Enhancement Themes QAA Collaborative Cluster Report

Widening Participation with Lecture Recording

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Executive Summary

This project arose from a Collaborative Cluster call on the 2017-2020 enhancement theme, Evidence for Enhancement: Improving the Student Experience. As part of this theme, the Cluster Lead at the University of Edinburgh had participated in cluster events exploring particularly how qualitative evidence can be used within institutional evaluations. From this work, it became clear that widening participation was a key motivator for implementing lecture recording use, and so this Cluster was proposed to explore the theme 'student engagement and demographics'.

The Collaborative Cluster found examples of best practice within the higher education sector where lecture recording was used to support widening participation. However, there were also key gaps, particularly surrounding policy, and in existing evidence as to how widening participation students experienced lecture recording, and what challenges existed for them. To help combat this, the cluster engaged with widening participation students to characterise how they did or did not use recordings. Recordings were associated with attempting to manage time and study strategies effectively during the transition to higher education, which was recognised as a difficult period in our widening participation focus groups. Through a series of open meetings, the Collaborative Cluster identified a number of strategies that the higher education sector can adopt to better support student engagement through the adoption of lecture recording, and a series of guidance resources were produced.

In summary this project collected new evidence, and improved the use of existing evidence by staff by providing further guidance. In the longer term, we hope this project will improve the student experience, particularly for widening participation students, and contribute to a culture in which evidence is utilised to better support student engagement across a wide range of demographics.

Project Operation

This Collaborative Cluster was led by the University of Edinburgh, in collaboration with the University of Glasgow and the University of Aberdeen. The Cluster Leaders intended to form an open collective of interested parties across the sector, and to make the work of the Cluster transparent and responsive to feedback. To this end, a public 'face' of the Cluster was created through a manned Twitter account (@LectureCPTR: https://twitter.com/LectureCPTR).

Between December 2019 and May 2020, the Cluster planned to host a series of meetings open to all across higher education sector: Edinburgh (December 2019), Aberdeen (April 2020), Glasgow (May 2020) with the intention to:

- Promote inclusivity in teaching and learning with lecture recordings
- Explore where lecture recording may support transitions throughout higher education
- Support the development of study skills within all students, but specifically for widening participation students.
- Develop best practice guidance for when and how we can use recordings to support these students at a sector level.

- Develop resources for prospective university students and school teacher professional development.

The cluster aimed to do this through the collection of new evidence, particularly surrounding best practice in the sector, and the synthesis of new guidance to support staff and students to make best use of the existing evidence.

There were two further closed workshops scheduled for November 2019 and April 2020 for the Cluster leaders to facilitate the open workshops through collation of evidence and synthesis of guidance. Between open workshops, the Cluster leaders addressed the evidence or evidence gaps that were identified in the open workshops.

Impact of COVID19

Approximately half-way through the Collaborative Cluster's operation, SARS-COV-19 (COVID19) resulted in widespread sector disruption. As part of this, the final two open meetings were hosted as online discussions. Naturally, the Cluster's focus pivoted to supporting widening participation with recordings in a blended learning environment, and resulted in an unplanned output, guidance regarding incorporating widening participation needs into providing blended learning in the short and longer-term approaches to COVID19 responses.

Project Key Tasks

The key tasks of the Collaborative Cluster were to:
- Bring together the sector in a series of open workshops to:
  o Identify existing good practice
  o Identify key gaps in the sector with regards to how we support widening participation students with lecture recording
  o Develop and reflect on appropriate guidance
  o Promote good practice within the sector

As a result of the first open workshop (Edinburgh), a further task was identified:
- Collect evidence with regards to how widening participation students experience learning with lecture recordings

Review of Evidence

Widening Participation

'Widening participation' is a common agenda item in higher education, but often loosely defined. In HESA data, widening participation is defined as the participation of groups that are otherwise under-represented in higher education (HESA n.d.). This is most often discussed in terms of deprivation indices.

