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Mentoring development research at Tallinn University

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ABSTRACT

We will present the outcome of the development research, including the support model for novice lecturers at Tallinn University. One of the most common ways to support novice lecturers in universities is the Mentoring program. Previous research indicates that mentoring in Tallinn University often happens in non-formal ways, formal mentoring programmes are not yet implemented. The aim of the research is to develop the mentoring model and launch a mentoring system. We saw the need to look at mentoring as a comprehensive system, combining the current and planned supportive activities in university. In cooperation with academic units we aimed to develop the best practice. As a result of our work, we realised that a sustainable, people-centered work culture that supports professional development is a time and resource-intensive process that requires meaningful co-creation between stakeholders, working together towards the same goal.

In order to cope with complex and high expectations, novice lecturers need systematic and yet specific support. One of the best approaches to support the novice lecturers to enter an organisation is to offer mentoring by formal mentoring programme. However, the formal mentoring system has not yet been systematically designed and launched at Tallinn University. The aim of our development research is to create a model of mentoring, keeping in mind the needs and opportunities of novice lecturers, academic units and university.

We conducted interviews with nine lecturers from the two academic units of Tallinn University. Using content analysis, we explained how and with whom they reflect about teaching, what kind of support they need, and how they want to experience mentor support. Based on both surveys and the scientific literature, novice academics find mentors in informal ways, often the mentor is the colleague who either invited the person to become an academic teacher or the academic, who had previously been responsible for teaching the same subject. As there is need for support for the novice lecturers, universities should develop the formal mentoring programme, offering coordinated support for every novice academic in a way that imitates the informal mentoring. As researchers, we realized that from an institutional perspective, it is difficult to find the best ways to support beginning lecturers without doing it in collaboration with other university units. We mapped which activities could be centralized and implemented at the university level and which activities implemented and executed in the academic units, and how these activities will ultimately also be expressed in both attestation and accreditation situations. As a result, we have developed a model that focuses on the novice lecturers and describes the existing activities and contacts and offers also the missing developments. The model that is created will be aligned with the stakeholders, and after the feedback from the stakeholders implemented as new practices in the academic units.

1. INTRODUCTION

In order to cope with high expectations, novice lecturers need systematic support. The most widely used option for supporting the novice lecturers in higher education is mentoring. However, the mentoring system has not been systematically implemented at Tallinn University. In the community of practice “Academic’s Science LIFE” the representatives of institutes and developers of higher education didactics from both academic and support units of Tallinn University merged with the aim of creating a comprehensive and sustainable mentoring system**.** The aim of our development research is to create a model of mentoring, keeping in mind the needs and opportunities of both parties: the novice lecturers, the academic and support units. In the first stage, we collected data from theoretical sources, and collected the input on mentoring of different stakeholders: the directors of the academical units, the managers of administrative and teaching staff, and the representatives of the support units.

2. METHOD OF THE STUDY

The need for development research arose because different attempts of implementing mentoring have been tested in Tallinn University over the past years (f.e Primus program, etc), yet the implementation has not led to sustainable practices and currently, initiatives have been taken in different institutes of Tallinn University to restart with mentoring. The initial task was to find ways to create research-based, comprehensive and sustainable practices to support the development of novice lecturers at Tallinn University. In order to do so, the task was to become acquainted with Tallinn University and other universities practices and in co-creation with all the stakeholders (experts and practitioners from both academic and administrative units) develop a mentoring system. Theoretical sources, previous experience, etc. can be used in development research to define the problem, on the basis of which the first application is outlined (Plomp, 2010). Development research combines theory with practice and therefore offers a practical research-based solution to complex practical problems that do not have a single answer in educational research (Lodico et al. 2006, Plomp 2010).

The development research process (Cobb et al. 2003, Nieven 2010, Plomp, 2010) is mainly characterized by the following phases:

1) in the preliminary study phase, the problem is defined, the context is analysed, the literature is examined, the theoretical framework is worked on. The problem is defined on the basis of previous research and empirical research.

2) in the prototype phase, the design is created, documented and feedback for the prototype is collected;

3) in the evaluation phase, solutions are evaluated and compared with expectations, which may be followed by improvement of the application. Evaluation ensures the reliability of the results.

In the preliminary study phase, we explained based on the scientific literature the concept of mentoring in a higher education context and how to develop mentoring in higher education. To identify the problem, we conducted an empirical study. We collected the views of the different stakeholders involved in the mentoring system.

We investigated how novice lecturers understand teaching, with whom they discuss teaching related topics and/or issues and what support they need in terms of teaching. In the preliminary study phase, a semi-structured interview was conducted with 9 novice lecturers from two different institutes in the Zoom environment. The criteria for inclusion in the targeted sample was up to six semesters of teaching experience at Tallinn University. The directed content analysis enabled us to explain how novice lecturers experience teaching, what kind of help they need and which mentoring principles would suit the Tallinn University mentoring program. In the next step, we examined the views of mentoring from different stakeholders: the academic and support units (the representatives from the Personnel Office, the Academic Affairs Office and the Center for the Innovation in Education). The sample included the Director of the School, the Administrative Head and the Head of Studies of all Schools and College, the Personnel Development Senior Specialist of the Personnel Office, the Study Management Senior Specialist of the Academic Affairs Office and the Programme Coordinator of the Center for Center for the Innovation in Education. Together with the support units, we mapped the activities carried out so far to support the professional development of university teachers in Tallinn University.

Based on the theoretical literature, the expectations of the different Tallinn University stakeholders, input from support units and the interviews with the novice academic teachers, we posed problems that are important to solve to implement mentoring at the Tallinn University. As the aim of this development research is to develop the principles and application possibilities of mentoring, keeping in mind the needs and possibilities of the novice lecturers, the academic unit and the university, we created a mentoring model. In the description of the mentoring model, we explain which activities make sense to centralise in mentoring and which activities to carry out in the academic unit. In the next step we presented the model and asked for feedback from different experts. The experts were the Head of the Center for the Innovation in Education, the lecturers of the academic units, the Personnel Development Senior Specialist of the Personnel Office, the Study Management Senior Specialist of the Academic Affairs Office and the Director’s Assistant of the College.

3. THEORETICAL FRAMEWORK

The meaning of mentoring has changed over the time towards a decrease in the mentor's position of power. Changed perceptions of how learning takes place and how to support personal and professional development emphasise the importance of the dialogue between the equal partners and this also influences the meaning of the role of the mentor (Lainola, Eisenschmidt 2021). Historically, the role of a mentor has been instructing, teaching and guiding, mentoring in contemporary times is more seen as mutual partnership to support both mentor´s and mentee´s learning and development (Halai 2006; Iancu-Haddad, Oplatka 2009, Russell, Russell 2011). Successful mentoring therefore means an empowering partnership, a shared journey of learning and development in which participation is valued (Castanheira, 2016). In addition to being a role model, the role of the mentor is a co-learner and co-thinker (Orland-Barak 2006). Anderson (2007) emphasises that mentors need not only experience but also continuous support to better understand and guide the professional development of mentees. Thus, one of the important starting points in the development of mentoring at the university is to update the content of mentoring according to the changed view of mentoring.

The study "Adaptation and coping of a novice university teacher" (Remmik & Karm, 2014) outlines the stages to support novice lecturers teachers: in the first stage, the focus must be on training and mentoring of teaching skills; then it is needed to continue with the training of teaching skills and shaping the teaching community, and finally the focus of development support should be set on researching one's own teaching, and continuous analysis of teaching, compiling and updating the learning portfolio.

Advanced lectors should already be offered longer development programs, systematic mentoring, (video) feedback on their teaching, but above all the opportunity to join professional communities to share pedagogical knowledge and skills (Feixas, Euler 2012). In-depth learning would be reached if lecturers practice reflection on their teaching in workshops and conferences, experiment with new methods and apply them in the context of their own teaching, and also research their own teaching (Feixas, Euler 2012). Researchers also emphasise that the impact of long-term development programs is significantly greater than that of short-term training, and that their impact should not be measured solely in terms of participant satisfaction (Feixas, Euler 2012, Postareff 2007). Thus, academic lecturers' professional development support must be seen and developed in continuous stages and in long-term perspective.

Based on the interviews of the novice lecturers, it is not possible to have only one fixed structure of the mentoring program that would be applied to mentor all novice academic teachers. While creating mentoring program for novice academic teachers, the results of the survey suggest considering the following:

1) Mentor is most needed at the very beginning of the employment relationship. The right timing is crucial to a successful mentoring relationship.

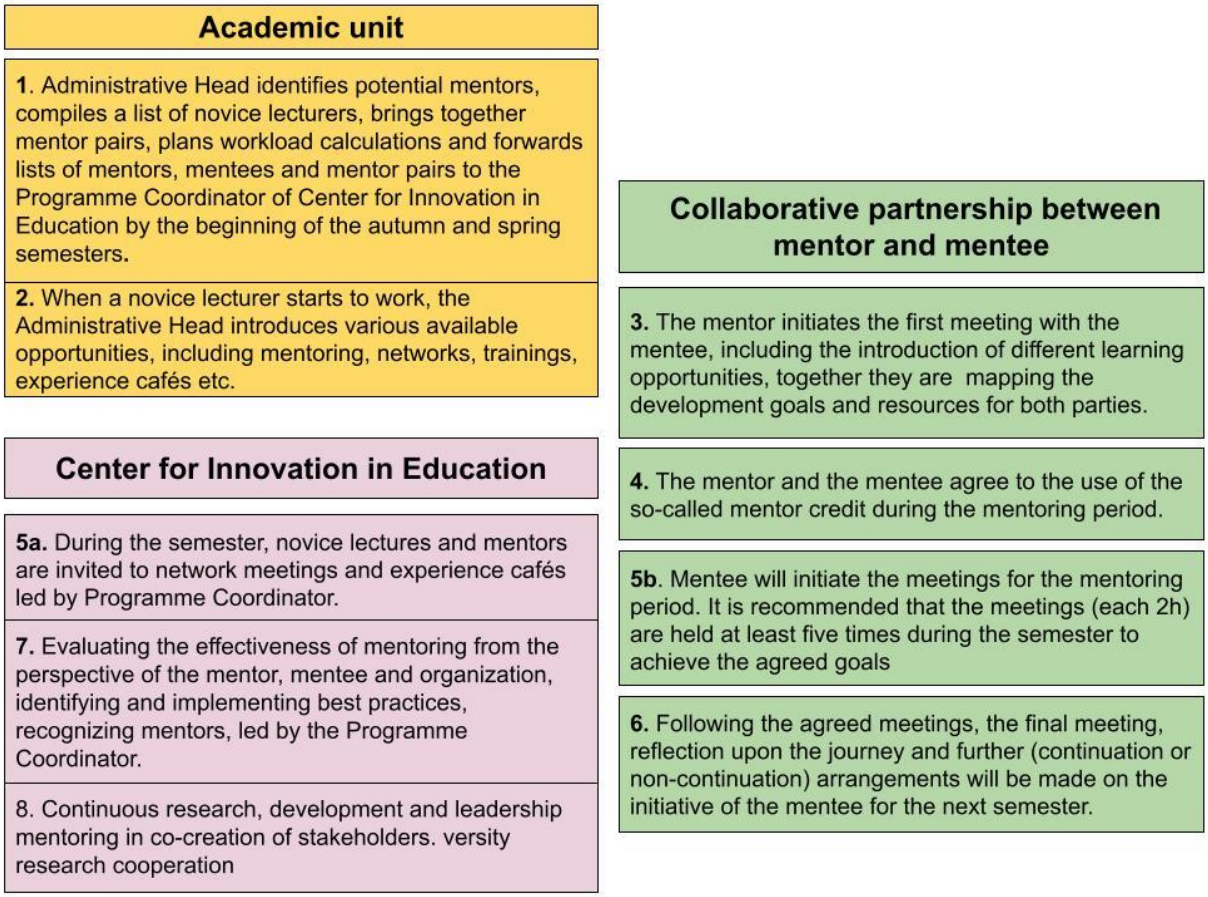
2) Mentoring could be used as a fixed amount of credit, which gives the mentor couple the opportunity to manage their own time. From the point of view of a novice lecturer it is important to know how much time the mentor has for him/her and what topics to prioritise, not to exhaust the mentor and to feel still sufficiently supported.

3) The meetings provided during the mentoring program should be included in the mentor's workload or paid additionally, to ensure that the mentor has time for mentoring.

4) Mentoring is offered to all novice lecturers but it should be possible to refuse and cancel the mentoring at any step in case there is no value seen or the current mentoring is not satisfying the participants.
5) The most preferred way of mentoring is traditional one-on-one mentoring.
6) The novice academic teacher wants to belong to different networks of teachers.

4. RESULTS

We created a model of the mentoring process, keeping in mind what is happening in the mentoring relationship, as well as how the activities are centrally coordinated at the university and supported in the academic units.



5. DISCUSSION

As researchers, we agree with Harvey et al. (2017) that a major challenge in designing a mentoring program in higher education is to find ways to enable formal mentoring to achieve as many features of informal mentoring as possible. Thus, ways must be found to informally institutionalise mentoring, to achieve the situation that mentoring becomes a so-called mandatory option for all novice lecturers but still supports the autonomy of each party. There is important to meet the needs of flexibility, caused by the different needs from the novice lecturers (time, content, regularity, length, etc.), to find ways how to organise regular informal meetings within the participates and at the same time incorporate mentoring in the workload of both, mentor and mentee and leave to mentee the option to choose to continue with the mentoring or terminate the mentor relationship**.**

What are the key takeaways for us from this development research process? First, the involvement of different stakeholders is crucial. Co-creation with the different stakeholders, listening and gathering feedback in several steps from the stakeholders allows all stakeholders to be heard and to avoid so-called top-down development.

So far, it has not been decided in the development study whether to stick to the concept of mentoring because we want to emphasize the dialogue and partnership between two equal partners learning from each other, perhaps even professional friendship but the word mentor carries a long history and might be interpreted as teaching, guiding and instructing by someone more experienced. Finding this alternative could take place in cooperation and development programs between institutes and even universities. Whether we use the term learning partnership, masterclass or another term instead of mentoring takes time and needs to be tested. We find that it would be more effective for all universities to use the same term, expressing an empowering language that supports the change from deficit mindset to learning mindset.

During the research we noticed that we initiated the change in university in the use of language - the language that supports growth and development and does not focus on mistakes and shortcomings is already a good change. We also noticed that as researchers we were overly critical of what we had done so far and underestimated what had been done in the organisation to support the academic lecturers. Thus, it was important to learn how to be a researcher, not to point out shortcomings, but to value them.

We recognised the importance of sustainability. Ruul (2012) emphasises that international research that highlights the benefits of mentoring has been conducted mainly in universities that already have a long tradition of mentoring, and this research should be treated with caution in Estonian higher education institutions. It must therefore be borne in mind that the development of a mentoring system must be seen as a very long-term process, which will certainly have repercussions, and that the process must be evaluated and feedback consistently.

Finally, it is important to point out that a novice academic teacher may not be only the young person, coming directly from university studies. As researchers, we often came across with this opinion. Novice lecturers often come to university from practice with their own valuable life and work experience and must be supported by both the mentoring system and the communicative language it uses.

We realized that we are solving a multifaceted problem, for which there is a situation-based and ideally personalized and unique solution. Mentoring grows out of the need to support novice lecturers, but the university has great potential to develop learning partnerships at different levels.

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An exceptional opportunity: teacher training programmes to collectively address academic challenges during the covid pandemic

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ABSTRACT

The forced virtualisation imposed by the Covid-19 pandemic challenged academic continuity of universities. In 2020-2021, teacher training became a pillar for sustaining educational processes at this level. It's important we ask ourselves: how can training programmes accompany and be useful to faculty's practices, in a context that requires special flexibility? How can we ensure they are not instrumental but have a comprehensive design that addresses the integral process of teaching online (Rapanta et al., 2020; Schwartzman, Berk & Reboiras, 2021)? How can we take advantage of this historic opportunity to encourage academic communities to reflect systematically, critically and with theoretical foundations on university teaching (Domingo & Anijovich, 2017; Adell, Castañeda & Esteve, 2018)?

Based on these questions, this research aims to characterise teacher training courses on remote teaching. This is an educational design study on a comprehensive teacher training plan implemented in an Argentinean university of health sciences during 2020-2021. It consisted of 15 short and complementary training sessions, focussed on: 1) techno-pedagogical processes, 2) teacher autonomy in managing technological resources, 3) curricular programming, 4) active student participation in synchronous classes. They were implemented in two modalities: a) introductory synchronous workshop b) introductory workshop plus an asynchronous production activity with personalised feedback. The modularity of these actions allowed teachers to choose which training courses to take according to their interests and needs, thus building their own training paths.

The plan encouraged 1,039 participating teachers to exchange experiences and knowledge, fostering the construction of a reflective academic community. It sought to generate learning based on previous knowledge and practices, and to promote situated actions supported by pedagogical theories of good teaching practices. Within this framework, the teaching staff developed 471 productions such as remote lesson plans, learning assessments, teaching materials and the design of virtual environments to enhance learning experiences, among others.

