DISTINGUISHED EDUCATION EXCELLENCE AWARDS
Category: Early Career Educator Award
Sammy Taggart

Section C: Case Study

Title: *Adding some SWIVL to our Digital Pivot*

Summary: This case study explores the work of colleagues in the School of Education, led by the applicant, in reimagining practicum assessment throughout the COVID-19 pandemic. Work focussed on engaging with stakeholders, identifying technological affordances aligned with pedagogic priorities, selecting core facilitating technologies, supporting and developing the skills of colleagues, developing the competence and confidence of students and implementation across the majority of schools throughout Northern Ireland. Stakeholders, students and colleagues report favourably upon the innovative deployment of hardware to facilitate unobtrusive remote observations of pre-service teachers' placement activities and cite and pilot capacities for expanding integration within managed-/post-pandemic andragogy.

Keywords: *Placement Continuity, Innovating Assessment, Sustaining Partnerships*

What was done:

Aligned with the 5&50 objectives to: Embrace the opportunities presented through emergent technologies to facilitate and complement teaching and learning practices; and Support and develop our staff to deliver excellence in teaching and learning, this case study shares how students can be assessed and supported during off-campus placement and demonstrates rapidity in resource deployment and skill development in response to complex challenges.

School-based practicum experience has long been an essential component of teacher education programs, and effective supervision is essential to develop student-centred, successful university and school partnerships. The established norm of direct, in-person pre-service teacher observations has been challenged by protective 'bubbles', shielding staff and mandatory self-isolation necessitated in the interest of public health. In response, colleagues from the School of Education, led by the applicant, adopted an innovative, emergency response to the challenges posed by COVID-19, with the capacity to enhance student learning throughout and after COVID-19-related disruptions.

Without the intervention and innovation articulated within this Case Study, the implications for student placement, continuity, progression, and assessment rigour would have been at significant risk.

Figure 1 SWIVL Base Unit

Incorporating the use of tablet devices and an innovative SWIVL™ robotic Base Units (Fig.1), colleagues within the School have been enabled to seamlessly conduct remote observations with student-teachers on placement where access to the classroom was not possible.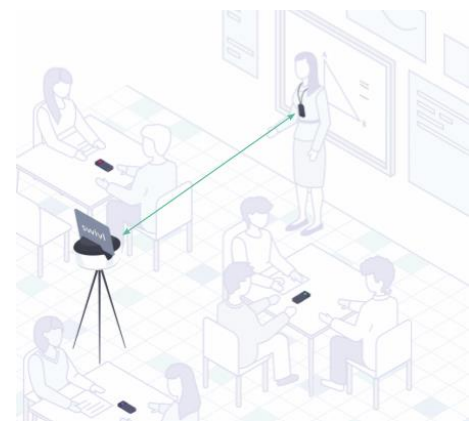 The devices themselves are not especially complex nor unfamiliar, however their application in this context of remote classroom observation and assessment is both beneficial to learning and novel. The robotic SWIVL™ device can rotate 360 degrees, automatically adjusting position as the pre-service teacher moves around the classroom (Fig. 2) by following a digital signal emitted by a marker worn around the neck of the pre-service teacher. The SWIVL™ device acts as a cradle for the tablet device, enabling the lesson to be observed via a private MS Teams call and approved for connection via the secure Classroom 2000 (C2k) wireless network available in all schools across Northern Ireland.