In Scotland, for example, there is a government target for 20% of HE entrants coming from the 20% most deprived backgrounds in the country by 2030 (Scottish Funding Council 2018). However underrepresented groups can also include Black Asian and Minority Ethnic (BAME) groups, students with disabilities, and students with a range of gender and sexual identities.

The Cluster established a need for a definition of widening participation in higher education that reflected the diverse range of students that are presently under-represented. An inclusive education approach, as per (Florian 2014) is one that 'supports teachers to respond to individual differences between learners, but avoids the marginalisation that can occur when some students are treated differently'. The Cluster approved the European Universities Association definitions of Diversity, Inclusivity and Equity (Claeys-Kulik and Jørgensen 2018) where:

- Diversity refers to the make-up of a group, such as the sex, gender identity, age, sexual orientation, ethnicity, cultural associations, religious affiliation, physical or mental conditions, health conditions, and socio-economic background.
- Inclusivity refers to these diverse backgrounds all being valued within the group and the institution is aware of the differences and privileges within the diverse group.
- Equity acknowledges that people have different starting points, and that inclusivity can only occur when specific barriers to different groups have been overcome.

Lecture Recording

Lecture recording (variously lecture capture, lecture podcasting), is the practice of capturing part of a teaching activity via visual and/or audio recording to support learning. There is considerable debate in practice as to the extent recordings support learning, or unintentionally devalue it (MacKay 2019; Nordmann et al. n.d.). The precise role of a 'lecture' in learning is surprisingly difficult to define, but has long been considered 'more than' a simple conveyance of factual matter (Trott 1963). The Cluster was keen to identify what evidence existed regarding the impact of recordings on learning.

Widening participation can be supported through technology enhanced learning in four main ways, per (Lane 2012).

- Making resources more available
- Making more resources affordable
- Making resources more accessible
- Making resources more acceptable to the student

Lecture recording can make a teaching activity more available to students unable to access materials due to illness, caring responsibilities, or other commitments. It can make teaching more affordable, particularly where students live far away from campus (more common in widening participation students, Kenyon 2011). It can be more accessible to those with auditory or visual processing disorders, or those with attention deficit hyperactivity disorder, particularly through the ability to pause and rewind material. Finally, the acceptability of materials may be greater for students where it particularly models an academia that represents them. The Cluster discussed particularly how recordings can support diversifying a curriculum where they can be re-used and shared, with that lecturer's agreement.

The Cluster also discussed negative impacts of recordings on students, particularly where affording more flexibility to students may in fact serve to alienate them from the campus space. An example was given

of a student with a significant travel cost who may choose to watch a recording as opposed to travelling in for a sole lecture. While this is a short-term boon for the student, what other important aspects of the university experience are they missing? The Cluster highlighted that the use of recordings should support WP student concerns, not 'paper over the cracks' of where educational institutions do not adequately consider the inequities of the WP experience.

Best Practice

Policy

The Cluster instigated a review of lecture recording and widening participation policies across the 15 HE providers and 20 FE providers in Scotland. We found 19 institutions (15 HE Scottish Institutions, the Open University, Glasgow School of Art and the Royal Conservatoire) with public facing definitions or references to widening participation in their policies. The majority of these extended beyond Scotland's SIMD20 category and also referenced care-experienced students (68% of definitions), students who were carers (37%), and students who are the first in their family to attend university (21%). We explored the policies of 33 of these institutions (excluding Glasgow School of Art and the Royal Conservatoire Scotland for their unique curricula, and the Open University for its widening access focus) to categorise their lecture recording policies. There were very few institutions (n = 7, all HE institutions) with public facing lecture recording policies, although a few more made reference to lecture recording within their widening participation policies (Table 1). In summary, there is a requirement for a more considered approach to policy within both areas, and how recordings can support students from widening participation backgrounds.