This flexible training strategy which promoted teachers sharing, reflecting and re-designing their current teaching practices using pedagogical theories of online teaching enabled a comprehensive approach that facilitated academic continuity

during this time. We believe that long-term programmes based on these principles have the potential to strengthen the development of SoTL communities and we wish to exchange ideas, experiences and lessons learned with other institutions.

Key words: teacher training, faculty development, higher education, health sciences

REMOTE TEACHING FOR TEACHER TRAINING

The forced virtualisation imposed by the Covid-19 pandemic challenged the academic continuity of universities. In the 2020-2021 period, teacher training became a pillar for teachers' work and for sustaining teaching processes in higher education. It's important we ask ourselves: how can training programmes accompany and be useful to faculty's practices, in a context that requires special flexibility? How can we ensure they aren't instrumental but have a comprehensive design that addresses the integral process of teaching online (Rapanta et al., 2020; Schwartzman, Berk & Reboiras, 2021)? How can we take advantage of this historic opportunity to encourage academic communities to reflect systematically, critically and with theoretical foundations on university teaching (Domingo & Anijovich, 2017; Adell, Castañeda & Esteve, 2018)?

Based on these questions, this research aims to characterise teacher training courses on remote teaching. This is an educational design study on a comprehensive teacher training plan implemented in an Argentinean university of health sciences during 2020-2021.

This comprehensive training strategy consisted of 15 short and complementary workshops, organised around three major lines of work described below:

1) Planning remote teaching activity

The aim of these training sessions was to address issues related to educational planning that are frequently "naturalised" in face-to-face teaching but which need to be specially reviewed when carrying out remote teaching.

The following techno-pedagogical processes were selected: a) criteria for the virtualisation of learning content including its selection, organisation and sequencing; b) design of learning activities appropriate for each teaching modality; and c) remote assessment of learning. The teacher training sessions addressed these specific topics from a holistic perspective in order to support the decision making process when planning teaching at university level.

2) Implementing online teaching

Online education has specific characteristics that require a set of knowledge, skills and teaching attitudes for which training is necessary. Furthermore, the new challenges of the context require institutions to transcend instrumental training and develop comprehensive approaches where the teaching role in online education is collectively reconstructed.

In this sense, the training linked to this line of work sought to recognise the importance of sustaining the pedagogical relationship with students and between

students. To this effect planning teaching intervention strategies was considered central: review their purpose, moments and digital spaces in which to develop them, as well as monitoring the learning process, among other aspects.

Within this context, real-time interaction through videoconferencing systems was an option frequently adopted by teachers. The sustained growth of this type of classes requires reflection about their particularities, as they are different from on-site classes and e-learning as it has been developed until now.

In order to respond to these issues, workshops were developed to address the use of digital tools for the management of synchronous meetings based on valuable learning activities. This implied recognising the relevance of designing activities that involve students, promote reflection processes during class and stimulate students to actively participate and produce in different formats.

3) Teacher autonomy in the management of technological resources

Teacher's autonomy in the use of digital resources is essential to carry out their tasks in remote or hybrid scenarios. In this sense, a genuine inclusion (Maggio, 2012) of these technologies, with a pedagogical purpose is key. For this reason, this third line of work included workshops that intended to provide teachers with a toolbox that would allow them develop their academic activity on the university's virtual campus, promoting their growing autonomy. Given the exponential increase in the use of this online environment, it became clear that it was essential for faculty to be able to make basic decisions on the configuration of tools employing pedagogical criteria that would support their proper use. These workshops also encouraged reflection on the articulation of this centralising space of virtuality with other tools that complement the construction of digital territories for learning and teaching. (Schwartzman, Tarasow & Trech, 2014).

When looking at the teacher training devices designed, we can find some distinctive features that we believe are relevant to ensure a comprehensive approach:

Firstly, a distinctive feature of this plan is its modularity. Designing the workshops as independent modules that are linked to each other but do not need to be done sequentially allowed teachers to choose which workshops to take according to their interests and needs, thus building their own training pathways. This was designed as a strategy to encourage continuous training and to support their academic activity in a context of high demand for our faculty. As they belong to the health sciences field, our recipients not only had to virtualise their teaching activity, but they also had to simultaneously battle the over-demanded health care front due to the epidemiological context. The challenge was to generate microlearning proposals that did not become a delivery of content in small doses, but rather capsules that were articulated to integrate the learning experience (Milillo et al, 2020).

Secondly, participation in each capsule (workshop) offered a micro-certification and, at the same time, those who completed more extensive formations received a certificate of the training achieved.

Thirdly, professors had the possibility of choosing the desired course modality according to the time they had available, ensuring even more flexibility. Each workshop was implemented in two modalities: introductory and complete. The

introductory modality consisted of a synchronous session made up of different moments that aimed to encourage learning based on participants' previous knowledge and practices. On the one hand, pedagogical criteria was presented on the topic addressed, offering a conceptual framework from which to reflect on their teaching practices. On the other hand, small group activities were carried out. These could consist of: discussion and analysis of a teaching scenario, exchange of ideas and experiences, design of a teaching activity, planning of an assessment instance, reflection on problematic situations, among others. Groups were also invited to materialise the conclusions of what they had worked on into different digital tools for collaborative work, exemplifying genuine uses of the technologies currently available. The workshops invited faculty to socialise the agreed upon ideas with the rest of the participants and together systematise implementation strategies for the different ideas exchanged. In the complete modality, the introductory workshop was followed by an asynchronous work sequence oriented towards guided personal production. The productions had the objective of fostering situated actions based on pedagogical theories on good university teaching practices. With this end in mind, the activities designed in this second stage promoted:

- Reading and exploring complementary materials made available for participants to deepen their understanding of the contents addressed in the introductory meeting.
- Reviewing their own teaching practice based on pedagogical-didactic theory.
- Designing a teaching proposal to be undertaken in the near future (for example: curricular and micro-curricular design tasks, lesson planning, construction of assessment instruments, preparation of support materials, etc.).
- Personalised tutoring to guide with the task and provide constructive feedback to facilitate the implementation of the designed proposal.

For their part, both in their introductory and complete modality, the workshops sought to model good teaching practices as they were designed considering the same pedagogical criteria addressed. In this case, we can say that the form was also the content since, on occasions, the decisions behind the planning of the workshop were also made explicit and were the object of analysis and reflection.

Summarising, we find certain features in the educational design that may explain, albeit partially, the value of this training programme: a comprehensive approach of each topic, situated learning based on faculty’s current teaching practices, modularity, possibility to make own training-pathway, flexibility to choose participation modality, micro-certifications and the recognition of more extensive training. In addition, the modelling of good teaching practices that promote participation, reflection and the exchange of ideas and experiences; the possibility to plan and produce in the context of training and count with personalised tutoring for its implementation.

Looking at the results of this comprehensive training strategy, we find that, within the framework of the full course modality, faculty developed 471 productions. Among them we find lesson plans where professors designed valuable remote learning activities for the development of the objectives and contents of their subjects. Remote learning assessments were designed from a perspective that understands assessment as part of the didactic process, encouraging students to become aware

of their learning and teachers to interpret what these constructions imply for teaching. In addition, they developed digital teaching materials with the aim of facilitating students' approach to the contents using hypermedia. They also built virtual environments to create powerful educational experiences. To this end, they learned to configure different tools and resources available in the institution's virtual campus to present the materials and activities of their subjects in a manner that favoured the proposed learning. Finally, they carried out curricular and micro-curricular planning tasks in which they had to analyse the contents to be taught in this context and make the corresponding adjustments for their development. The details of these productions can be seen in the following table:

Teaching productions developed in the framework of the full workshops	**Number**
Remote lesson plans	122
Learning assessments	92
Didactic materials	37
Design of educational virtual environments	130
Curricular adaptations	90
Totals:	**471**

Between 2020 and 2021, the plan promoted the exchange of experiences and knowledge between 1039 participating teachers, fostering the construction of a reflective academic community.

The different characteristics behind this comprehensive teacher training strategy promoted the construction of pedagogical-didactic knowledge in genuine opportunities where theory was used as a tool to reflect, question, rethink and even modify one's own practice. The modularity and modality of the course favoured the identification of teachers' own challenges in relation to the teaching of their discipline and the strategic use of limited time for continuous training. At the same time, a comprehensive view of online teaching processes was encouraged, fostering the valuable and pedagogically meaningful inclusion of technologies, promoting good teaching practices without prescriptions, but rather reflecting together on the unique opportunities that the new context offers for the development of their teaching practice.

Undoubtedly, the lessons learned during this unprecedented and difficult period for education also allowed us to recognise the value of continuous teacher training. We believe that a training strategy sustained over time, based on exchange, reflection

and work with situated teaching practices, strengthens the construction of academic communities.

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Engaging students as pedagogic consultants to co-create inclusive, reflective learning experiences and communities

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ABSTRACT

An introduction to our co-creation journey and learning community

Our paper offers insights into our experience of co-creating, with students and in a cross-departmental team, a resource that scaffolds reflection on learning and professional identity growth towards the summative assessment on a postgraduate module ("Working with Museums and Heritage"), as well as beyond. SoTL sparked our collaboration, framed our outcomes, and is informing our work to build further impact. Drawing on design thinking principles, our SoTL-linked partnership generated a five-part framework which offers guidance for student-staff co-creation of innovative, reflective learning and teaching in inclusive communities. The five components of the framework – collaboration, creativity, risk, learning, legacy – were developed through reflective dialogue among a team of four staff from across the university with complementary expertise and a Museums and Heritage postgraduate student, with additional input from students working as Library-based peer mentors. The same principle of reflective dialogue underpins our solution to offering student-staff partnership opportunities at scale in a relevant and sustainable way.

Fig. 1: The Ideo U framework (https://www.ideou.com/pages/design-thinking)

Using Ideo U's design thinking process (see Fig. 1) and tools, Charlie and Amy combined their complementary expertise – as module leader and student who had

completed the module, respectively – to identify an aspect of Charlie's module that they could work together to enhance. Although the stages in Fig. 1 are presented linearly, there is widespread agreement in the literature that design thinking projects unfold iteratively, with overlaps and feedback loops. Amy and Charlie began by framing a question (Fig. 2), fine-tuning the broader brief set in the project application form developed prior to Amy joining the project. They gathered inspiration via conversations with other professionals leading client-based project modules and web-based information searches. They generated ideas which they gradually refined through an iterative process, going past the immediately apparent options to identify a solution with potential longer-term impact.

Fig. 2 The question framing stage (Amy Elmughrabi)

In the funding application submitted prior to the start of the project, the proposed solution had been broadly framed as

> *a resource which addresses a significant issue in Charlie's postgraduate teaching: providing students with stretching opportunities to work with partner organisations on live projects to meet NTU quality expectations, the development of professional attributes, and to exceed the expectations of external partners.*

The agreed-upon solution, a framework for reflection on learning and professional identity growth, was then made tangible as a reflective workbook on the PebblePad digital platform (with support from Rosemary). PebblePad was chosen for the reflective workbook due to its template functionality, continuity of access beyond a course (Roberts, 2018) and the ability to improve inclusive teaching (Bovill, Matthews & Hinchcliffe, 2021; Curtis et al., 2015). Building on the benefits and limitations of reflective writing (Curtis et al, 2015; Bassot, 2020; Tupper & Ellis, 2020), the workbook responded to Amy and Charlie's experiences of the module,

aiming to make the hidden mechanisms behind curricula design more apparent to enhance meaningful participation (Kaufman, 2018). It aimed to embed reflective skills and lifelong reflective behaviours, widely recognised as important competencies for work and life (for example, Nesta, n.d.; BOP Consulting, 2016; Jenkins & Clarke, 2017).

The prototype reflective workbook (Figs. 3 and 4) was tested with a group of six Library-based student mentors, enrolled on a range of courses across at NTU and experienced in scaffolding NTU students' engagement with assessed work. Sarah and Lia also provided input and prompts to support critical evaluation of the prototype. The present paper aims to share the story, alongside a presentation co-delivered at the EuroSoTL 2022 conference and future planned outputs from follow-on activity designed to generate additional impact. Sample material from the resource, with annotations, is available via the National Teaching Repository (https://figshare.edgehill.ac.uk/The_National_Teaching_Repository).

Fig. 3: Screenshot of the first activity in the reflective workbook

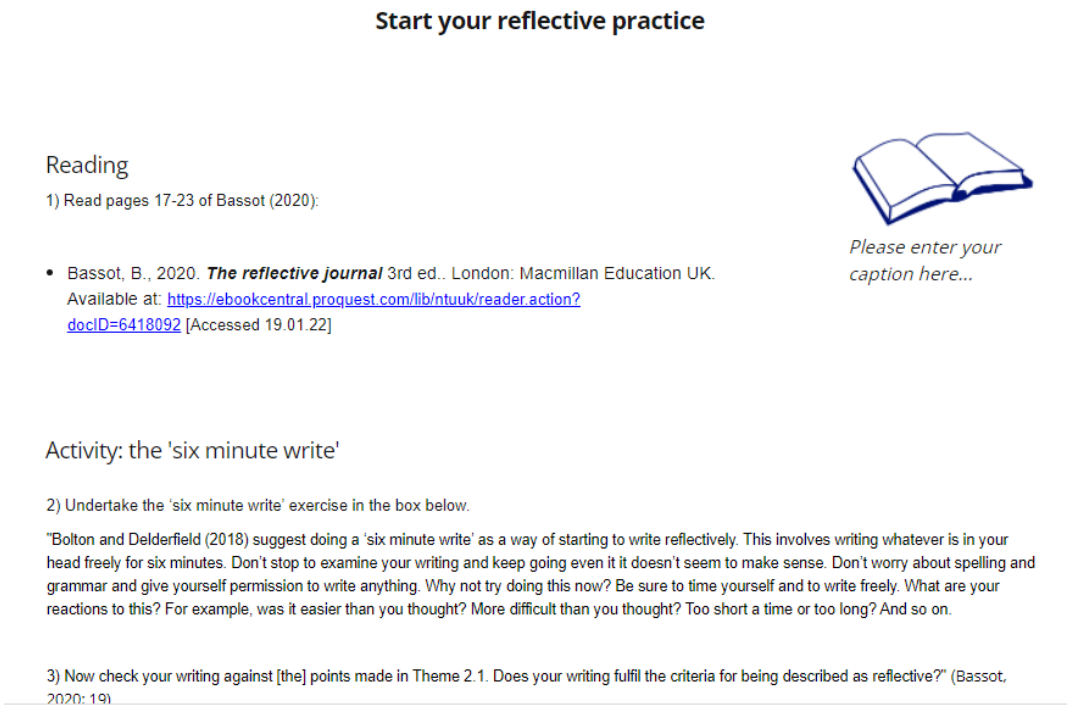
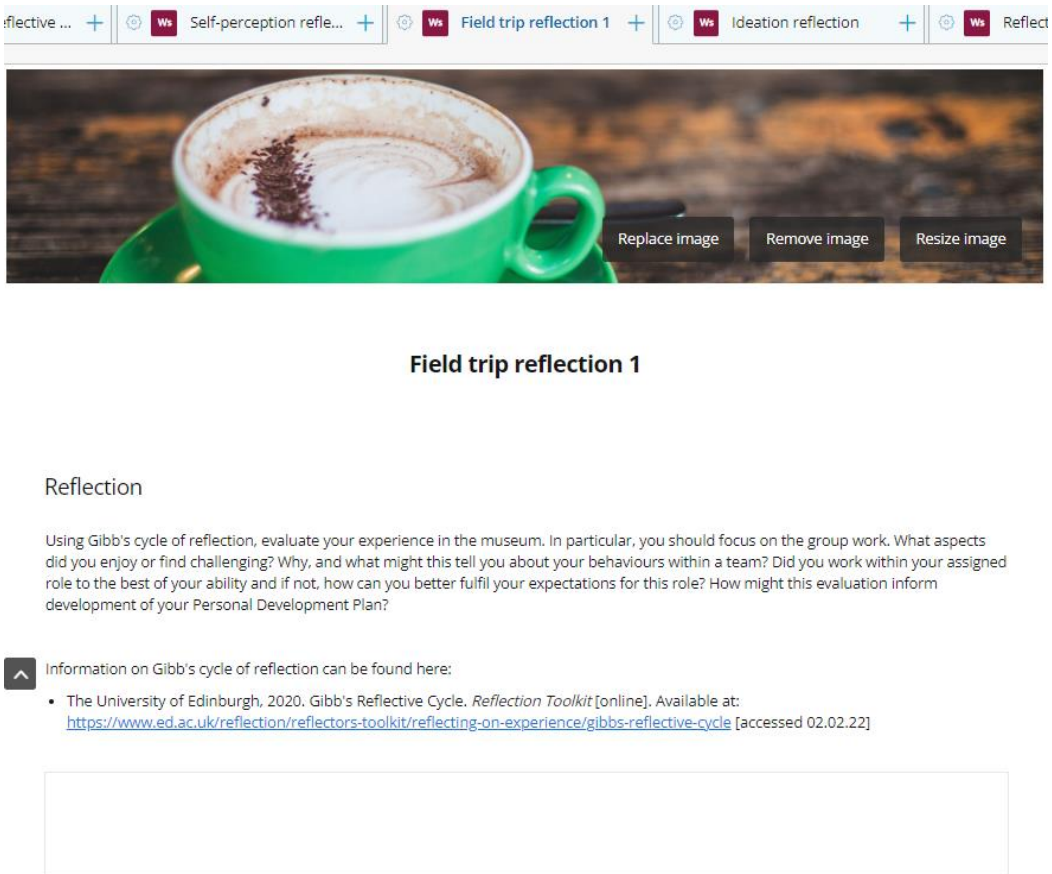


Fig. 4: Screenshot of reflective journal. This wider shot partially shows the tabs by which students navigate between activities



DESIGN THINKING MEETS STUDENTS AS PARTNERS

A shared interest in design thinking sparked our cross-functional community of practice into existence. For the purposes of this project, design thinking was viewed flexibly as

> *the application of design practice and its related competencies beyond the context of design for and with those without design backgrounds* (Chon & Sim, 2019, p. 189).

