learning box of individual learners.

Through our experiences in developing degree apprenticeship education, with the goal of developing trained biomedical scientists, it is clear that a division

between learning in university and training within the NHS may present a false dichotomy.

Students are on a learning journey to become biomedical scientists; a journey not just to acquire new knowledge but to develop new identities, new ways of being and becoming,





## “Learning in a community of practice is most evident in the workplace”

activities or practices and a deepening of how practice is experienced occurs.

As students and trainees develop, so does the meaning associated with their participation in practice, allowing a corresponding change in identity to occur. Thus, the meaning of knowledge and skills acquired in university change through participation in professional practice. Individual knowledge is recognised through passing examinations. In the constant flux of ongoing activities that are never considered separately from the context within which they take place, learning through participation occurs, and a new professional identity emerges.


Professional knowledge can only change as a result of participation in ongoing professional practice.

Changes in meaning structures, resulting from participation in practice, allow students to bring back into university a new understanding, which may differ from the academic tutors as to the importance of taught elements of the course. This can bring about a change in tutor practices, contributing to co-creation and the development of teaching.

Students in higher education learn within communities of practice both outside of the curriculum and the university. Turning to our experiences in delivering practice-based and apprenticeship education, it is probable that apprenticeship students may well develop and learn through social learning practices resembling a community of practice. This learning occurs outside the taught curriculum and is likely to involve their workplace community, together with discussing differing practices when talking and working with students from different NHS trusts. This contextualises the acquired tick-box learning by

redefining its meaning, but this (and the associated identity change) may not always be recognised by students or educators. Importantly though, it is this participatory learning and changing professional identity that develops the intellectual autonomy to respond to challenging situations with confidence and agility – taking responsibility, determining moral and ethical direction, showing leadership and innovation. The “safe pair of hands” in the laboratory is not just created by the knowledge from formal education, but in the knowledge developed through participatory learning within their community of practice.

### Ambitious visions

The biomedical science community response to the challenges of COVID-19 has shown that agility, resourcefulness, and innovation can be achieved at pace. Understanding why this is so, and to what extent the implicit and often unrecognised role of participatory learning has in realising this, is important. By understanding this, we can work to develop curricula that recognise and foster participatory learning, and use this to “bridge in” new learning to existing communities of practice. Identifying gaps in how participatory learning is understood may underpin the realisation of ambitious strategic visions. 

which require communities of practice engagement within both university and NHS learning experiences.

Learning is not solely about changing conceptual cognitive structures – the acquisition of new knowledge and understanding; students also learn within university and in the laboratory through relational participation in practice. This participation occurs as part of being a member of a “community of practice”, which is a way to understand learning as an integral part of ongoing practice. Within this, participation still considers individual autonomy, but also the individual as a person-in-the-world as a member of a sociocultural community.

### Participation in practice

Learning within a community of practice is most evident in the workplace. The habits and practices of trainees are fundamental to workplace structures, how they operate and how they are understood. With the passage of time, trainees engage – through participation with others, often more experienced biomedical scientists – in different

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