Table 1: *Summary of widening participation and lecture recording policies across Scotland Higher Education Providers (n = 15).*

Policy	N Institutions	% of HE Institutions in Sampled (n = 15)
Related to Lecture Recording		
Opt-in Policies	4	27%
Opt-out Policies	3	20%
Reference to lecture recording in Widening Participation policies	3	20%

Supporting transitions

At meeting one (Edinburgh, 13/12/2019), the Cluster identified an area of best practice within the Scottish HE sector where lecture recordings were used to support transitions into university for widening participation students. The University of Glasgow Widening Participation team presented their

work supporting student transitions[1]. Monika Anderson and Victoria Blades presented on the use of blended learning in the University of Glasgow's Widening Participation programmes. These include their Reach and Access to a Career programmes, Sutton Trust Summer School, the Taster Week with Top-Up Programme, the University of Glasgow Summer School and HNC/HND Transitional Programme, and the HNC Articulation Programme.

AS part of this, the WP Team run an Online Academic Skills module which can be taken stand-alone, or completed as part of Taster Weeks, the Sutton Trust Summer School, or the Summer Schools. Students in this module learn how to make notes, and receive formative feedback on the activity. Recordings are utilised to give students the opportunity to experience a lecture prior to attending university.

Additionally, the WP team presented at the final open meeting (Online, 15/05/2020) where they detailed the work being conducted in response to the COVID-19 disruption on widening participation activities[2]. In addition to presenting case studies for how each programme has been expanded and moved online, the Glasgow WP team also discussed considerations for online teaching with respect to technology and environmental inequality and the extra demands that online teaching can place on disadvantaged students. Suggestions for inclusive best practice for online teaching were identified such as ensuring flexible engagement with asynchronous content.

Student Evidence

In the open Cluster meeting in Edinburgh, the Edinburgh University Student's Association presented on student activities relating to Widening Participation at Edinburgh[3]. EUSA's focus was on supporting Equity Diversity and Inclusion approaches to supporting students, and they were particularly focussed on tackling elitism, and hidden course costs, including accommodation costs and tenancy rights.

In these discussions, the Cluster identified a lack of evidence in student feedback mechanisms regarding how WP students receive and make use of lecture recordings. Sources of evidence include student surveys, such as the National Student Survey and feedback surveys, and user-data from learning analytics. The free-text responses in such data sources were considered particularly valuable. There are also the experiences of WP teams within institutions, and their knowledge of the support that is most needed. However, the Cluster also identified a recurring challenge with these types of data sources. Often characteristics related to WP (such as those identified in the policy section above) are not recorded, or if recorded not reported in results due to concerns about low numbers and identification. In this way, there is a systematic 'gap' in our information where it is difficult to specifically explore how recordings affect WP students from our existing data.

An outcome of the open Cluster Edinburgh Meeting was that we needed to know: how do Widening Participation students perceive and utilise lecture recording resources?

To answer this question, the Cluster Leads ran a series of focus groups with students at the University of Edinburgh, University of Glasgow, and University of Aberdeen (Table 1). Each focus group was facilitated by the local Cluster Lead and participants were recruited via the respective institution's Widening

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[1] https://youtu.be/9KsNIK-uKt0?t=851
[2] https://youtu.be/eWqzhh1YigY?list=PLCLI88kIIROWEmckWn749ZKBpSl801wGK
[3] https://youtu.be/9KsNIK-uKt0?t=1857

Participation team distributing a recruitment email via their student lists. Ethical approval was granted from within each institution's ethical body[4]. Participants were recorded via Dictaphone and recordings were transcribed by a researcher at the University of Edinburgh (Leigh Murray). Participants were told they could use a pseudonym for recordings and could withdraw at any time during the focus group. No participants withdrew from the study. Participants received a £20 Amazon Voucher to thank them for their time.

Table 1: Focus groups, timings and participants as part of Cluster research on Widening Participation students' experiences with lecture recordings.