In brief, design thinking helps tackle the risk, confusion, uncertainty and complexity which are inherent aspects to any learning activity with an appropriate level of emotional intelligence. The principles have been trialled in a small number of higher education contexts before the pandemic and have been found to align well to the non-linear nature of learning, lead to higher quality outcomes, increase awareness of personal strengths, integrate cognitive and emotional needs and help teams find new and informative angles from which to approach issues (Chon & Sim, 2019; Linton & Klinton, 2019; Melles, 2020; Sarooghi et al., 2019, Snelling et al., 2019). The value of design thinking is that it can be used for engaging audiences as co-creators, giving them greater ownership of the solutions designed, ensuring that innovation focuses on aspects that genuinely matter to users, meeting their needs more fully, in a sustainable way. The process and tools of design thinking are rooted in a mindset that emphasises empathy, collaboration, mutual learning, and prototyping which allows failing fast to achieve success faster.

In a 2018 horizon-scanning report for Advance HE exploring possible new developments in higher education, Martin (2018) predicted a number of challenges for the higher education sector to address, which proved highly relevant in light of the pandemic that swept the world in early 2020. To address the transformative challenges identified, Martin called for collaboration and partnership across institutional structures and hierarchies. The report did not explicitly refer to engaging students as partners in the process of reshaping learning and teaching experiences, but the values it expressed resonate with those of the students-as-partners framework (Healey & Healey, 2019). The most widely used definition of students-staff partnerships is as follows:

> a collaborative, reciprocal process through which all participants have the opportunity to contribute equally, although not necessarily in the same ways, to curricular or pedagogical conceptualisation, decision-making, implementation, investigation, or analysis (Cook-Sather, Bovill & Felten, 2014, pp. 6-7).

Student pedagogic consultancy is arguably the least explored form of student-staff partnership according to Healey and Healey (2019). The 2020 pandemic has created the need to substantially rethink learning, teaching and staff development at university. Students' expertise has become all the more valuable and the playing field has been levelled even more (power has shifted away from staff towards a collaborative space where students and staff make sense together of what it means to learn and teach effectively in a transformed environment) (Kaufman, 2018).

Student-staff partnership work is not without its challenges, as Matthews et al. (2019) highlight in a systematic literature review which led to a set of

> *broad, overarching themes to guide and strengthen the work of academic developers in supporting student-staff partnership policies and practices (p. 248).*

The institutional cultures and choice of partnership type will necessarily shape how the overarching themes are applied, but the themes continue to have relevance in a pandemic-transformed higher education context where hybrid and/or virtual partnership work is becoming the norm. This was confirmed by the student co-editors of the *International Journal for Students as Partners*, who note that the values of partnership should be seen "not as something contained within and limited by formal partnership practices, but as something practised in everyday life" (Ntem et al., 2020, p. 3).

At Nottingham Trent University, shortly before the pandemic, Charlie, the lead author of the present paper, had started making effective use of design thinking principles in her professional museums practice, co-creating with practitioners and communities. Lia had developed an initial interest in the Ideo variant of design thinking through a serendipitous encounter with Kelley's (2001) *The Art of Innovation*, which she followed up with Kelley and Kelley's (2014) *Creative Confidence* and an article about reverse mentoring (Jordan & Sorell, 2019). The pandemic-induced need to look at higher education practice through a different lens prompted Lia to explore the application of design thinking in the context of learning and teaching innovation. Drawing on students' expertise in being students (Healey & Healey, 2019), she completed two small-scale co-creation projects, each involving a student as a pedagogic consultant (Blaj-Ward & Hanley, 2020; Blaj-Ward & Jebali, 2021). The logical next step for Lia was to look outside her own student-facing practice, test the draft list of principles that shaped her initial projects, exploring ways to scale up student-staff co-creation of learning and teaching experiences in a sustainable and context-aware way and to grow her understanding of relevant scholarly literature in the field. Within the context of her Library-based role, Sarah had been practising pedagogic student-staff partnerships successfully in her everyday professional life for a number of years. The combined experience of Charlie, Lia and Sarah lay the foundation for the SoTL project discussed in this paper.

CO-CREATING INCLUSIVE, REFLECTIVE LEARNING EXPERIENCES AND COMMUNITIES THROUGH SOTL

For the purpose of this paper we refer to two communities: the project team and the student community studying the Working in Museums and Heritage module. Focusing first on the project team as a community, the project development and evaluation were shaped around rich, reflective dialogue, anchored in experience, integrating academic literature, and building on an initial understanding of SoTL from Fanghanel et al. (2016) as a means to engage students in the development, scholarly framing and dissemination of learning and teaching solutions. The richness of reflection was enabled by the complementary expertise of the co-authors.

Charlie and Amy were the core staff and staff-student partners co-creating a resource for Charlie's module. The project, however, was set up as a team initiative, with a main scholarship strand into which Charlie and Amy's resource would be

integrated. It offered opportunities to road test learning from Lia's two previous projects (Blaj-Ward & Hanley, 2020; Blaj-Ward & Jebali, 2021). Regular project team meetings took place, with the project team operating as a cross-functional community of practice. The sixth stage in the process (share the story, Fig. 1) involved all named authors and started earlier, during initial reflection on the feedback received on the PebblePad resource. Preparing a conference proposal provided an opportunity for all to take stock of the project's progress, arrive at a shared understanding of what had been achieved and agree how to present our learning in a way that would benefit an external audience.

Having joined the project at the start of her second year as a part-time postgraduate student, and having studied the "Working with Museums and Heritage" module in her first year, Amy was well placed to provide useful critical perspective based on her direct experience. Her profile matched Healey and Healey's (2019) definition of student-as-pedagogic-consultant expertise. Useful perspective was also gained from the six students working in Library-based student mentor roles that Sarah invited to provide feedback on the prototype resource. Rosemary provided input on the learning technology side. As such the project team was assembled to create a cross-disciplinary, non-hierarchical community of practice with complementary skillsets, following teamwork theorists such as Belbin (2010).

Reflection is generally perceived as an individual process of introspection. In our case, however, we derived substantial value from reflective dialogue – in our scheduled team project meetings, in spontaneous email exchanges, in one-to-one or three-way debrief meetings. Some of this dialogue was scaffolded by bespoke guiding questions drafted as the project progressed. To shape our thinking we revisited Kolb and Kolb's (2017) experiential learning theory and explored different journaling formats (Earley, 2022; Garrett, 2022). Charlie and Amy's reflective tool for students was originally framed as a resource to be engaged with individually, drawing on feedback from the Library-based mentors regarding the importance of privacy and creating a safe space.

The second community we are referring to here, namely, the community of students on the MA in Museum and Heritage Development at Nottingham Trent University, is one we intend the co-created resource to help shape in the future. Scholarship-informed and experience-underpinned reflection on the community-building aspect of the project led to the realisation that the co-created resource could be integrated into the module in such a way that individual, introspective reflection is sparked by academic texts, classroom discussions and student team dialogue and, in turn, is used as a basis for reflective conversation to support one another's growth within the context of a learning community. Student cohorts can then abstract the insights they gain from reflection and pass these on to subsequent student groups, ensuring that learning communities are sustained over time. While formal feedback on a module is individual, we would recommend that all students on a module are given the opportunity to co-create, at the end of the module, a "learning how to learn on this module"-type resource that can be integrated into the next iteration and will openly credit the students for their contribution. Reflection for the resource will have been scaffolded organically throughout the module and the final output could be facilitated by the module team or a member of staff with learning development experience and sufficient understanding of the module context. Making students aware of this opportunity from the very beginning and highlighting the value of their learning not

just for themselves but for others too will ensure that, as Ntem et al. (2020) recommend, partnership is practised in their everyday learning lives. Co-creating a resource is a more valuable way to ensure student engagement than capturing their views via module feedback (either individually or through a focus group), because students have the opportunity to actively input into learning design beyond making suggestions which they will not have had the opportunity to implement. We view this as a way to scale up student-staff partnerships in a relevant and sustainable way.

A FRAMEWORK TO CREATE INCLUSIVE, REFLECTIVE LEARNING COMMUNITIES

In our project we sought to learn how to integrate design thinking and student pedagogic consultancy. The five-part framework we developed (collaboration – creativity – risk – learning – legacy, see Fig. 5) and the eleven items underpinning it capture our thinking and itemises our guidance for student-staff co-creation of innovative learning and teaching in inclusive communities.

Fig. 5: Collaboration – creativity – risk – learning – legacy: creating inclusive, reflective learning communities

Collaboration

a. Co-create roles and expectations

Roles and expectations of partners in inclusive, reflective learning communities should be clarified from the beginning, but may evolve as new knowledge comes to

the fore and partners gradually realise what else they can contribute that would be of value to the project. Partners should have some level of freedom to configure their participation.

b. View relationship-building as ongoing work

Relationships are vital to project success; relational dynamics can be built from the recruitment stage right through to project closure (and where appropriate, beyond). Onboarding and team building activities are important as the basis for a productive working relationship. Motivations for participating in the project should be clarified from the start, so that each partner is supported to contribute to the best of their ability and benefit as fully as possible. Openness facilitates better learning for all involved.

c. Create with, not for

Partnership is about creating with rather than creating for, to give all participants a greater sense of ownership and ensure outcomes have a fuller impact. While tasks need to be clearly framed (and clarified from the beginning of the project), they should not be prescriptive. All partners should input into task design and tasks should be negotiated, building a shared vision.

Creativity

d. Enable a culture of creativity through focusing on strengths

Focusing on strengths sparks learning conversations in which it becomes easier to critique work constructively because it reduces potential discomfort that comments perceived as criticism might cause. Partners are more likely to express candid views and feel less vulnerable, and to develop an understanding of the challenges that each other faces. It is important to normalise failure and admit limitations, as there are no set right answers. Partnership work flourishes when partners openly display commitment to the project and offer each other encouragement to foster a culture of creativity.

e. Nurture creativity through belonging, shared space and “pedagogies of care”

Design a shared space to engender a sense of belonging. Space can be physical but also virtual (access to an online workspace to store information and document progress).

Partnership projects should be informed by a “pedagogy of care” (Motta and Benett, 2018). Partnership work should be stretching and will take participants outside their comfort zone, but there should be recognition of appropriate risk levels and project partners should be supported to push past vulnerable points.

f. Appreciate non-linearity and use structure flexibly

Partnership projects are non-linear. The Design Thinking process provides valuable structure: while it is not meant to be used linearly, it creates a sense of discipline and progress and enables creativity to flourish. Structure is not rigid. While projects have a time limit, partners should not rush to reach closure too early and come up with a pragmatic, second-best solution. It is important that partners give each other space to come up with suggestions and solutions. There should be flexibility built into the

project. The process (and intangible learning) is just as important as the tangible outcome.

Risk

g. Take developmental risks and learn from others

Partners should listen actively and explore objectively each suggestion and solution offered, acknowledging that every contribution contains a useful lesson and that learning can come from the most unexpected of places. They should also be ready to call on external experts to validate choices.

h. Ensure partnership is supported as legitimate work within an institution

Partnership works best when it is legitimate work sanctioned by the institutional context in which it unfolds. There should be safety points built into the project, e.g., a person external to the project that partners can talk to where necessary. Institutional sanctioning safeguards outcomes through ensuring sufficient resource is available; a project-external person helps safeguard relationships and provides an additional layer of trust.

Learning

i. Include a representative range of partners and offer new opportunities

Partnership work should engage a representative range of participants, to ensure that learning is maximised for all involved, not just the most committed ones, and is equitable. To maximise learning value it should provide new opportunities that would not otherwise be available.

j. Process thick data to enhance learning experiences on an ongoing basis

Partnership work generates thick data, i.e., insights into learning experiences that a formal survey would not capture in sufficient detail, if at all. The data generated should be processed appropriately on an ongoing basis to ensure maximum benefits are derived. Evaluation should be integrated into the natural rhythm of a project and should rely on a range of evidence. A single experience does not have to be transformational in itself. It is of value if it leads to a chain of experiences and impacts on a longer-term journey. Partnership work is an opportunity for partners to learn about their strengths and grow. Recognition of learning and contribution is important and should be built into the project as an ongoing conversation, through stop-and-reflect moments.

Legacy

k. Create a legacy through dissemination

To make partnership sustainable, it is important to create a legacy through disseminating insights and to scale up partnership opportunities in ways that take contextual factors carefully into account. Dissemination should be both of the

completed outcome and of smaller stages in a project, i.e., show early signs of significant positive outcomes through case studies / examples.

A CLOSING REFLECTIVE NOTE

Our SoTL-linked partnership experience led to substantial learning for project participants but we are aware of the importance "to be realistic and cautious about the transformatory claims of student-staff partnership" (Peseta et al., 2021, p. 269) and to ensure that understandings of partnership develop and align over time – both those of partners involved in the immediate co-creation tasks and those of stakeholders in the broader context who can enable or inadvertently constrain the partnership work where student pedagogic consultants are involved. Tuhkala et al. (2021) directly address the limited power that students may have when involved institutionally in curriculum design at the level of a degree course rather than in an individual module, where informal innovation of learning and teaching can develop organically. Tuhkala et al. caution that power can be gained (or lost) when formalising relationships and the question of how to go beyond including only a minority of students is one to which only a context-specific answer can be provided. In our context, the solution to offer co-creation on a broader scale was informed by SoTL and generated new scholarship in turn, within the space of a funded mini-sabbatical. We aim to test this in the future iteration, within the day-to-day unfolding of a course, and to continue to share our learning for the benefit of others.

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Filmmaking as an Engaged Learning Tool - from Undergraduate Study to Postgraduate Research

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ABSTRACT

A whistle-stop tour of almost ten years of using filmmaking in learning and teaching environments, in the hope of inspiring others to adopt this innovative practice in higher education curricula:

- First, as an English Literature undergraduate exploring social haunting and the 1984-85 Miners' Strike;
- Then, as a PhD student in Education trying to find ways of representing members of a community-based media organisation 'in their own image';
- And most recently, as a means of training young people as budding researchers.

INTRODUCTION

On Tuesday 6th January, 2015, a Lecturer in Film and a final year English Language & Literature Undergraduate gave a talk at The University of Sheffield's Ninth Annual Learning & Teaching Conference. They had worked together during the summer of 2014 on a project called 'Filmmaking and the Engaged Curriculum'. Supported by the Lecturer - and funded by a small grant provided by Sheffield's cross-faculty 'Engaged Curriculum' initiative - the Undergraduate had created a 50-minute documentary film, *Born of Coal*, which captured "a set of wonderfully rich narratives around themes of friendship, loss, solidarity and pride" in relation to the 1984-85 Miners' Strike conflict (Storying Sheffield, 2015).

The Lecturer was David Forrest; at the time of writing, he is Professor of Film and Television and Faculty Director of Learning and Teaching at The University of Sheffield. The Undergraduate was me; eight years after I started making *Born of Coal*, I am now a Lecturer in Education, also at Sheffield. The theme we addressed together at the Annual Learning & Teaching Conference's theme, 'Developing Student Learning Beyond Knowledge Acquisition', is an ambition I am equally enthusiastic about now as a lecturer, as I was back then as a student.

Today, I hope to demonstrate how filmmaking can provide a rich way of understanding the social world that moves "beyond the prohibitive jargon and limiting structures that characterize much of traditional research practice" (Leavy, 2015: ix). I will describe how filmmaking (and arts-based research more generally) have been integrated within our School of Education programmes at The University of Sheffield, including the MA in Digital Literacies, Culture and Education; and more recently, the PhD-by-Practice. And as someone who continues to benefit from the filmmaking-as-

research methods I learned as an undergraduate, I will attempt to show how filmmaking can enhance learning and teaching opportunities for communities both within and beyond academia.