Figure 2 Classroom Placement & Marker Tracking

Teaching is not a simple act, with reflection at is core as a vehicle to foster improvement. Using video to reflect on on-campus micro-teaching has been integrated with the PGCE at Ulster for many years. In parallel to deployment across schools, colleagues set about piloting the use of the devices to develop learner reflection and noticing skills maximise post-COVID-restriction device use. Sherin, 2004, p.13 notes that the use of video technology "affords the luxury of time" and so that explicit noticing of aspects of the lesson can be further reviewed and considered (van Es & Sherin, 2002). The capacity of SWIVL™ devices and online platform to support reflection and teacher-skill development to improve personalised teaching and learning and generate meaningful, actionable dialogue between University tutors and pre-service teachers has the potential to impact reflective practice in teacher education well beyond the University's programme of study.
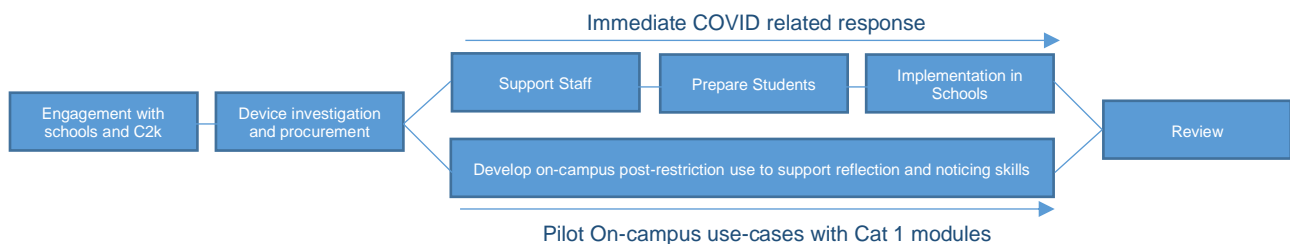

Figure 3 Project Stages

Motivation and aims:

The effects of the COVID-19 pandemic have been felt across the globe, not least within schools and Higher Education. In teacher education, this disruption presented significant risk to school-based observations, learner assessment and, in turn, to the on-going development and interoperability of associated school and university partnerships. Kimbell et al. (1991, p.23) assert that without evidence "our assessment must of necessity be based

on guesswork – and that will not do" – a truism for the course team as gatekeepers of the teaching profession. Crisis can often serve as a useful inflection point for innovation and the initial motivation was to ensure continuity and rigour of practice-assessment during the COVID-19 pandemic, but to simultaneously ensure that any investment in hardware and of time taken for colleagues to upskill would add value in any returning/new normal as pandemic related restrictions would recede. The target added value was to be the development of pre-service teacher reflection. Reflection has increased in primacy in Initial Teacher Education with the terms 'reflective teaching', 'reflective practice', and 'reflective thinking' now commonplace across an array of educational contexts (Bengtsson 1995; Waks 1999). Internationally the potential of video technology in ITE is well documented. Incorporating SWIVL-like systems can allow pre-service teachers to consider and reflect upon the complexities of teaching and learning and critically examine their own practice (Chilton and McCracken 2017; Osmanoglu 2016; Harford and MacRuairc 2008) more easily.

Implementation:

School pupil, student and colleague safety was paramount in the design and implementation of this work. Many of the concerns around the use of digital image-capture in classrooms relate to ethical standards and the protection of participants, not least the children within the classroom environment. Safeguarding participants was centralised in the design of this work and the devices selected contributed to mitigating this risk. Whilst the software accompanying the device incorporates secure recording capabilities, knowledge of legitimate safeguarding and
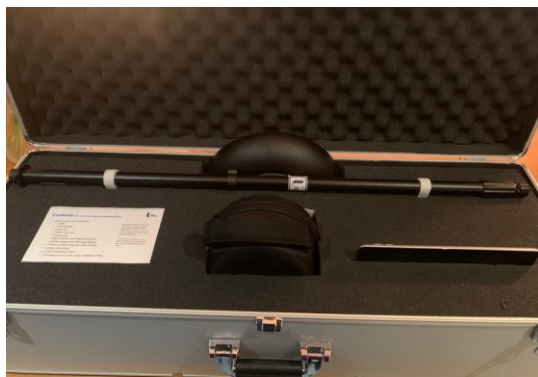

Figure 4 School of Education SWIVL Kit

Teacher Trade Union matters regarding the recording of images in classrooms restricted effective use of this function in schools. Nevertheless, livestreaming student-teacher-focussed classroom activity via School and University approved platforms leaves a negligible digital footprint when conducting a classroom observation - Tracking the movement of the pre-service teacher within the classroom, the content of the MS Teams call was in no way focussed on the pupils within the classroom.