University	N Participants	Mode
Aberdeen	4	In person, 02/03/2020
Glasgow	4	In person, 05/03/2020
Glasgow	3	In person, 12/03/2020
Edinburgh	4	Immediately post-COVID19 campus lockdown, was conducted via online text chat, 18/03/2020

A grounded theory approach was used to approach the question "how do widening participation students perceive and utilise lecture recording resources at university?" A researcher naïve to the focus groups iteratively thematically coded all four focus groups and developed themes in collaboration with the Cluster Leads until saturation.

There were six emergent themes from this work:

University Life

This theme was mainly centred around the student's subjective experience of their time at university, and often highlighted the students' perception of their background and contrasting that with their classmates. Mature students referenced having different life experiences to their classmates, and many students discussed their lack of confidence in their skills.

> "people coming from maybe disadvantaged backgrounds who are equally as capable, might feel sort of daunted by the fact that they're actually going to university. So they might, I think they're a bit anxious about going to lectures, I think that would really help them, be really beneficial, they wouldn't miss out just because they're feeling a wee bit, you know, overwhelmed or something" – Glasgow Participant

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[4]University of Aberdeen Ethical Approval Reference: Aberdeen University School of Psychology Ethics Committee Ref PEC/4455/2020/1
University of Edinburgh Ethical Approval Reference: Moray House School of Education and Sport Ethics Sub-Committee Ref 2678
University of Glasgow Ethical Approval Reference: College of Science and Engineering Ethics committee Ref 300190121

Inclusivity

For the student participants in this part of the project, inclusivity incorporated the accessibility of resources for those with auditory or visual processing disorders, matching or overcoming study preferences, and their own health and learning needs.

> "I understand Joe[5], I had that problem as well. I am allocated a recorder from disability but find it hard to use in seminars as its intrusive … When in the lecture halls I felt I could record but it seems wrong to put it on the desk for seminars as its more talking." – Edinburgh Participant

Time Management & Priorities

The WP students in this sample discussed their differing priorities which included financial concerns, mirroring EUSA's work on the hidden costs of degree programmes, and the pressures that students feel, both from within themselves, but also from their institution. Guilt and a fear of missing out on important experiences because of commitments elsewhere were highly prevalent within this theme.

> "In terms of balancing work and doing uni I feel like in terms of other students I probably don't go out and go out drinking as much. Not that big on drinking, anyway. It's not that big a deal but I do sometimes feel like I see other people going out like I should probably be doing that more. But it's trying to find time between other things and trying to prioritise. You feel bad sometimes if you go out and you're, like, I should really be working on that. I have some guilt behind it sometimes which stops you." Aberdeen participant

Lecture Recording Utilisation / Study Strategies

In talking about how they did (or would like to use) recordings for studying, participants spoke about challenges around note-taking, particularly where materials or lecturers were not clear. They spoke about trying to find efficiencies in their study strategies

> "[I] get stressed out trying to take notes and listen at the same time because I'm always scared in case I miss something but having that opportunity to go back I can relax and I can take a few notes but then I can go back and add to bits if I don't understand it or go over things."- Aberdeen Participant

Lecture Recording Perceptions & Concerns

Participants also had many concerns about using lecture recordings, worrying that using them would reflect poorly on them as a student, particularly if it was seen as the recording being used to substitute for attendance. Students also felt the technology was underutilised, and often unreliable, particularly where lecturers did not use mics for example, or did not use a recordable way to point to a diagram (e.g. using a laser pointer instead of a mouse).

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[5] Pseudonym

"For me, having the lecture recording, I live quite far away and it costs me quite a lot of money to get in, so one the days only when I need to come in for an hour or two hours, if there's lecture recordings there, I won't come in because it costs me quite a lot of money to come in for a very short period of time. So I will stay at home and watch the lecture recordings instead, but on other days when I'm in for, you know, a whole day, then I'll come to the lecture, and then watch the lecture recording later." – Glasgow Participant

Student Transitions

Some of the biggest challenges students faced coming to university were transitioning to becoming independent learners who managed their own time.