1. FILMMAKING AS AN UNDERGRADUATE

Born of Coal

Prior to going to university, filmmaking had never been on my radar. I did not take media studies at college, even though many of my friends did. With the exception of a 'Day in the Life of an English Student' video I made during my first undergraduate year, I had never made a film before. I did, however, have an interest in learning more about the social history of my hometown of Barnsley; an area that, "like many other northern regions, [had] suffered as a consequence of post-industrialism" (Bramley, 2014a).

I had also been inspired by my time on a recent module, *Storying Sheffield*, run by David Forrest alongside Professor Brendan Stone. In contrast to the essays we had written on classic novels and poems, *Storying Sheffield* presented the opportunity to produce creative writing pieces as our assignments, celebrating the 20th anniversary of Sheffield's *National Fairground Archive*. As well as passing the module and progressing onto the third year of our degree programmes, having a co-produced creative artefact to show for our efforts, in the form of the *No Fixed Abode* anthology (2014), gave us an extracurricular sense of achievement rarely brought about by the average university assignment.

When I came up with the idea of doing my own research project on the 1984-85 Miners' Strike, it was no coincidence that David Forrest and Brendan Stone were the first people I brought it to. Under their guidance and leadership, I arranged nine qualitative interviews, which I then edited down into a 50-minute film - complete with archive footage generously provided by the Yorkshire Film Archive. If documentary films are said to "play an important role in how we see and position ourselves in the world" (Fitzgerald and Lowe, 2020: 1), the same can be said for documentary filmmaking; the whole process had a profound impact on how I saw myself and my relationship with the town I had left behind to study for a degree. As I wrote in my final reflective blog post for the project, "I've never felt prouder to call myself a Tyke[1]" (Bramley, 2014b).

Filmmaking and the Engaged Curriculum

The opportunities for learning and teaching inherent in a practical filmmaking assignment have been well documented in K-12 educational settings internationally (see Vukovic, 2020; Stille, 2011; Higgins et al., 2012) and, to a lesser extent, within

[1] 'Tyke', amongst other meanings, refers to a person from Yorkshire. Given that Barnsley Football Club are nicknamed 'The Tykes', the term is strongly associated with Barnsley in particular.

universities (e.g. Rookwood, 2017). In higher education, however, the effectiveness of filmmaking as both method and mode of qualitative inquiry - which has been well documented in recent years (Fitzgerald and Lowe, 2020; Pink, 2007) - has not successfully translated into a widespread integration of filmmaking assignments and exercises across disciplines. This lack of creative assignment provision was something that the *Filmmaking and the Engaged Curriculum* project had sought to address at a local level.

Despite documentary filmmaking's potential for educational authenticity, the act of creating a film (for anything other than a filmmaking course) challenges traditional notions of what counts as ethical and rigorous research (Fitzgerald and Lowe, 2020: 2). As well as contributing to local knowledge exchange in its own right, the other key purpose of the *Born of Coal* film was to explore how the exercise of making a film could be integrated in the School of English undergraduate curriculum, in the form of filmmaking dissertations. To this end, I was asked to keep a *Filmmaking and the Engaged Curriculum* blog, documenting my reflections on the process of creating the film:

> *'Filmmaking and The Engaged Curriculum' aims to promote the use of creative practice-as-research as an academic approach that can contribute towards a more comprehensive learning experience. This alternative study technique, if used properly, can provide an enlightening accompaniment to the more traditional methods of degree-level study, furthering the learner's academic enrichment in higher education. I will be reflecting on my learning experience throughout the course of the project via this online blog, documenting the advantages and disadvantages that I encounter. It is anticipated that this information could be used to inform and advise future students and practitioners on how creative practice-as-research can be used suitably to accomplish these aims.* (Bramley, 2014a: online).

2. FILMMAKING AS A DOCTORAL STUDENT

In Their Own Image: Voluntary Filmmaking at a Non-Profit Community Media Organisation

As well as informing the integration of filmmaking assignments within Sheffield's School of English, the experience of creating a documentary film made me reconsider what my own research might look like, if I was fortunate enough to get accepted onto a postgraduate programme. Following the completion of my BA in English Language & Literature in 2015 - and a subsequent MA in English Literature the year after - I developed an idea for a PhD within the School of Education (also at The University of Sheffield) which would not only examine the usefulness of film as a community-building tool, but incorporate filmmaking as a research process as well. In response to Bourdieu's "calls for methodological pluralism in sociology", qualitative researchers have been increasingly encouraged to be creative, in their pursuit of what Ayrton refers to as the "dimensions of social life that may [be] difficult to represent or gone unnoticed using more routine approaches" (2020: 1229-1230; see

also Lamont and Swidler, 2014). My own PhD's methodology, heavily influenced by the Mason's Facet Methodology and its appeal for "imagination, creativity, inventiveness and intuition [to be brought] into research practice" (2011: 80), represented a conscious attempt to "blur the lines between researcher and participant, broadening the definition of what is/is not 'scholarship' in the process" (Bramley, 2021: 158).

After spending "almost 700 hours on fieldwork duty [...] across 119 day-visits" at *Kirklees Local TV* (Bramley, 2021: 9), a non-profit social enterprise and local media outlet that has been creating short news programmes and documentary films about the West Yorkshire town of Huddersfield and the surrounding borough, I created four short documentary films of my own. Each of these research films documented a different aspect of this organisation's attempts, in the words of CEO Milton Brown, to "go to the heart of the community [...] and get those who are involved *in* the story to *tell* their story" (Bramley, 2021: 398). Using filmmaking as a central component of my PhD's inquiry was as much an illuminating research practice as it was an equitable one. "Doctoral students wishing to provide answers for an organisation", according to Weatherall, "might consider how their writing might be both academic and accessible for practitioners" (2019: 111). Given that the majority of my participants were filmmakers themselves in some shape or form, it seemed that the most accessible way to present my research findings was in the same way they routinely present their own: as films.

Practice Based PhDs in Education

Documentary filmmaking is considered a "research process" in its own right (see Fitzgerald and Lowe, 2020), but at the time I did my doctoral project, the submission of a creative artefact such as a research film was 'not a recognised method of fulfilling the requirements of the PhD programme within the School of Education' at The University of Sheffield - '"despite it being an option in Education departments at other institutions, such as the University of Leicester" (Bramley, 2021: 324). In Sheffield's School of English, where my higher education studies began, students could (and still can) take a Creative Writing PhD: "a full-scale creative project, novel, collection of short stories or poetry collection, accompanied by a 40,000 word critical project" (University of Sheffield, 2021). In contrast, as a PhD candidate within the School of Education, I was able to submit my four research films to my examiners as an appendix, but not as part of the thesis itself.

Reflecting on this in my thesis conclusion, I wrote:

> *Perhaps the greatest disappointment of my own doctoral experience was not being able to conduct my own PhD-by-practice, putting forward the four 'research films' as the creative component [...] I feel that the research quality of the four films I produced would have been better illustrated by that alternative practice-based model. In the traditional written thesis format, the research films were restricted to a transcribed form of that data [...] certain*

> *qualities of these films (and the multimodal data contained within them) may well have been lost in translation.* (Bramley, 2021: 324-325)

When provided a platform to articulate their frustrations with learning and teaching to members of departmental staff, students can become powerful agents of change (Zandstra and Dunne, 2009). Having reluctantly accepted that a practice-based thesis model could not be made available to my own project, I worked with the School of Education's then-PhD Programme Director to make the case for the introduction of a new practice-based PhD programme for future students - a decision that needed to be made at Faculty level. I received the following email from the PhD Programme Director on 16th November 2020, just in time to include it in my own thesis:

> *I'm sure you'll be pleased to hear that all the work you did will feed into a new offering that will allow for a completely new PhD within the Social Sciences. I am still very grateful for your input here, and the leading role you took in researching how a PhD by Practice is framed and presented in other departments in our university, as well as in other institutions. The document you prepared was extremely useful, meticulously put together, and full of useful ideas for how we might make it work. One of the core contributions was the bridging work you did, thinking through how an offering which is traditionally available in the arts and humanities might be transferred to the very different disciplinary context of the social sciences. This was invaluable research, helping me to make a case at 326 faculty level for new regulations and for an expanded definition of what PhD might include. It also helped frame the department level draft descriptors of a PhD by Practice, taking into account disciplinary needs, and explain how to faculty how this would work at a local level.* (personal correspondence; cited in Bramley, 2021: 325-326)

3. FILMMAKING AS A LECTURER

Students as Knowledge Producers

Filmmaking, according to Evans et al., "provide[s] avenues for marginalized communities to participate in both forms of self-research and self-representation" (2009: 87). When I went back to Barnsley in 2021 - this time, as a lecturer - I worked with four (16-19 year old) students from a local college, putting the camera in their hands instead of my own. As both a research associate and artist-in-residence, I trained these young researchers-to-be in filmmaking-as-research techniques, in preparation for a UKRI-funded project (*Evaluating Trespasss Prevention*) examining the effectiveness of railway trespass prevention campaigns that specifically target young people. The students conducted their own interviews with a variety of people and stakeholders, including Network Rail's Suicide and Prevention Lead, a train conductor, an academic researcher, and people with lived experience of railway trespass. These interviews were recorded and edited into two video blogs which explored two key research questions: what would stop people from trespassing on railway tracks; and are rail safety campaigns effective? The *Evaluating Trespass*

Prevention blog is publicly available and can be accessed at https://medium.com/@EvaluatingTrespassPrevention.

An MA in Digital Literacies, Culture and Education

Diver (2014) argues that academic research's reliance on the written word "often excludes local communities from knowledge production [...] employing specialized academic language, and reinforcing multiple layers of social hierarchy" (para. 1). Moreover, Dunn and Mellor argue that "some knowings cannot be conveyed through language" (2017: 294). Being a part of the MA in Digital Literacies, Culture and Education teaching team at the University of Sheffield - alongside a community of colleagues who similarly appreciate the value of multimodal research contributions and outputs - I have witnessed first-hand the liberating effects of integrating filmmaking-as-research within a taught degree programme. For example, on the *Media Making and Creativity* module, students engage in "digital media production workshops where students [...] work on a series of group and individual creative projects" (University of Sheffield, 2022).

Filmmaking, as an arts based research practice, "may possess the power to persuade an audience to 'rethink' aspects of the social world" (Barone and Eisner, 2012: 167). In the same vein, I hope this presentation might help encourage some of you to think of ways in which academic assignments can provide a space for students' creativity and imagination to flourish. After all, if it had not been for the *Born of Coal* film that I made all those years ago, I might not be standing here in this room today.

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Creating SoTL communities through critical storytelling: reflections on a participatory study with Russell Group academics of working-class heritage

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ABSTRACT

While the lives of academics of working-class heritage (WCH) are an increasing source of inquiry, few studies exist which mobilise participatory approaches situating the participants as co-producers of knowledge about their own lived experiences.

This proceedings paper discusses a participatory study with eight Russell Group university academics located in the UK. The study mobilised critical storytelling methods to challenge a narrow range of stereotypes which typically represent academics of WCH in deficit tropes (Brook and Michell, 2012; Morley, 2021). In sharing and questioning their stories, an inquiry space emerged to co-produce knowledge aimed at expanding the possibilities of understanding what it means to identify as an academic of WCH. Working collectively with the emergent narrative data, the participants created composite stories representing the diverse, rich complexities of being/becoming an academic of WCH. Aimed at students of WCH considering, or in postgraduate study, the academic and non-academic outputs seek to communicate that academia is a place where people like them exist.

The study aligns with pedagogic approaches aimed at providing under-represented social groups with inquiry spaces to co-produce knowledge as part of community development approaches to counter forms of epistemic injustice. The participants shared, critiqued and analysed their lived experiences to comprehend how wider social and cultural factors shaped them. Through this dialogic and reflexive process, a “Third Voice” emerged from contrasting perspectives, producing new understandings of self and shared experiences (Goodson and Gill, 2011: 79). The interrogative process was marked by emotional dissonance, as participants revisited and reconfigured their lived experiences in the presence of each other. In line with the concept of critical hope (Bozalek, Carolissen and Leibowitz, 2014), the participants collectively worked through despair and discomfort to counter reductive caricatures of academics of WCH through stories celebrating the contributions they, and others, have made to academia and beyond.

Based on the outcomes of the study to date, the authors consider possibilities for this approach to create SoTL communities through forms of narrative participatory inquiry. Through a series of reflective prompts, audience members are asked to contribute thoughts and questions to generate dialogue aimed at developing the approach further.

INTRODUCTION

In recent years, a growing number of studies about academics of working-class heritage (WCH) by people identifying as such have done much to celebrate working-class cultures in academia and to highlight forms of injustice felt by them (Binns, 2019; Crew, 2021). There has also been an amplification of calls for positioning academics of WCH as subjects in research about their own lived experiences, rather than the objects of inquiry in the work of more privileged others (see Walkerdine, 2021 and Binns, 2019). At the heart of this work is a concern with representing the rich diversity of cultural wealth academics of WCH bring to academia and the challenges they face. Some observers hope that through this work we can move beyond a limited range of stereotypes representing academics of WCH as figures of despair or heroic champions overcoming adversity in a quest of social mobility (Brook and Michell, 2012; Morley, 2021 and Poole, 2022). Such work confronts hermeneutic injustices constraining the possibilities individuals have to know their own lives, because of a limited stock of representations (Fricker, 2007; Goetze, 2018). Therefore, more needs to be done to involve academics of WCH in generating stories reflecting the cultural heterogeneity of this group of people

This Society of Research in Higher Education (SRHE) funded study mobilised critical storytelling methods to provide eight Russell Group academics, identifying as being of WCH, with opportunities to position their lives as sites of critique and analysis to generate knowledge about their experiences on their terms (Benmayor, 2012). The participants were offered opportunities to work collectively to author their stories as opposed to having them ventriloquised by more powerful others positioning themselves as “self-appointed speakers-for” underrepresented people (Seers-McCrum, 2020).

CREATING A SoTL COMMUNITY

Through a co-production of knowledge approach, the study has pursued the creation of a SoTL community where individuals can create their stories. The participants have collectively taken control of the narrative means of production; often denied to them because their underrepresented status in the Academy is not fully recognised (Walkerdine, 2021). By bringing together participants with different lived experiences, the hope has been that a rich source of symbolic resources would be available to create stories of becoming and being an academic of WCH. The project embodies four recurring themes of a SoTL community; collaboration; professional development; sharing and dissemination; and funding (Tierney, Aidulis, Park and Clark, 2020). The participants have had a space to discuss how their routes into and through academia have shaped their sense of being and becoming an academic of WCH. The stories have produced narrative data the participants have collaboratively analysed and distilled into composite stories representing three main themes (Johnson, Wildy, Shand, 2021). Working in partnership with a student-illustrator, the group are currently developing the following stories to disseminate in an interactive graphic novel format:

1. What is an academic of working-class heritage?
2. Routes into HE (career pathways)
3. Developing epistemic confidence.

The stories aim to communicate to future generations of academics and students of WCH that people like them exist in academia, a middle-class place not designed with them in mind but nevertheless somewhere they can belong (Ingram and Abrahams, 2015; Shukie, 2022).

The inquiry space has offered opportunities to consider the cultural wealth of experiences the participants have brought with them, including resilience, adaptability and a willingness to challenge each other as well as established representations of their lived experiences (Yosso, 2005; Crew, 2021). An intimate community with deep connections has formed through the sometimes uncomfortable yet developmental sharing of life's happenings. Working through the despair of having cherished beliefs unsettled to make visible the often-contradictory nature of one's sense of becoming has produced critical hope (Bozalek et al., 2014). At times, the participants have been "broken open ... to relinquish authority in favour of collaboration" and to "find meaning in uncertainty" (Riddell, 2020). Rather than ignoring the discomfort caused by emotional dissonance, the participants have worked with it to create interconnecting stories of becoming an academic of WCH, reflecting the complex fluidity of identity. The study has produced a "Third Voice" formed from contrasting perspectives, producing new understandings of self and shared experiences (Goodson and Gill, 2011: 79). The aim has not been to replace absolutes with new absolutes, but to work with liminal feelings of being betwixt and between contested class boundaries to create new ways of authenticating what it might mean to identify as an academic of WCH (Ingram and Abrahams, 2015; Poole, 2021).

STUDY OUTCOMES TO DATE

At the point this proceedings paper has been written, the project is ongoing, so the outcomes are limited in determining the extent to which the following study aims have been met:

1. to create collaborative opportunities for participants to transform their stories into anonymised composite stories (with possibilities for a variety of media types) for dissemination with wider audiences
2. to identify pedagogic contexts the stories can be used in to empower students of WCH in, or considering, postgraduate studies to see HE as a place for them

Nevertheless, the study has illustrated that significant ethical responsibility is attached to this pedagogic approach, particularly when considering the potential for participants' affective responses. Sharing, interrogating and (re)interpreting life histories requires much emotional work from participants, which has the potential to be critically productive and personally distressing. Therefore, to counter the possibility of disrupting participants' cherished beliefs, forms of compassion must be in place to support participants replace any feelings of lost self they may experience (Boler, 2014). In practical terms, from the outset participants need to be aware that the work may cause emotional dissonance, and that measures have been taken to support any forms of distress they may feel during and after the project. For this study, support measures have included access to a counselling service and opportunities to discuss the emotional work of the study in sessions. In this sense, the study's ethical dimensions respond relationally to the participants' affective needs.