Before deployment, sessions were held to familiarise colleagues and students with the hardware setup and connectivity arrangements. Devices were packaged in kit form (Fig. 4) including necessary disposable gloves and wipes to reduce the spread of COVID-19 and the School of Education's COVID-19 Risk Assessment was updated to facilitate exchange kits throughout between schools

The kits and QR-coded instructions helped students to setup the kits in schools independently. One colleague reported,

> *'The students confirmed that the technology was **easy to set up and use**. The students welcomed the lesson feedback and tutor support arising from the Swivl observations. They reported that they increasingly **felt at ease** during lessons as they often forgot they were being observed.'*

Once the hardware was setup in the classroom, tutors could arrange observations with the pre-service teacher via MS teams and obverse the lesson with clear audio and student-focused video. Once the lesson concluded tutor remained on the private MS Teams call to engage in assessment feedback and debrief as the student moved to a more private location within the school.

Successes and lessons learnt:

Students and colleagues across the PGCE were invited to share reflections on the use of these devices with responses being overwhelmingly favourable and are summarised below.

So much can be learned of an institution by how it values and resources the needs of its people. Linked to measures of success pertaining to well-being and operation excellence in 5&50, work within this case study enabled colleagues to fulfil personal and familial obligations in parallel to supporting students on placement during peak periods of unprecedented COVID-19 infection. One colleague reported that this new methodology,

> '…***provided a real lifeline*** *in terms of allowing me to continue to seamlessly support students as they moved from the frontloaded academic stage of the course, to the more challenging and practical school-based, teaching practice stage of the course. As a parent of a child who was **shielding**, personally this **alleviated a lot of stress** I felt, in that I was still able to keep continuity for the students and provide direct feedback on their teaching, (whilst not physically being in the school building).'*

Another reported,

> *'I utilised the Swivl Camera throughout the pandemic year of 2020-21.* ***This allowed me to self-isolate and shield.*** *This turned out to not only be an acceptable substitute, but indeed, in many respects **superior** to in- person lesson observations.'*

Aligning with targets associated with Academic Excellence, tutors reported learning benefits afforded by the work within this case study.

> *'I felt that the SWIVL technology focused on the student teacher and **offered real insights into their developing pedagogy** and on their use of teacher talk, in particular. […] Such conversations (as teachers move around the classroom supporting and encouraging pupils) **are not as easy to observe and hear when observing directly** as an observer in the classroom and when seated in the midst of a busy and bustling classroom environment. {…} It **gave a very authentic impression** as to how the student teacher was tailoring instructions and explanations to **meet diverse pupils' needs**.'*

The student voice was also collated in this regard and one student reported,

> *'SWIVL was a great alternative as I could see [Named tutor] through the camera and could see them watching but also there were able to see the classroom **and hear everything I was saying and the pupils responses clearly**!'*

When the devices were used on campus for teachers to self-reflect on their microteaching sessions, students were fulsome in their praise on how the adoption of this new technology allowed them to rethink their teaching and communication styles and methods. Students reported,

> *'During my microteach the SWIVL camera allowed my lesson to be recorded and sent back to me to review my practice, playing back the footage allowed me to see which areas I strive in and areas which needed development for going out on teaching practice, which I thought was **a great strategy for both personal and professional development**. As my teaching practice was during COVID-19, my tutor's observation was via the SWIVL camera, which allowed us to **connect and converse effectively with constructive feedback given as if she was present in the room**.'*

One member of staff highlights much of the additionality afforded by this project and reports the innovative practice noted by the external examiner for the course,