"Yeah, so for me it's I've had, I'd probably describe it as continuous learning. So it's not just the academic perspective but…so I moved away from home, so it's like that experience, a completely different experience of like, living for yourself and managing finances etc., etc. Which has been a challenge, I think I'm still getting used to" – Glasgow Participant

Outputs

The Cluster Leads developed a series of resources which were reviewed at open Cluster meetings. In addition, a number of academic papers are under development responding to the research developed by the Cluster Leads. The majority of the outputs are hosted on the Enhancement Themes web page for the Cluster. These outputs include the '10 Simple Rules for a Temporary Online Pivot in Higher Education' paper written in response to the COVID19 outbreak (see below).

Guidance Resources Produced By Project

Resource	Description
Top Tips Leaflet	A short pdf leaflet with top tips from the cluster including sharing of best practice use cases of lecture recording in widening participation. This leaflet was reviewed by the open cluster on 15/05/2020, and feedback incorporated into final document
Database of resources/links	Links to policies, resources, and materials, to be hosted on Cluster page and possibly on QAA Focus on: Technology Enhanced Learning Resource Hub

School Resource: What Does University Teaching Look Like?	A short 'proof of concept' video featuring a variety of classroom styles and VLEs aimed at students/high school teachers to show what university teaching looks like. It is anticipated that many stakeholders will be unable to participate in this, so a proof of concept simple design will be created by the core cluster team, with the hope that other stakeholders (e.g. SQA, SSERC) will be able to engage post June. This was reviewed by open cluster on 15/05/2020. The proof of concept version is available here: https://drive.google.com/file/d/1I1VQY3x76SezSrGd7uImCpNHLT9G6a1B/view?usp=sharing
Recommendations for future work	Short summary of 'known unknowns' and 'unknown unknowns' for future work to be hosted on Cluster page.

Academic Outputs Produced by Project

Output	Description
Nordmann, Hutchison, & MacKay (In Prep). Look again: a socially progressive case for mainstreaming lecture recordings. Invited chapter in Handbook for Digital Higher Education. To be published by Edward Elgar Publishing. Editors: Professor Rhona Sharpe, University of Oxford, Professor Sue Bennett, University of Wollongong, Dr. Tünde Varga-Atkins, University of Liverpool	An invited chapter focussing on the socially progressive case for mainstreaming lecture recording.
Academic paper on qualitative evidence (focus groups) for how lecture recordings can and can't support WP students (MacKay, Nordmann, Murray, Blades, Browitt, Anderson & Hutchison, in prep).	A paper writing up the results of the four focus groups (2 x Glasgow, 1 x Edinburgh, 1 x Aberdeen) with widening participation students. Expected September 2020.

Outputs Impacted by COVID

Output	Description
Panopto UK HE User Group Meeting (02/04/2020 - **postponed, presently not rescheduled**)	Edinburgh Napier Invited Talk https://www.eventbrite.co.uk/e/panopto-uk-he-user-group-meeting-april-2nd-2020-tickets-94594648139
Enhancement Themes Conference (06/06/2020 - **postponed, aiming to present something at online conference: Evidence for Enhancement, Autumn 2020**)	International Enhancement Conference 2020 (Glasgow) discussion session. 3.2.1 14:30 - 15:30 Title: Best practice with lecture recording to support widening participation in HE Presenter: Jill MacKay Organisation: University of Edinburgh
QAA Annual Conference (23/04/2020 - **postponed, presently not rescheduled**)	QAA Annual Conference 2020 (London) Title: Widening Participation with Lecture Capture. Abstract: With the increasing use of lecture capture in HE we aim to understand how this technology might be used to support students from the perspective of equality, diversity and inclusion. We will present preliminary findings from our QAA collaborative cluster work with colleagues and students from across the HE sector. Presenters: Jacqui Hutchison & Emily Nordmann