NEXT STEPS

Progress on the study has entered a key stage as the participants work collaboratively with an illustrator to produce their stories. The aim is to layer multimodal artefacts into the two-dimensional stories to amplify the voices in the stories. In tandem with producing the stories, a website is being created to disseminate outcomes from the project and the group are working on a journal article discussing the methodological aspects of the work. The participants are also reflecting on possible applications for the approach in other contexts where under-represented social groups struggle to tell their stories on their terms.

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Faculty Development and transfer: Is what they learn what they do as teachers?

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ABSTRACT

Traditionally, University teaching in Argentina has been based on discipline expertise in detriment of the “professionalization” of teaching. However, due to Government policies and University incentives for faculties to be trained in Higher education as an essential condition for scholar promotion, a substantial change can be observed in Faculty development (FD). In our University, this process has been initiated more than 15 years ago. Diverse FD options have been implemented. Though many educational innovations have been initiated, the real scope of educational knowledge transfer (KT) is not clear. This study aimed to explore the degree of KT reached by trained faculty, and facilitators and barriers identified for transfer. An e-mail invitation to complete a spanish validated questionnaire (Feixas, 2013) was sent to 521 trained faculties evaluating FD transference factors. This instrument included 54 five-point Likert scale items grouped in 3 factors (FD training characteristics, institutional & personal). Three open text items were added to the original instrument. Two different types of FD training programmes were analysed: short (SD) and long duration (LD) of 50 and 360 hours respectively. The response rate was 30% (156): 42% (66) SD and 58% (90) LD. Results of factors: FD training: SD 4.26 vs. LD 4.43; Institutional: SD 3.73 vs. LD 3.88; and personal: 3.11 vs. 2.97. Iterative content analysis of the open text items showed the need for building a teaching community of practice and economical and working conditions as the main aspects for transferring the knowledge. In conclusion, both groups of trained faculties (SD & LD) agreed on the strength of the 3 factors in facilitating KT, though the personal factor needs to be further explored. In contrast, the open text analysis showed that the institutional factor could be perceived as a significant barrier. The transfer of learning is a complex and multi-causal phenomenon. A multi-factorial approach that considers personal aspects, teacher training and institutional contexts is required to understand the transfer of learning to professional teaching practice. By discussing the results of this study, we hope to build networks with colleagues from other universities interested in this topic and strengthen the ties of the SoTL community.

COMPLETE TEXT

Traditionally, university teaching in Argentina has been based on disciplinary expertise in detriment of the "professionalisation" of teaching. However, a substantial change can be observed of late in Faculty Development. This is related to government policies and university incentives for faculties to be trained in higher education as an essential condition for scholar promotion. In our University, this process has been initiated over 15 years ago. Since its foundation in 2001, the University has placed great value in teacher training through policies, programmes and lines of action, as well as through the allocation of human and material resources. The University fosters the design and implementation of a wide range of academic activities for faculty development: for example, it awards grants to its professors for teacher training courses, as well as for participation in conferences and congresses in the field of education. However, although many educational innovations have been implemented, the actual extent of educational knowledge transfer is unclear.

The seminal studies on transfer were developed by Baldwin and Ford (1988). They described *transfer* in terms of training input factors, training outcomes and transfer conditions. Among the latter, they identify the generalisation or manifestation of learning from training on the job, and the continued use of the acquired competences in the workplace.

Kirkpatrick's (1998) model is currently used to evaluate training programmes. It sets out to determine four aspects: reaction, learning, application and change in behaviour, and finally, the impact on the organisation. The recognition of transfer in this model is circumscribed to the third aspect: application and change in behaviour. From these initial contributions, new models for evaluating university teacher training have emerged: Gilbert and Gibbs (1999), Kreber and Brook (2001), Guskey (2002) and Stes et al. (2010), and Madinabeitia Ezkurra and Lobato Fraile (2015). In particular, the latter group of researchers focuses on the transfer achieved from long-term faculty development strategies and how they influence: understanding of teaching and learning, the capacity for educational research and the management of teaching activities. In the Spanish-speaking context, Feixas et al. (2014) define the transfer of pedagogical training as “the effective and continued application in the workplace of a set of knowledge, skills and attitudes learned in the context of academic development.” Studying transfer allows us to understand the extent in which teaching practices are exercised based on the pedagogical knowledge developed during pedagogical training.

In this communication we present ongoing quantitative and qualitative research. It is a descriptive-interpretative study (Ramos Zincke, 2005) in the form of a case study (Stake, 2010). Its aim is to identify and characterise the transfer of the pedagogical training received by faculty to their teaching practices. Four cases were selected from the same institution. This is an argentinean non-profit private university associated with a high complexity teaching hospital. It has a long tradition of human resources training in the health field and is locally recognized for the quality of its

educational programmes. The design includes 2 types of data collection instruments: the application of a validated questionnaire and the implementation of focus groups.

This paper presents the results of the administration of the instrument "Teacher Training Transfer Questionnaire" (Feixas, 2013) to identify the factors that condition the transfer of pedagogical training of professors. The questionnaire, applied to the European university setting by Feixas and Zellweger (2010), was adapted to the Argentinean context by this research team with the author's permission. This instrument includes 54 five-point items on a Likert scale grouped into three dimensions referring to: the design of teaching training, the environment and individual factors. Three open-text items were added to the original instrument. For the application of the questionnaire, all the participants who had completed any of the 4 training programmes (cases of this study) up to 2019, were contacted by email. Out of 521 participants, the sample obtained was 156 answered questionnaires, which represents a 30% response rate.

Brief description of the sample

Universe	511 participants contacted
Sample	156 answered forms
Response rate	30.5%
Gender	female: 91 male: 65
Age	25-29: 0.5% 30-39: 25% 40-49: 34.5% 50-59: 26.9% 60-64: 10.6% +64: 2.5%
Years of teaching experience	0-5: 27.7% 6-10: 20.5% 11-15: 19.8% 16-20: 12.8% 21-25: 8.3%

	26-30: 6.4% +30: 4.5%

RESULTS

Two types of results from this first stage of the research are presented below. Firstly, a characterisation of the four case studies, identifying their general and particular features. Secondly, the analysis of the data obtained through the questionnaire, organised according to conditioning factors of transfer.

Characterisation of the four case studies

We found that the four case studies share some general features:

- They are teacher training programmes (courses and degrees) designed and implemented by the University for its own academic community between 2007 and 2019.
- They are intended for faculty teaching in undergraduate and posgraduate programmes linked to health sciences, and professors of postgraduate fellowships and residencies in the same field, both at the university and at the associated hospital.
- They acknowledge the central challenges of university teacher training in the health sciences. On the one hand, their participants are already teaching, and they tend to reproduce a-critically teaching practices that focus almost exclusively on the presentation of information. On the other hand, teaching in clinical contexts (medical offices, operating rooms, etc.), which is central to the training of professionals in this field, is not usually considered as such. Teacher training enables them to recognise their role in contexts "outside the classroom".
- They offer an **integrative model** to university teaching competences: it is not exclusively a question of developing specific skills.
- They encourage exchange between faculty in order to strengthen the academic community.

With regard to the particular features of the 4 cases analysed, we present below the systematisation developed:

Case	Initial Teacher Training Programme (ITTP)	Postgraduate Teaching Training Programme (PTTP)	Specialisation in University Teaching for Health Professionals (SUT)	Complementary Cycle for Specialist Degree (CC)
Type of programme	Postgraduate course	Postgraduate course	Postgraduate degree	Complementary cycle
Duration	Short: 50 hours - four months	Long: 360 hours - two years	Long: 360 hours - two years	Long: 100 hours - one year.
Modality	Blended	On-site	On-site	On-site with self-managed workload
Target group	Professors without pedagogical training.	Professors with or without pedagogical training.	Professors with or without pedagogical training.	Professors who have completed the *"Postgraduate Teaching Training Programme*"
Characteristics	A first comprehensive approach to the professionalisation of teaching. It deals with basic and common content on teaching practices.	Comprehensive and in-depth approach to pedagogical issues. It was developed between 2007 and 2015 and precedes the *Specialisation in University Teaching*, which began in 2015.	This course replaced *"Postgraduate Teaching Training Programme"* with which it shares characteristics and objectives.	Term proposal with two cohorts. Considering the equivalences between the PTTP and SUT programmes, when the latter was created PTTP graduates expressed interest in obtaining the Specialist degree.
Objectives	That participants reconstruct their teaching identity by developing a reflective vision of their teaching practice, an appropriation of pedagogical concepts and methodological tools on teaching, learning and learning assessment.	To encourage participant's reflection on their own teaching practice with a pedagogical conceptual framework. Promote improved teaching practices, in aspects such as: lesson planning, programme design, learning assessment, team management, etc.	In addition this programme promotes research and dissemination work in the field of higher education in health sciences.	Update training through systematised activities that include research and dissemination (PTTP and SUT).
Universe	12 cohorts (2015 a 2019),	9 Cohorts (2007 a 2015),	2 Cohorts (2016 y 2017),	2 Cohorts (2016 y 2017),

	295 subjects.	137 subjects.	52 subjects.	27 subjects.
Sample	66 responses (22%)	44 responses (32%)	28 responses (54%)	18 responses (67%)

Analysis of conditioning factors of transfer

An overall analysis of the data obtained from the 156 answered questionnaires shows the following result on eight determining factors in the transfer of the training received:

training design and acquired learning, study program coordinator's support, willingness to change, environmental resources, student`s feedback, institutional recognition, team's teaching culture, participant's personal organisation.

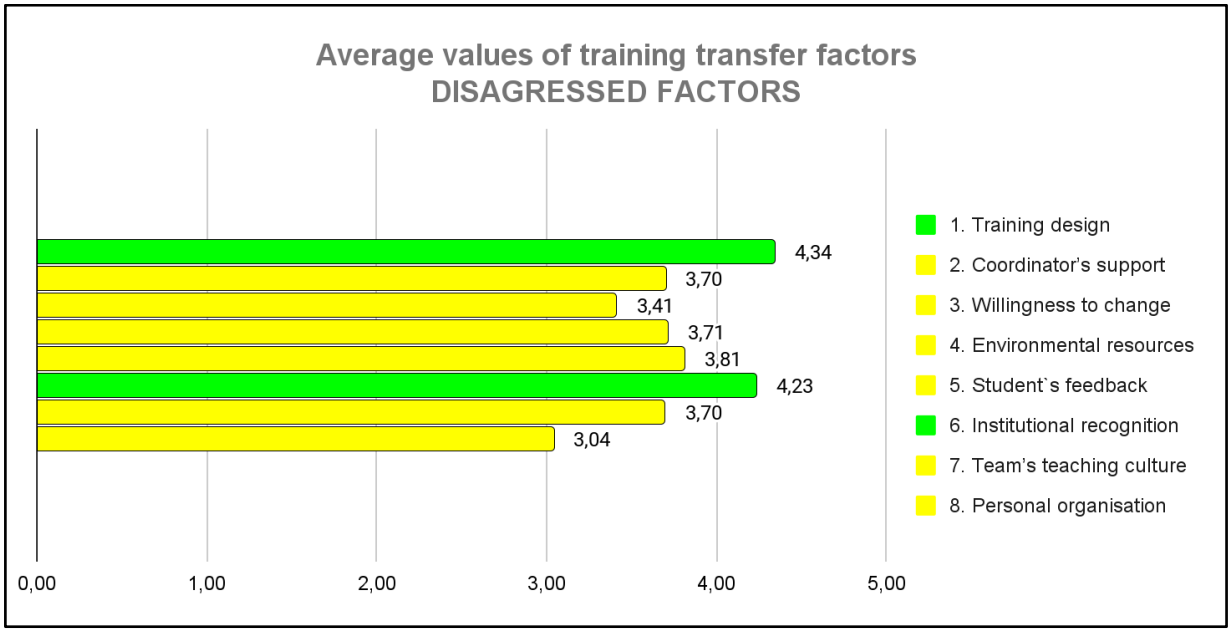


Figure 1: Global average values of transfer factors for the four cases

To identify whether a factor is a facilitator of transfer, the criteria of the previous work (Feixas, 2013) was followed: on the Likert scale of 1 to 5, transfer barriers are placed between 1 and 2 (colored red in the graphs of this work), barrier risks between 2 and 3 (colored orange), weak facilitators between 3 and 4 (colored yellow) and finally strong facilitating factors between 4 and 5 (colored green). The grouping of these eight factors gives us an overall view of three major dimensions: design of teaching training, environment and personal organisation.

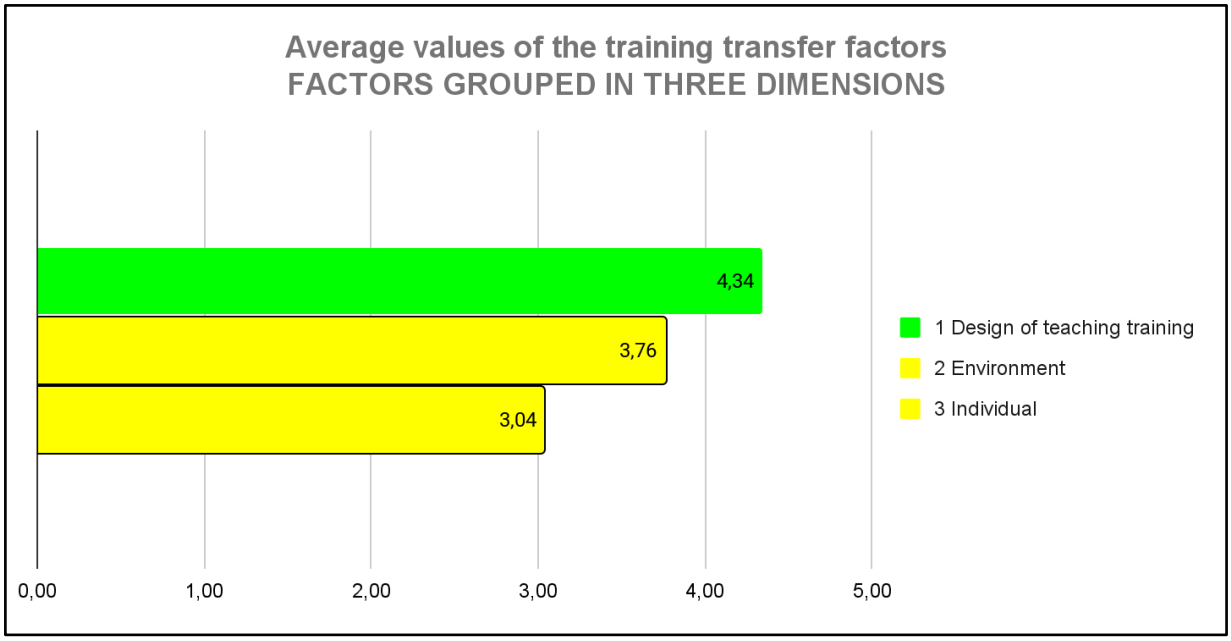


Figure 2: Average values grouped by dimension for the four cases

Looking at the four cases as a whole, with an average of 4.34, the *"Design of teaching training"* dimension is a strong facilitator of transfer. When asked directly, participants express having achieved learning transfer, their intention to do it or the feeling of being able to do it. When consulted in particular about the conditions of the training, they identified the value of certain characteristics, such as the fact that the design of the training encourages the group to share new experiences and this motivates change. They also value the role of the trainers who carry out the programme and identify lessons learnt for their teaching practices. In line with the challenges identified for teacher training in higher education, we can highlight that professors mention a new recognition of "what it means to teach at university level" and the value of reflecting on their role within the framework of the programme. They also regard highly the opportunity to rehearse strategies in the safe context of training (with greater emphasis on long-term courses: 4.52 than short-term ones: 4.09). In summary, we can affirm that the participants value the design of the training programme and perceive that the knowledge can be put to use in their teaching practices.

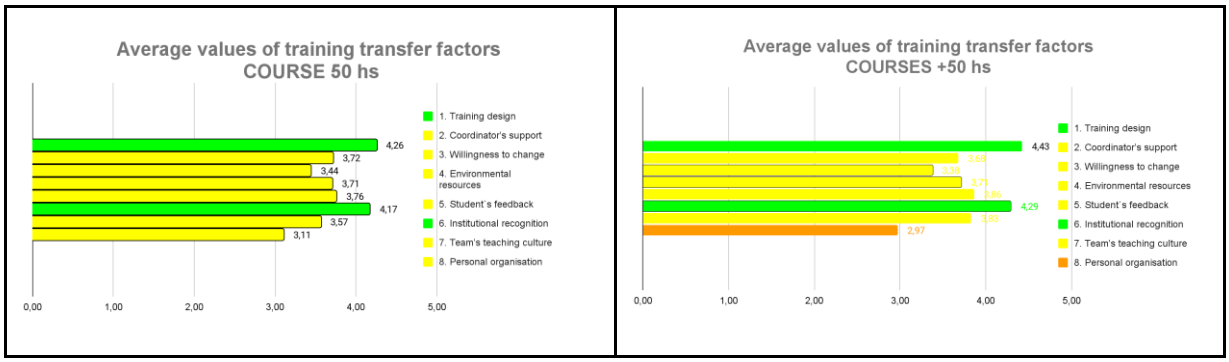
If we compare the results of this dimension in the cases of short and long duration we find minimal variations, the short duration course reaches 4.26 points while the long duration ones as a whole go up a little to 4.43 points.