> *'The SWIVL cameras **ensured that the scheduled observation** of students on school placements was **uninterrupted** and class **teachers were extremely willing to accommodate** the technology. The cameras provided **a lens into the classroom**, giving students the immediacy of a 'regular' school visit, whilst offering tutors the same close observation that would be expected in a classroom setting. The **value of the SWIVL cameras was noted by the External Examiner** who described it as **'an excellent innovation … which I very much hope might continue next year'.**

As COVID-related restrictions recede, SWIVL devices will remain integral to the School of Education provision. Centralised in reflective practices, the capabilities will assist in supporting pre-service teachers to develop this core pedagogic skill. Augmenting integration into a post-pandemic provision will see the devices used to enhance pre-COVID-19 provisions. SWIVL devices can be used to support students on (hopefully) post-COVID placements, providing timely linking of students and tutors whilst minimising excessive car journeys. The potential for peer-to-peer remote observation workflow is also being explored. The capacity, with more streamlined workflows of device sharing, to reduce unnecessary travel and mitigate the workload of colleagues remains pertinent as the University reflects on well-being and it sustainability footprint moving forward.

Transferability:

The transferability of the workflow and benefits outlined in this case study is significant and already has garnered interest from several sources. Designed as an initial response to a challenge faced by the PGCE course, the devices are now integral to remote observation protocols of four courses with workflows being designed to support students on International Placement once international travel normalises.

There has been some interest from other ITE providers both in NI and across the United Kingdom. Details of the innovation have been shared at the COVID-19 ITE working group (NI) and many of the external examiners for the PGCE provision have shown significant interest in this innovation with a number seeking details as they consider similar implementations within their own courses. In my role as External Examiner for the PGCE provision at Roehampton University, I have shared details of our work which again have been received with considerable interest. As a leader in University- School partnership, our capacity to expand use of these devices to support in-service teachers is being examined.

More broadly, courses with practicum assessment of any professionalism are likely to draw value from the remote assessment capabilities outlined within this case study.

Looking towards provision in the School of Education, the affordances outlined within the case studies have served as inspiration for colleagues within the school who are now considering a hyflex approach to teaching and learning in the context of the ongoing impact of COVID-19 (Kohnke & Moorhouse, 2021).

Further information:

Bengtsson, J. (1995). What is reflection? On reflection in the teaching profession and teacher education. Teachers and Teaching, 1(1), 23–32. https://doi.org/10.1080/1354060950010103.

Broadfoot, P. and Black, P., (2004) Redefining assessment? The first ten years of assessment in education. *Assessment in Education: Principles, Policy & Practice,* 11 (1), 13.

Chilton, H., & McCracken, W. (2017). New technology, changing pedagogies? Exploring the concept of remote teaching placement supervision. Higher Education Pedagogies, 2(1), 116–130.

Harford, J., & MacRuairc, G. (2008). Engaging student teachers in meaningful reflective practice. Teaching and Teacher Education, 24, 1884–1892.

Kimbell, R., Stables, K., Wheeler, A.D., Wozniak, A.V. and Kelly, A.V. (1991) *The Assessment of Performance in Design and Technology.* London: Schools Examinations and Assessment Council and HMSO

Kohnke.L & Moorhouse.B (2021) 'Adopting HyFlex in higher education in response to COVID-19: students' perspectives', Open Learning: The Journal of Open, Distance and e-Learning, DOI: 10.1080/02680513.2021.1906641

Osmanoglu, A. (2016). Prospective teachers' teaching experience: Teacher learning through the use of video. Educational Research, 58(1), 39–55.

Sherin, M. G. (2004). New perspectives on the role of video in teacher education. In J. Brophy (Ed.), *Using video in teacher edu- cation* (pp. 1-28). Boston: Elsevier.

Van Es, E., & Sherin, M. (2002). Learning to notice: Scaffolding new teachers' interpretations of classroom interactions. *Journal of Technology and Teacher Education, 10*(4), 571-596.

Waks, L. J. (1999). Reflective practice in the design studio and teacher education. Journal of Curriculum Studies, 31(3), 303–316.