Supporting Higher Education During COVID19

During the early phase of the COVID19 outbreak and associated lockdown, the Cluster Leads identified a gap in the current discussions regarding how technology enhanced learning solutions to the COVID19 'pivot' intersected with equality, diversity and inclusion aims. Through discussion with colleagues across the sector, the Cluster Leads developed the following publication, which was shared as a pre-print, and has formed the basis of a number of talks across the sector:

Nordmann, E., Horlin, C., Hutchison, J., Murray, J.-A., Robson, L., Seery, M. K., & MacKay, J. R. D. (2020). 10 simple rules for supporting a temporary online pivot in higher education. doi:10.31234/osf.io/qdh25

This paper has generated discussion across the sector, including a series of talks aiming to highlight how higher education can support the needs of all students at this time.

Supporting Students through COVID19 Talks

ABLE Academy Webinar (28/04/2020) Dr Jill MacKay Dr Emily Nordmann	Abertay University Invited Talk 28/04/2020 Abstract: *Now that, out of necessity, we all have more experience providing recorded content for students come to the AbLE Academy Online meeting to catch up with your colleagues and chat about your experience. Dr Jill MacKay from Edinburgh University and Dr Emily Nordmann from the University of Glasgow will be our guest speakers, both of whom have extensive experience implementing recorded content and conducting research on the pedagogical and practical impact of lecture capture technology. Emily will give a review of the lecture capture literature, including a summary of how recording usage impacts grades and achievement and how it is related to study skills more generally, whilst Jill will discuss the results of a focus group study conducted as part of a QAA funded collaborative project on lecture capture and widening participation.* https://www.eventbrite.co.uk/e/widening-participation-with-lecture-recording-tickets-101750002998
Irish Universities Association Digital Education Community Webinar (25/05/2020) Dr Emily Nordmann	Topic: IUADigEd Community Webinar: 10 simple rules for supporting a temporary online pivot in higher education Time: May 25, 2020 12:30 PM
QAA Enhancement Themes Conference "Learning from Disruption: Exploring What Counts in Higher Education" (03/06/2020) Dr Jill MacKay	QAA Enhancement Themes Online Conference Title: #ETConf20: 10 simple rules for supporting a temporary online pivot for higher education https://youtu.be/4sPrkHWWImo?list=PLCLI88kIIROWOczaxkk3V-FROWpBownmd
TILE Network Webinar (15/06/2020) Dr Jill MacKay Dr Emily Nordmann	Title: 10 Simple Rules For Supporting A Temporary Online Pivot 1o Simple Rules For Supporting A Temporary Online Pivot Abstract:

	As continued COVID-19 disruption looks likely across the world, contingency plans are being drawn-up for the 2020-2021 academic year. This includes delivering face-to-face programmes fully-online for both new and continuing cohorts of students. This temporary pivot will necessitate distance teaching and learning across almost every conceivable pedagogy, from fundamental degrees to professionally accredited ones. In this seminar we will discuss our new preprint "10 simple rules for supporting a temporary online pivot in higher education" and how, despite much of what is to come being far from simple, there are a number of underlying principles that can be used to support the planning process (and how these rules don't just apply to higher education, despite the focus of the paper). We will also present interdisciplinary examples for online pivot plans that are built around the 10 rules. Finally, we will end with a discussion of the concerns and challenges that face you as educators. To allow us to tailor this discussion, we would be grateful if you could complete this short questionnaire before the seminar. The full paper can be downloaded here https://psyarxiv.com/qdh25
TU Dublin Seminar (24/06/2020) Professor Michael Seery	Title: Dublin e-learning summer school
Centre for Education Support and Innovation (CESI) Cardiff University (20/08/2020) Dr Emily Nordmann Dr Jill MacKay	Meet the Experts Webinar Series 10 Simple rule for supporting a temporary online pivot in higher education.

Project Activities and Long-Term Goals

The project activities included bringing the sector together for overall discussions of the present evidence, consolidating and sharing existing evidence, and the production of new resources to support learning and teaching in future.