Something similar happens in the *"Environment"* dimension. Looking at the four cases as a whole, we observe an overall average of 3.76, constituting a weak transfer factor. If we break this data down and analyse the results according to the duration of the cases, we observe that programmes of short duration score 3.73 and those of long duration score 3.88. This dimension groups together questions that refer to: the support received by their superiors when implementing what was

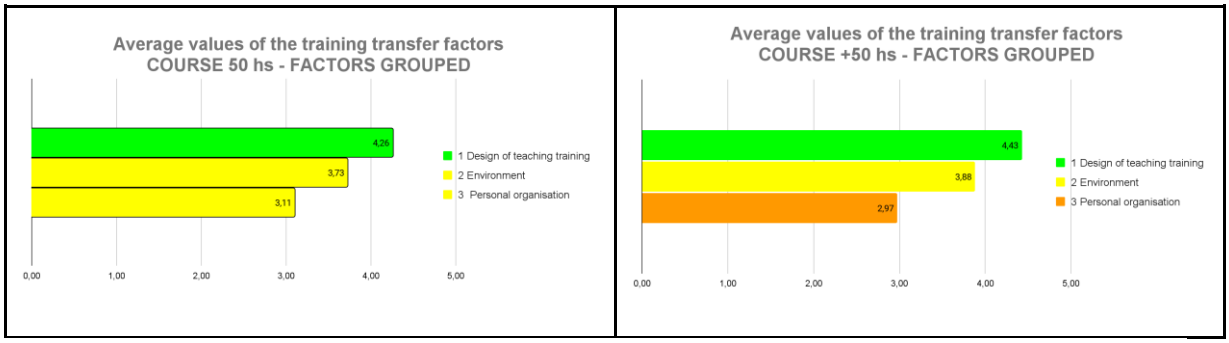
learned in training (encourage, scaffold and value); the predisposition to change of their team; the institutional resources (human, technical, economic) available; student`s feedback when introducing innovations; institutional recognition (both of the training and of the implementation of changes), and teamwork culture (experience sharing, joint planning, collaborative working). Despite the overall result indicating this dimension being a facilitator of transfer, it is striking that the team's enthusiasm to introduce changes represents in both, long and short duration, groups a hindering barrier (2.41 for short cases and 2.33 for long cases).

The *"Personal organisation"* dimension is close to hindering knowledge transfer. Globally a 3.04 average is reached, consisting of 3.11 for the short-term course and 2.97 for the long-term courses. In this dimension, both workload and work pressure factors are below 3 points (with 2.81 and 2.86 in the long courses and 2.92 and 3.00 in the short courses), consisting of the main barriers for transfer. On the other hand, time commitment factors obtain better results, ensuring the overall dimension constitutes a weak facilitator.

Figures 3 to 6 present the results of the factors gathered according to the duration of the courses:



Figures 3 and 4: Average values of factors when grouped by case duration.



Figures 5 and 6: Average values of the three dimensions grouped by case duration.

The open questions introduced to the questionaire by this research team aimed to gather information on the challenges identified by faculty when putting what they had learnt to use. The main difficulties described were:

- Lack of time to design/implement innovations (58 mentions).
- Teamwork with colleagues with no teacher training (30 mentions).
- Student's resistance to innovations/ interest (21 mentions)
- Finding a balance between teaching and health care activities (19 mentions)
- Working conditions: human resources, materials, recognition, remuneration (17 mentions).

Finally, when asked to give their global perspective on knowledge transfer:

- 59% of respondents claim to apply in professional practice "a lot" of what they have learnt (63% for long duration LD, 53% for short duration cases SD),
- 21% claim to apply knowledge "sufficiently" (13% LD, 30% SD),
- 12% claim to apply "everything" they have learnt (17% LD, 6% SD).
- 9% claim to apply "little or no" knowledge learned (7% LD and 11% SD).

CONCLUSIONS

The research shows that the adapted questionnaire allows for the identification of transfer barriers and facilitators from academic training to teaching practice in the Argentinean context. The small linguistic modifications made avoided comprehension doubts of some items.

The analysis developed at this stage reaffirms the role of training design and learning acquired as a potential or strong facilitator in the four cases. In line with the previous work carried out by Feixas et al. in 2013, the results obtained in this analysis allow us to argue that: "*the design of teacher training and the learning acquired by participants is a factor that acts as a strong facilitator of transfer, especially in long duration programmes where all teaching competences are developed in an integrative model*" (Feixas et al. 2013). Although, in this study, no significant differences were observed between the long and short duration cases regarding the value of teacher training. Only subtle differences can be seen in some items between the short duration case and the long duration cases that are not exclusively ascribable to the time spent in training. An example of this is the opportunity to practice what was taught during the training period. This is something that the long duration cases work on intensively as they base training (reflection, criticism and improvement) on the real teaching practices currently exercised by participants. We consider this design characteristic a key factor to facilitating knowledge transfer. It is necessary to consider that in previous publications "short duration" cases consisted of courses with less than 50 hours. The short case presented here amounted to a total of 50 hours and was placed in this category because it was significantly shorter than the other three cases described. A slight tendency in the appreciation of transfer application is maintained, with a perception of greater transfer in the case of long duration programmes.

The role of the environment and personal organisation were also affirmed as weak facilitators in this institution. In the case of personal organisation it can even be considered a risk of barrier (especially in graduates of long duration programmes). Both of these dimensions are clearly a challenge for this institution which is working to identify opportunities for improvement. Aligned with these findings, the iterative content analysis of the open text items showed the need to strengthen academic community, teamwork and consider economic and working conditions as aspects to work on to improve learning transfer. Furthermore, the demanding healthcare activities tensioning the time professors dedicate to their teaching practices represent an additional institutional challenge.

Moving forward, this research team considers the implementation of the focus groups essential. The aim is to go beyond the perception of transfer as surveyed by the questionnaire, and collect data that will enable us to understand the teaching actions that evidence transfer, the conceptions that guide educational practices and the role of facilitating or hindering factors identified in this first stage. We believe this new information will eventually contribute to the improvement of teacher training programmes in our institution. Finally, by discussing the results of this study, we hope to build networks with colleagues from other universities interested in this topic and strengthen the ties of the SoTL community.

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Peer observation of hybrid classes. A teacher training activity for university faculty

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ABSTRACT

The COVID-19 pandemic posed new challenges for teacher training. Like all aspects of university life, this too was virtualised to guarantee continuity. In our institution, the Postgraduate Programme in University Teaching has a peer observation of face-to-face classes training device. It consists of: a preparatory workshop, the class observation, a report written by the observer analysing the event and a feedback meeting chaired by a teacher of the programme. The forced virtualisation required changes in the activity in order to: 1- virtualize the observation management process; 2- define what constitutes remote classes, understanding they generally transcends the synchronous video conference session; 3- build new tools to guide and support the observation process. The adaptations sought to maintain the original design of this process (Schwartzman et al, 2019). Professionals in training use this instance of reflection and joint construction with teachers and peers to make their action repertoires conscious, undertake conceptual reconstruction and restructure their representation, understanding and teaching practice (Anijovich, 2009; Roni, Eder, Schwartzman, 2013). The external and, at the same time, close look that supposes the observation by a peer in training, enables the construction of new practices from a SoTL perspective.

This communication presents the results of a descriptive-interpretative qualitative study that allowed us to recognize specific configurations of remote classes observed and analysed by students of the 2019-2020 cohorts.

Among the configurations, we found classes centred on a synchronous meeting exclusively or hybrid sequences including synchronous videoconference sessions and asynchronous pre- or post-synchronous activities. However, the peer pedagogical analysis in the reports mostly focuses on the synchronous sessions without addressing the asynchronous pre- or post-class sections that make up each remote class.

We find the need to work with university teachers in redefining the concept of "remote class" and assess the value of the modifications made to the peer observation activity for the training of post-pandemic professionals. Finally, recognize the strategies that enabled colleagues to work remotely and thus sustain the development of the academic community during pandemic isolation. Discussion

of these findings with colleagues could help us build a better understanding of hybrid classes and the difficulties in designing, developing, and transforming them.

COMPLETE TEXT

The COVID-19 pandemic posed new challenges for teacher training. Like all aspects of university life, in order to sustain academic continuity, it was necessary to "virtualise" teacher training activities for undergraduate and postgraduate teaching staff and for hospital residency systems.

At our institution, until the irruption of isolation, the Postgraduate Programme in University Teaching had a training device based exclusively on peer observation of face-to-face classes. It consisted of: a preparatory workshop, the observation of the class, a report written by the observer analysing the class, and a feedback meeting chaired by a teacher of the programme.

This device of peer-to-peer classroom observations allows for a reflective approach to the practices of the teachers taking this postgraduate course. The participants offer classes that they have to carry out in their real teaching activity to be observed by their peers. Everyone plays both roles: being observers and being observed. The classes can take place in any of the educational programmes developed at the University Institute and in different contexts or practice settings (hospital, university, communities, scientific societies). In a previous study (Schwartzman et al 2019), we were able to recognise the value of this device as a learning activity that enables trainees to critically reflect on their teaching practice through a didactic analysis. The results of the study also showed that teachers in the health sciences field who are being trained in the aforementioned programme were able to recognise and analyse the lesson plan, the use of various teaching strategies and didactic resources to reflect on face-to-face teaching. In addition, they recognized observing their peers as a valuable experience for reflecting about their own teaching activity.

In order to sustain this formative activity during the pandemic, we had to incorporate the observation of remote classes. This in turn implied reviewing the training device itself. In this communication we present its new features and the first results of its implementation.

The study presented here was carried out at a health sciences university in Buenos Aires City (Argentina) which has undergraduate, postgraduate and in-service specialisation programmes linked to the hospital residencies system. In this context, a postgraduate course in university teaching for health professionals (EDU) is being developed. Its aim is to provide a comprehensive and in-depth approach to pedagogical issues at the higher education level. It encourages reflection on participant’s teaching practice and the development of a critical view using a socio-constructivist pedagogical conceptual framework to promote improvements in

aspects such as: teaching, curricular and micro-curricular design, learning assessments, team management, etc. It also intends to promote the development of research and dissemination work in higher education in health sciences.

Within the framework of this programme, the peer-to-peer classroom observation device is being developed. Until the start of the pandemic it consisted of the following four stages:

1- Participation in a workshop on observation, in which work is done on the meaning of observation, the role of the non-participant observer, the observation instrument, the construction of the report and feedback to the colleague.

2- Classroom observation of a fellow trainee using a structured observation guide that focuses on: contextual aspects of the class, sequence of activities, relationship between content and teaching strategies, teacher-student relationship, among others.

3- Preparation of a feedback report by the observer. This includes contextual data of the class, interpretation of what happened, conclusions (strengths, opportunities for improvement and suggestions for future teaching activity), and reflection on how the observation contributes to the observer's own practice.

4- Peer feedback meeting, where the observer shares their views on valuable aspects of the class observed, issues to be reviewed and suggestions for improvement. This space is coordinated by an EDU teacher.

In the context of isolation due to the Covid-19 pandemic, this university developed all of its academic activity remotely. The peer observation device had to be redesigned both to respond to teacher training in this context and to account for the classes that were actually taking place. The changes made to the peer observation system involved:

1. defining what constitutes remote classes, understanding they generally transcends a synchronous video conference session;
2. virtualising the observation management process;
3. building new tools to guide and support the observation process.

Defining the class.

The first aspect entailed not only a revision in conceptual terms but also outlining what classes could be observed, analysed and would benefit from the feedback meeting.

The class sets up an exchange model, in which the person who designs the class establishes a contract and a form of action for recipients' appropriation of knowledge, competences and skills. The university class as a temporality and a common space brings together professors and students for an educational purpose. In the context of the pandemic, in highly mediatised situations, classes have been decoupled from building spaces and physical classrooms and in some cases from synchronous time

as well. However, they still exist. As a result, two of the central elements that defined classes, time and space, are called into question and invite consideration on what constitutes them (Landau, Sabulsky, Schwartzman, 2021).

In this sense, the classes we describe as "hybrid" respond to a broad conception:

> *We speak of hybrid teaching models when face-to-face teaching strategies are combined with distance learning strategies, enhancing the advantages of both modalities enriching the pedagogical proposal. The term "hybrid" functions as a metaphor that structures understanding and allows us to account for the interaction of different elements and a combination of multiple approaches to learning: synchronous/asynchronous, online/face-to-face, formal/informal, and their combination using different tools and platforms.* (Andreoli, 2021, page 2)

From this developing perspective, a series of guidelines were constructed to allow students to identify classes that could be offered for observation. These should include:

- synchronous, asynchronous or hybrid with different combinations.
- in the case of fully asynchronous classes, the observer had to "observe" the complete sequence once it had finished.
- a maximum duration of about 2 weeks
- a minimum duration of one hour
- planned interactions between professors and students
- different activities: dialogue in forums, production of materials or documents, viewing and analysing multimedia material, synchronous interaction meeting, problem solving or case studies, exercises, etc.

Some exclusion criteria were also considered: classes which only consisted in voice-over slide presentations, a recorded lecture, or synchronous sessions based exclusively on monologue lectures. These characteristics correspond to the didactic conception that underlies the entire postgraduate course, and which understands the class as a meeting place that enables exchange and interactions between students, professors and content for the construction of knowledge.

Adapting the device

The second aspect of virtualising the observation device was the need to modify the procedure for carrying out this teacher training activity. Some steps were added to the previous process in order to anticipate some difficulties or specificities that should be considered:

- When offering a class to be observed, the teacher had to specify, in addition to the contextual data (degree, subject, year, number of students) and the date and time of the class; whether it was a face-to-face class in a pandemic

context[2], a remote class due to the pandemic, or a class that was originally virtual. In addition, they were asked to specify whether the class was synchronous, asynchronous, combined and in which educational setting it would take place.
- Before the observation, an EDU teacher evaluated the viability of the proposal, checking whether it was a class that could be observed according to the established guidelines.
- If the evaluation was favourable, the proposed class could be published in a forum so that a colleague could observe it.
- Once the pair observer-observed was defined, the EDU teacher made sure that whoever was going to observe had all the elements for their observation: resources and materials, links to platforms, etc.

Just as in the pre-pandemic device, the EDU teacher reviewed the adequacy of the report made to the guidelines and evaluated the didactic analysis carried out. If necessary, she requested its revision. Finally, at the scheduled feedback meeting, a joint analysis of what had happened was carried out, identifying strengths and opportunities for improvement.

Adapting the observation guide

Thirdly, it was necessary to modify the observation guide and some of the points of the report. It was requested the observer consider the digital spaces and tools used, the teaching interventions and the students' activities in those spaces and with those tools; as well as the interactions in synchronous sessions, in forums or databases, etc. It was also suggested that the following aspects should be included in the analysis:

- the sequence of activities and their relevance to the achievement of objectives
- time management and adequacy of the choice of synchrony/asynchrony formats for the resolution of the proposed tasks.
- digital spaces and tools (apps) for the development of activities and interaction between teacher and students.
- when and for what purpose the teacher intervenes.

The work carried out allows us to present three types of results: the changes in the original device, the positive assessment that teachers continue to make regarding the formative experience and, finally, the types of remote classes that were developed and the analysis carried out by the peer observers.

Firstly, as can be seen in the previous section, the whole process of readjusting the training device involved changes in the postgraduate course. Although the incorporation of technologies with pedagogical criteria was traditionally taught, the context of emergency remote teaching (both of the training programme and of the teaching practices exercised by participants) speeded up the approach of these contents, as well as the exercise and reflective analysis of remote practices. The

[2] In Health Sciences, during the pandemic, teachers of clinical or surgical practices continued developing training activities for the residents in their charge.

construction of a new observation guide and the changes in the procedure demonstrate the need and value of working on this new modality after its accelerated incorporation during the pandemic.

Secondly, peer observation, also when it comes to remote classes, is considered to be of great value for teachers' training as academic professionals. In words of the participants:

> *By witnessing my colleague's class, I realised how important it is to be able to observe from another place, as a teacher, I noticed things that I would not have paid attention to if I were a student.* (CZ)

> *It was my first activity as an observer and it is very interesting to put into play all the concepts seen so far during the teacher training programme to analyse this class as a spectator (...) The friendly atmosphere observed allows students to make the most of the activity, that is something very valuable that I take for myself.* (VB)

The double meaning of the task, highlighted in this second quote, allows us to recognise the value of this device: participants "use" the conceptualisations constructed during training to dialogue with a peer and also to rethink their own practice. As we have argued in previous works, professionals in training use this instance of reflection and joint construction with teachers and peers to make their action repertoires conscious, undertake conceptual reconstruction and restructure their representation, understanding and teaching practice (Anijovich, 2009; Roni, Eder, Schwartzman, 2013). The external and, at the same time, close look that supposes the observation by a peer in training enables the construction of new teaching practices from a SoTL perspective.

Finally, we present the results of a descriptive-interpretative qualitative study that allowed us to recognize specific configurations of remote classes observed and analysed by students of the 2019-2020-2021 cohorts. We analysed 42 written reports and were able to identify the type of classes conducted by this group of teachers and what observers focussed on when critically reviewing them.

Among the configurations, we found classes centred on a synchronous meeting exclusively or hybrid sequences including synchronous videoconference sessions and asynchronous pre- or post-synchronous activities. However, the pedagogical analysis in the reports mostly focused on the synchronous sessions without addressing the asynchronous pre- or post-class sections that made up each remote class.

Most of the virtual classes observed (70%) were synchronous. They included moments of monologic exposition, dialogic expositions (although to a lesser extent)

or work in groups with clearly defined tasks such as analysis of newspaper articles or clinical cases. This last activity correlates strongly with the training tradition of health professionals. In several classes, role-playing sessions of teleconsultations were developed to train students in this new professional practice that emerged during the pandemic.

Mixed-mode (hybrid) classes represent 30% of the classes observed. Among them we find asynchronous activities linked to reading materials or watching videos, analysing cases or films. All these activities are designed as preparatory for what happens in the synchronous moment of the class, in which these readings and/or tasks are taken up again.

Only one of the classes observed included an asynchronous activity prior to a face-to-face activity. The asynchronous activity follows the same logic as in the rest of the hybrid classes, preparing for the synchronous activity, in this case face-to-face. None of the classes include subsequent asynchronous activities in the sequence.

Although the training device encouraged the observation of classes that would be enriched with the contribution of hybrid sequences, the EDU participants preferred to offer classes which, in structure, resemble traditional face-to-face classes. The only difference being they were now mediated by technologies: synchronous (face-to-face) meetings with students, in a limited time (one or two hours), with sequences of activities that begin and end in that meeting.

Recent research, which attempts to account for the changes that virtualisation has had on university classes, pose a series of questions that allow us to hypothesise possible interpretations of what we find:

> "is it possible to problematise the emphasis on spatio-temporal coordinates as structuring aspects of what we understand by class? How is a class delimited as a unit of meaning if it is developed in different times and spaces?" (Landau, Sabulsky, Schwartzman, 2021)

These questions reflect a profound change in which teachers and education specialists are currently immersed.

As far as the analysis of the lessons is concerned, the observers tend to focus on the synchronous moment of the class and, although they include in the report the description of the asynchronous previous activities, they tend to exclude the analysis of asynchronous activities. For example, they say: "at the beginning of the lesson", to refer to the synchronous moment. We also find that they consider them to be different classes and not moments of the same class, although they are expressly considered in the planning stage as one. This may also be due to the fact that most of the asynchronous activities in these classes are specifically designed to be worked on in the synchronous encounter and no interactions are planned between

students or with teachers in those moments. In very few cases, the observer analyses or suggests possible alternatives for improving the asynchronous moment by recognising the possibility of interaction with the content (and with classmates and teachers), beyond reading or observing.

The need to teach remotely entailed a change in the peer observation device. This modification has resulted in an enrichment of the observation activity by opening up new spaces and times for practice and reflection. Moreover, the analysis of these classes has led us to consider the need to: work with university teachers in redefining the concept of "remote class", work on lesson planning and on what the peer observers focus on when observing and analysing. Helping to construct categories of analysis and also didactic proposals that accompany these constructions is a double challenge as trainers. Lastly, an assessment of the value of the modifications made to the peer observation device for the training of post-pandemic professionals needs to be made,

We feel it is important to highlight the value of these new teaching modalities that have allowed us to continue building a learning community in contexts as complex as those imposed by the pandemic. They have opened up the possibility of thinking on new ways of doing and sharing without losing the sense of what calls us together in our daily task of teaching and continued learning.

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“It’s really great to actually connect with people”: Student perceptions of best practice in teaching and learning

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ABSTRACT

COVID-19 has radically altered teaching and learning experiences, prompting shifts to online teaching and an accelerating emphasis on hybrid approaches to teaching across Higher Education. This has provided a unique opportunity to consider how different teaching modalities can best implemented in the future. However, in order to understand the pedagogical value of different teaching approaches following this rapid pivot to online learning, it is important to consider the student experience. Therefore, to achieve this, we conducted two studies that aimed to understand students’ opinions of ‘best practice’ in teaching, in the context of COVID-19 teaching and learning experiences, and how this has informed student preferences for future teaching delivery. In Study 1, 64 students completed a questionnaire about their preferences for online and in-person teaching which shows that there is no universal consensus; some students value in-person teaching, some value recorded sessions, and some appreciated online-only delivery. In Study 2, we report preliminary findings from five student-facilitated focus groups with undergraduate students across a School of Psychology in a Russell Group university (N = 22) which aimed to provide more insight into the student preferences provided in Study 1. Preliminarily analyses identified that students’ perceptions of best practice in teaching centers around the need for “*meaningful connections*”, with peers, staff, and the institution. We discuss the implications of this for policy and practices.

“It’s really great to actually connect with people”: Student perceptions of best practice in teaching and learning

COVID-19 has prompted a sector-wide reappraisal of teaching and learning practice. In particular, the temporary pivot to online teaching has generated a renewed interest in investigations of how online and digital tools may be used in parallel with in-person teaching to facilitate student learning and engagement in the future. As we emerge into newer ways of working in Higher Education, this provides a useful opportunity for educators to ‘take stock’ and reflect critically and creatively upon best practice. However, in order for considerations of future teaching and learning practice to be meaningful, thorough, and authentic, student voices should be at the centre of these investigations. Previous research conducted before COVID-19 has used a range of research methodologies to explore students’ perceptions of ‘best practice’ in teaching across Higher Education. For example, Lowe and Shaw (2019) analysed the contents of student-led teaching award nominations to understand best practice in feedback provision, Holzweiss et al. (2014) asked online masters students to recall one ‘best’ learning experience, and Tran (2022) compared teachers and students’ perceptions of best practice in student learning strategies.

Higher Education is unlikely to revert to pre-COVID-19 delivery methods (Kalantiz & Cope, 2020). Therefore, this raises important questions about how students' sense of belonging, sense of learning community, and voice can be best facilitated within hybrid delivery. However, there are conflicting findings as to whether hybrid (online and in-person) teaching can lead to increased student community, autonomy, flexibility, engagement, and improved student experience (Harris et al., 2021a). In the present studies, we were interested in understanding how students perceive 'best practice' in the context of COVID-19 disruptions to Higher Education, and how this might inform future teaching delivery. In the first study we conducted an online survey to identify how students wanted teaching to look like when face-to-face contact resumed. We followed this up with student-led focus groups to understand the nuances of the student experience.

STUDY 1

METHOD

Participants

Participants were sixty-four undergraduate psychology students at a research-intensive university in the north of England. There were twenty-one students in each of the first year, second year, and final year, and one student was on a placement year. There were five males and fifty-nine females. There were seven mature students, and ten students who self-identified as being from underrepresented groups. Six students had caring responsibilities and twelve described themselves as disabled. Participants were recruited via departmental mailing lists student groups. Ethical approval was granted by the School of Psychology Ethics Committee.

Study Design & Procedure

A questionnaire was created on Qualtrics. Students completed a demographic questionnaire, and then rated their ability with technology on a 1-7 Likert scale. Students were asked with open box questions about the three aspects of online teaching delivery they would like to continue with when face-to-face teaching was possible again, and which three aspects they would like us to stop doing. They were asked what ideal teaching would look like when face-to-face teaching was possible again. They were also asked about their experience with online exams, and which aspect of online exams they would like us to keep.

Data Analysis

Survey answers were read and coded using content analysis. PB and RH read all of the comments and developed the codes. These were then checked by MP. Counts of the number of students who had contributed to each theme were then made.

RESULTS

Aspects students would like to continue

Overwhelmingly, students wanted to continue online lectures in some form, with 71% of students suggesting “recorded lectures”, “online lecture availability” or “Narrated slides” as one of the aspects students wanted to continue. During the pandemic, online, synchronously delivered question and answer sessions were introduced for the students in this study. Half (50%) of students wanted these to continue. Other changes students were keen on continuing with were changes to the timing and organization of lectures (“lectures being split into manageable sections”, “lectures at the beginning of the week, not all spread out”, 28%); increased contact with lecturers (“More contact hours”, “One-on-one zoom meetings with lecturers”, 27%) and changes in assessments (“Online exams”, “Open-book exams…”, “allowing presentation aspect to be done with audio online”, 25%). Only 5% of possible answers were blank.

When asked about their perception of ideal future teaching, many students also wanted live lectures (“I would like for us to go back to in person lectures again…”, “socially distanced lectures”, 43%). Many students also wanted to have seminars, tutorials and discussion groups face to face (“seminars in person”, “some tutorials etc. in person”, 27%). There were mixed comments about the timing of delivery with some students wanting lectures to be front loaded in the week, and others wanting things to be more spread out (“Having lectures spread out equally across the week”, “in person lectures at the start of the week with online Q&A later in the week”).

Aspects students would like to stop

The answers students gave for this question were wider ranging, and in some cases contradictory to the previous question. For example, one student answered “Q&A” to both of these questions! There were also more blank answers (30%). However, it was very clear that students found online pre-recorded lecture quality to be problematic in some cases (“over-running lectures”, “Boring slides with no breaks of videos and such”, “Releasing lectures late”, 20%). Students wanted to stop having ‘live’ things online (“anything that is face to face being online”, “online tutorials”, “personal tutor meetings”, 42%), and they wanted to stop pre-recorded delivery (“pre-recorded lectures only”, “online lectures, have them in person”, 23%). Other notable comments included inconsistency between modules in lecture format, and overwork associated with ‘extra’ teaching provided to compensate for online delivery.

Students experience of online exams

Students were overwhelmingly positive about online exams (“I enjoyed online exams”, “I found online exams good” 73%). Reasons for this included that it was less stressful (“Online exams are a lot less stressful and enable you to complete in your own time”, “Online exams takes the pressure off having to revise”, 27%) and that it turned the assessment into a test of understanding, rather than memory (“It is a lot more valuable to understand the content and be able to apply your knowledge rather than to memorise a bunch of facts”, 25%). However, some negatives were mentioned. Particularly lower motivation (“motivation to revise was very low”, “I

missed the adrenaline of going into an exam hall" 6%) and the difficulties of 48h exam periods overlapping or being close together ("can be intense to have the 48 hour periods which overlapped" 9%)

STUDY 1 DISCUSSION

The results from the survey suggest that, although there is no universal consensus among students, students generally wanted face-to-face activities to resume as soon as possible. This mirrors our previous research examining the difference between asynchronous and synchronous online learning (e.g., Harris et al., 2021b) which found that students valued synchronous online learning when it helped them to form social connections. However, while students reported a desire for live face-to-face activities to resume, they also reported wanting as much material to remain *online* as possible. This is to enable them to cope with periods of illness and disruption, but also to fit study around busy lives. They also value the ability to vary playback speeds.

This analysis also demonstrated how students prefer the authenticity of online, open book exams, which allow them to express their knowledge rather than simply regurgitate facts, names and dates. They find these exams less stressful and better for their mental health. However, many of the answers that students provided in this first study lacked nuance and context, making it difficult to infer why students had the preferences they had. Some comments were contradictory, where some students wanted Q&A sessions to continue while others found the extra contact time to be overwhelming. Indeed, the experience of individual students does not necessarily follow that of the general picture. Therefore, to understand further the nuances of the student experience, we conducted a second study, using student-led focus groups.

STUDY 2

METHOD

Participants

Participants were twenty-one undergraduate psychology students at a research-intensive university in the north of England. Four participants were in their first year of study, eight were in second year, seven were in the final year, and two were on a placement year (e.g., a year in 'industry'). All but one participant was female. Participants were recruited via departmental mailing lists and closed Facebook student groups. Students and focus group facilitators were paid for their time. Ethical approval was granted by the School of Psychology Ethics Committee. Participants were paid £10 for their participation.

Study Design

Students were invited to join a focus group about "*best practice in teaching delivery*". In order to allow students to feel as comfortable as possible in the focus groups, and to reduce the staff-student power imbalances inherent in research conducted by staff (Matthews, 2017), we recruited five undergraduate research assistants who conducted a focus group each. Previous research has demonstrated the effectiveness of student-facilitated focus groups. For example, Millmore (2021)

described a staff-student partnership initiative and recruited student-facilitators to run focus groups “for the aspirations of power-sharing within the partnership” (p. 89). Wang (2008) also found that student-facilitators of online group discussions can be useful at managing conversations between students online.

Procedure

Student focus group facilitators were provided with a focus group schedule to guide the questions and promote consistency across the focus groups, although the focus-group facilitators had flexibility to expand upon interesting discussion points. The research team first devised a focus group protocol. Focus groups were conducted online via MS Teams and were audio-recorded and transcribed verbatim for the purpose of analysis. In the focus groups, to provide some structure, participants were first reminded of the British Psychological Society (BPS) accreditation of psychology programmes and were shown a slide of “subject-specific” and “generic” skills, taken directly from the BPS accreditation standards. At the start of the focus group, students were asked to review these skills together and facilitators used this to start the discussion, with prompts such as “*how do you think you can best develop these skills?*”.

Table 2. Example questions and prompts, taken from the focus group schedule

Example questions	Follow-up question	Example prompt
If you were designing teaching delivery for your psychology degree, what would it look like?	What would you choose to have online?	Does everyone agree?
Is there anything that you have experienced about online teaching over the last year that you would like to keep when face-to-face teaching is possible again?	Do you get anything different from in person and online lectures?	How did you find online exams?
How do you learn most effectively?	How does this relate to your learning experiences whilst studying at university?	

Data Analysis

Analytical Approach

We used thematic analysis to interpret the focus group data (Braun & Clark, 2006, 2019). We deemed this type of qualitative analysis suitable given that we were interested in understanding students’ lived experience and first-hand perceptions of

teaching and learning (Braun & Clarke, 2006). The analysis was inductive and was not driven by a pre-existing theoretical framework (Braun & Clarke, 2006). The qualitative analysis was conducted collaboratively by two members of the research team (R.H and M.P) and discussed with the wider team. Both members of the team first read all of the focus groups transcripts in full and developed descriptive codes. Once all the focus group transcripts were coded by the two members of the team, the codes across the transcripts were collated. Themes were then created, reviewed, and refined in relation to the entire data set. Themes were then further defined and named, before the final report was produced. The analysis took place in collaboration with the whole research team, who reviewed each stage by reading the data, codes, and themes as appropriate to ensure coherence and fair representation of the data.

RESULTS

Here, we report preliminary findings from early stages of our analysis, focusing on one of the themes that were identified from our thematic analysis. Our thematic analysis of the five focus group transcripts identified one preliminary overriding theme, which centred around students' need to form *meaningful connections* in their teaching and learning experiences. In particular, students in the focus groups shared a perception that ideal teaching and learning is characterised by opportunity for forging and maintaining meaningful connections. This included connections with peers (i.e., other students), connections with teaching staff, and connections with the institution or department itself. Students discussed the value of 'live' teaching contexts in fostering meaningful connections, particularly with their peers:

> "live things I have had this year have been like the most beneficial because it's like actually interacting with other people because I've not really been able to meet other people on my course like because I've not had anything in person it's been like really great to actually connect with people and whenever it's just like a tutorial. It's like I should be allowed to speak to people like in real time who are on the course as well"

Other students spoke about the value of 'connecting with people' and 'getting to know' staff and students. For example, one student in the focus group discussed the value of speaking to other students 'in real time', which was viewed as an important part of the experience:

> "it's been like really great to actually connect with people and whenever it's just like a tutorial. It's like I should be allowed to speak to people like in real time who are on the course as well"

Students were mixed in how they aligned teaching modality with affordances of meaningful connection building. For example, some students praised in-person teaching: "We do get some human interaction rather than just a pre-recorded video", whereas other students spoke about being able to forge connections regardless of teaching modality. Some students did, however, reflect upon how the on-campus experience can be useful in promoting meaningful connections, because it creates a more 'sociable' feel to studying:

> "…making friends and enjoyment of actually meeting up with people and going to the lecture and then going together after lunch to library, like it's such like a sociable thing"

Some barriers to forging meaningful connections were also discussed throughout the focus groups. In particular, some of the students in the focus groups had the desire to be more connected with staff, although seeing staff as overly busy was a barrier to this. Some students in particular discussed how they did not feel able to approach staff and were aware of staff member's workloads, particularly in terms of research time and responsibilities, which created a barrier to feeling connected with members of staff (e.g., "obviously the lecturers are researchers in addition").