Our hope is that these conversations and resources will make it easier for individual staff to make changes to their teaching, and to support institutions in exploring how they can utilise technology enhanced learning, specifically lecture recording, to support students. By making the evidence accessible, and creating networks of interested practitioners, we hope to facilitate conversations at all levels, from individual instruction to senior management to consider how to integrate widening participation needs when implementing lecture recording within their institution.

Through sharing good practice and evidence-based guidance and providing an opportunity for practitioners to discuss and offer feedback, we hope to increase the awareness and understanding of the complex interplay between WP students and technology. Not all uses are always positive, and there

needs to be recognition of how WP students can still be disadvantaged by technology use. We expect that this will support more long-term changes to behaviour, particularly in supporting individual lecturers to change their own teaching practices, and giving institutions an easily accessible evidence base for the development of future policy. In the long term, we hope to see increased student recruitment and retention from WP cohorts, and greater diversity of student cohorts within the Scottish higher education sector. It would be particularly important to demonstrate the impact of COVID19 on this target, and to minimise the potentially disproportionate repercussions for WP students.

Expected Benefits

In the short-term, i.e. within the next year, we expect the following benefits:
- Sector-wide discussion regarding the impact of technology enhanced learning on WP students.
- Use of Cluster-produced guidance in education institutions across sector

At the beginning of this Collaborative Cluster, prior to COVID19, we saw great interest in the intersection between lecture recording and widening participation. At the Edinburgh Open Cluster Meeting (13/12/2019), many participants remarked on the importance of this work, and the need to consider the impact of earning technology on widening participation at all levels of the sector. Student union members, learning technologists, lecturers, and management with policy responsibilities attended our Edinburgh meeting. Interest in all of the open meetings, particularly the online ones, also came from outwith the Scottish HE sector, with participants from elsewhere in the UK, Dubai campuses, and in the European Union. It is also notable that prior to the COVID19 lockdown, we received multiple invitations to speak, such as at the UK HE Panopto User Group and UK-wide QAA conferences. This demonstrates the reach and importance of these discussions, and the benefit of coordinating interest parties throughout the sector to contribute at their own pace. Additionally, the use of infographics on the Cluster's Twitter account proved an effective and easily shared method of communicating outcomes of cluster discussions (Figure 1). The use of Twitter facilitated the international reach of the Cluster, with Twitter engagements across the UK HE sector, particularly from faculty development groups sharing resources. Utilising recordings also facilitated greater Cluster reach. As of July 2020, the recording of the Edinburgh Open Meeting has 155 views, the April Open Meeting pre-recorded presentation has 104 views, and the recording of the May Open Meeting has 94 views. In the immediate period following the Collaborative Cluster's work, we have evidence that experience in this area is of interest to the sector, with the series of further invited talks referenced above, and the Cluster recordings and resources being utilised.

Figure 1: *An example of infographics used on Twitter to disseminate Cluster discussions*

In the medium term, i.e. within the next two to three years we expect the following benefits:
- Positive feedback from students regarding integration of lecture recording
- Exploration of recordings in public engagement/supporting student transitions
- Greater uptake of recordings where appropriate throughout the sector, suggesting greater confidence in their use.

We would also consider the numbers of WP students retained during the AY 2020-2021, and positive feedback from those students with regards to tech usage to be indicative of a potential benefit, given the effects of COVID19. We hope that the network of interested academics grown by the Cluster Leaders will continue to produce research in this area based in the Cluster's experiences, and support these students through furthering Scholarship of Teaching and Learning. In the medium term, we hope to see increased implementation of the recommendations made by the Cluster, particularly surrounding the use of recordings to support transitions, which is an easily observed metric,

In the long term, i.e. in three years or more we expect the following benefits:
- Explicit detailing in lecture recording policies as to how students should be supported with the resources
- Integration of recorded materials into school-higher education transitioning schemes
- Evidence from student feedback regarding the use of recordings and appropriate technologies in their courses.

Acknowledgements

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