DISCUSSION

Overall, there was no overall consensus regarding preference for teaching modality in Study 1, but students appreciated recorded sessions and the in-person teaching experience. The student-led focus groups in Study 2 then demonstrated that the opportunity to forge meaningful connections is particularly valued by students, irrespective of how teaching is delivered. There were individual differences in students' preferences for teaching modality throughout both Study 1 and Study 2 (as per Beyth-Marom et al., 2005). For example, some students found online tutorials to be beneficial, while others found them to be unsatisfying.

Taken together, these studies suggest that, regardless of teaching modality, students value the ability to revisit material, which enables them to engage flexibly with their studies, while also benefitting from the advantages of in-person teaching, including the sense of belonging engendered by in-person interactions with both staff and student (see also Harris et al., 2021a, 2021b). This is consistent with the reflections of Nordmann et al. (2021), who suggest that the 'new normal' should involve interactive lectures, allowing the opportunity for personal connections, with lecture capture to provide students with the ability to engage flexibly with teaching materials. Nordmann et al. (2021) also emphasise the potential social aspect of lectures, which is reflected in the meaningful connections theme identified throughout our focus groups. In order to promote meaningful connections, as well as active and authentic learning, educators should consider ways of increasing genuine interaction, while making the most of in-person group learning.

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Using an Academic Literacies Lens to Examine Searching and Reviewing the SoTL Literature

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ABSTRACT

There are relatively few sources that critically evaluate the main search sources or examine how to go about synthesizing what we already know about the literature on SoTL. We use an academic literacies perspective as a lens with which to explore the different ways that literature searches and reviews may be undertaken. While searching and reviewing the literature is often presented as a scientific objective process, this is a myth; the reality is much messier, nuanced, and iterative. These are complex, context-dependent processes that are socially constructed. There is no one way of searching and reviewing the SoTL literature.

INTRODUCTION

As the volume of literature on SoTL grows, the need increases for clarity in how to identify 'key' references, and for critical reviews to synthesise what we have learnt from the literature search. However, it is not an easy task, because SoTL is characterized by the nature of the interdisciplinary 'big tent' (Huber and Hutchings 2005), and the diversity of purposes and contexts (Booth and Woollacott 2018). The founding co-editors of *Teaching and Learning Inquiry* observe that one of the most common reasons reviewers recommend revisions or rejection is "the need for a stronger grounding in relevant research on teaching and learning—an effective SoTL lit review" (Chick 2016).

Whereas a literature search is "a systematic search of the accredited sources and resources"; a literature review is "the analysis, critical evaluation and synthesis of existing knowledge related to your research problem, thesis or the issue you are aiming to say something about" (Hart 2018, 3-4). The two processes are related, and they are influenced by what goes before and affect what happens after.

Our review is informed by an academic literacies perspective that views academic reading, writing, and meaning-making as socially constructed processes (Weller 2011). Most work on academic literacies has focussed on supporting student reading and writing (Hilsdon, Malone, and Syska 2019; Lillis and Tuck 2016). We extend this

perspective to searching and reviewing SoTL literature by academic and professional staff, as well as students, and, hence, this review should be of interest to both experienced and new SoTL scholars.

RATIONALE

Arguably the main rationale for undertaking a search and review of the SoTL literature is to be able to join in a scholarly conversation about learning and teaching, whether to contribute to an existing conversation, or to change it in a different direction (Healey, Matthews, and Cook-Sather 2020).

Being clear about the purpose of the literature search is critical. The purposes are overlapping, but the focus of the search affects the amount of time you are prepared to commit, its thoroughness, and the number of references that you can cope with (Table 1).

AN ACADEMIC LITERACIES PERSPECTIVE

According to Lea (2017), the academic literacies movement takes a social and cultural approach to writing, which contrasts with the cognitive perspectives that encourage a deficit view of the literacy capabilities of students (Lillis and Tuck 2016). The literature on academic literacies argues that academic reading and writing are social practices that are related to academic identity, as well as identities privileged in the academy in general, and in scholarship more particularly (Lillis and Scott 2007; Lea and Street 1998; Weller 2011). Here we extend that argument to searching and reviewing SoTL literature. We need to recognize that SoTL scholars have to negotiate the academic hierarchies of power in which they operate and the sometimes-conflicting practices they come across in what are seen as acceptable ways of searching and reviewing the literature and communicating their findings.

Table 1. The purposes of the literature search

Purpose	Time period	Thoroughness	Number of references
Identifying a few 'key' references and authors on a topic	One-off	Highly selective	A few
Keeping up to date	Continuous	Selective	A few per week
Highlight excluded experiences and voices	Focussed - circular	Selective and/or comprehensive	Sufficient to illustrate excluded experiences and voices

To inform a SoTL project	Focussed - circular	Selective and/or comprehensive	Sufficient to contextualise and position the study
To undertake a stand-alone SoTL literature review	Focussed - circular	Comprehensive and selective	Identify relevant references from a long list

FRAMING AND MANAGING YOUR SEARCH AND REVIEW

The academic literacies lens led us to distinguish between:

- *Comprehensive searches*, which include library discovery searches, data base searches, and web search engines.
- *Selective searches*, which include social media, networks, reference lists, bibliographies, author searches, grey literature, and browsing journals.

Different combinations of comprehensive and/or selective types of searches may be appropriate for different purposes, reinforcing the argument that there are multiple ways of undertaking literature searches. For example, using a library discovery search, an online database search, and/or a web search engine, is generally unnecessary if your purpose is simply to identify a few ‘key' references, keep up to date, or to highlight excluded experiences and voices (Table 1). A mixture of some of the selective searches is more likely to be suitable.

Figure 1 presents a simplified framework of the main literature search and review processes. The diagram should help you visualise the context and stages of undertaking a literature search, along with some of the choices available. It may give the impression of an ordered linear process, but the reality is much messier. Where you start and finish your journey, which stages you go through, and in what order, will depend on the purpose of the search (Table 1). Often you will only engage with a small part of the framework. Importantly, we see the processes as circular, and you may return and revisit parts of the framework several times as you learn from your initial findings, possibly revising some of your aims and research questions, and almost certainly adding and making changes to your key search terms, the inclusion and exclusion criteria, and the key themes to be addressed in the literature review.

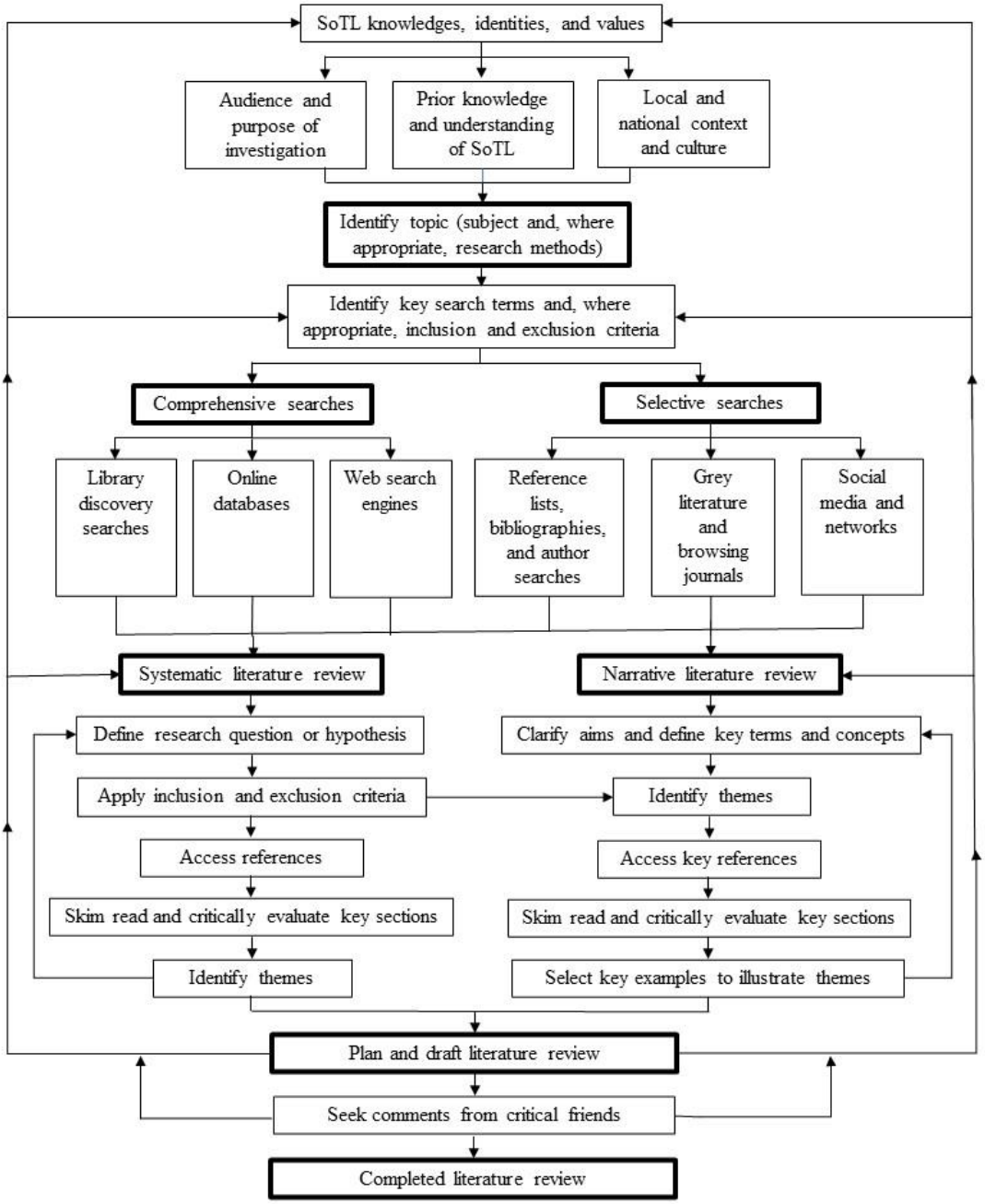

Figure 1. SoTL literature search and review framework

SYNTHESIZING THE LITERATURE IN A CRITICAL REVIEW

A SoTL literature review that is useful to researchers, readers, and the discipline connects diverse disciplines, past and present, theory and practice. It brings together individual points of light from prior work into constellations that take on a meaning greater than the sum of their parts (Macmillan 2018, 30).

A distinction may be made between:

- Narrative reviews, which tell a story based on themes identified through reading the literature.
- Systematic reviews, which are a research method that follow a series of well-defined stages, beginning with a clearly delimited (narrow) question or hypothesis. They attempt to identify all the literature within the criteria the authors define for inclusion and exclusion.

The majority of SoTL reviews fall into the narrative category. However, as the evidence-based movement expands within the social policy field, systematic reviews have grown in popularity in educational research. By focussing on empirical, evidence-based practice, systematic reviews prioritise quantitative studies, particularly those using randomized controlled trials, and exclude many of the qualitative studies that may feature in narrative reviews, and are common in SoTL studies. Indeed, it is questionable in many SoTL areas, whether there are yet sufficient quantitative studies undertaken to justify systematic reviews.

Systematic reviews are often claimed to be unbiased and superior to narrative reviews (Jesson, Matheson, and Lacey, 2011). However, these claims are highly questionable, according to Boell and Cecez-Kecmanovic (2015). They ignore the fact that systematic reviews are usually limited to published, peer reviewed, academic journal articles found in specified electronic databases that characterise comprehensive literature searches, and ignore the biases in the selection of journals the databases index, and in the references that authors choose to cite.

Well told narrative reviews can be engaging and enlightening. However, too often the authors do not say how they searched the literature, or why they chose to focus on particular items. It is important to remember that: “It is possible to work systematically in your literature review, but that does not mean it is a systematic review” (Jesson, Matheson, and Lacey 2011, 9). Narrative reviews may be enhanced

> “by borrowing from systematic review methodologies that are aimed at reducing bias in the selection of articles for review and employing an effective bibliographic research strategy” (Ferrari 2015, 230).

DISCUSSION

Searching and reviewing the literature are messy, complex, context-dependent processes. However, as Hart (2018, 3) notes: “the serendipitous, often chaotic, fragmented and contingent nature of most research … is not described in the formal account”.

To extend the academic literacies perspective further we need to examine the rich and varied lived experience of SoTL researchers and how they go about searching and reviewing the literature. In our case we were working on the article over a three-month period. It began as a ‘how to’ article. However, as we started planning the article, we realised that we could use ideas from the literature on academic literacies as a framework, and push the boundaries of what counts as valid forms of academic literacy. Our previous experience of SoTL, and undertaking literature searches and narrative reviews, is reflected in our reference list, where we had prior knowledge of 35% of the 101 items. However, we extended our knowledge and understanding significantly as we uncovered other references; 44% of these were from selective searches, and only 22% came from comprehensive searches. Unlike some authors, who note that they undertook their literature search on a particular date (e.g., Tight 2018), we kept returning to the databases, search engines, reference lists, and other sources, as our ideas evolved, and we received feedback from our critical friends. Our writing and our literature search were integrally linked as we clarified our thinking and kept revisiting our search.

We also need to be more purposeful in who we cite (Chng and Looker 2013). Citing can “give voice, and it can silence. … Intentionally or not, citing a source imbues it and its author or authors with power” (Chick, Abbot, Mercer-Mapstone, Ostrowdun, and Grensavitch 2021, 1 and 3). Following the recommendation of Mott and Cockayne (2017) to practice ‘conscientious engagement’ in selecting references to cite, to give greater weight to under-represented voices, we undertook a citation count of the literature we cited in the first draft of the paper, to identify the country in which the 175 authors were based. From the institution to which the authors were affiliated, 82% were based in UK (33%), US (27%), Australia (11%), and Canada (10%), the four most represented countries in the SoTL literature, and 18% were based in nine other countries. We were already aware of the desirability to diversify the background of the voices we cited and had moved in this direction, but this exercise focussed our minds, and we added or substituted a few further articles written from authors based beyond these four countries, where they made similar arguments or illustrated similar practices. In the submitted paper, 20% of the 203 authors cited were based outside the ‘big 4’, in thirteen different countries.

CONCLUSION

In this article we have sought to challenge the myth that the literature search and review processes can ever be entirely objective and scientific. Using an academic literacies perspective as a lens through which to view the nature of searching and

reviewing the literature has helped us to understand that these are social processes that are context dependent, and are constrained by the hierarchies in the academy. It is important to begin your SoTL project with a literature search and review, but also to keep returning to it. As Daniel and Harland (2018, 96) argue: “A literature review should be done first and last and at every stage in between.”

NOTE

This article is based on material from Healey and Healey (In submission).

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Impact of field-based interdisciplinary international staff development on teaching and learning practice.

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ABSTRACT

Traditional field-based, and often disciplinary focused, pedagogy has been revisited and revised. An international team of 15 natural and social scientists has developed field courses for students that are interdisciplinary, international and research-based. To maximising the learning for students during what is a resource intensive pedagogy, an innovative staff development course for new and experienced field course leaders was designed and implemented five times over a 3-year period. This presentation includes research on the impact of staff development for field course leaders for teaching and learning and in particular the promotion of interdisciplinary learning.

INTRODUCTION

In recent decades, science has been increasingly driven in new directions by collaborations at the boundaries between sub-disciplines and disciplines. The challenges students will face in the future are complex and the solutions are "not in the textbook" (Klein, 2005). Academic conferences now frequently call for proposals of a more integrative nature, where teams are addressing their enquiry from multiple perspectives. Employers are increasingly building interdisciplinary teams.

Yet undergraduate students must navigate discrete modules that can present as 'learning silos'. With this in mind, an international team of 15 natural and social scientists, through an Erasmus-funded field-based learning project, has developed field-based courses for students that are interdisciplinary, international, and research-based. The aim is to help prepare students for their life beyond the campus.

In order to make the most of such field-based opportunities, the project partners also developed a course for future and existing field-course leaders. This is underpinned by a 2006 report on integrative learning, an umbrella term under which interdisciplinarity sits, where Hutchings (2006) concludes that staff cannot model interdisciplinary learning to students unless they are themselves integrative thinkers and learners. This does not always come easily to teachers who traditionally focus on one discipline.

Klein (2017) summarises the complex proliferation of terms that have been used to try to define interdisciplinarity. However, underpinning all of these terms are three key criteria to achieve interdisciplinarity: integration, interaction and collaboration.

DEVELOPMENT OF THE COURSE FOR FIELD-COURSE LEADERS

A backward design approach (Wiggins and McTigh, 1998) was used to develop this course whereby the learning outcomes were first identified, followed by ways of assessing their achievement, and finally relevant activities to facilitate achievement. Five iterations of the course were held in Aljezur, Portugal, between 2018 and 2021, with a total of 58 participants. Participants included both experienced and junior staff. The courses drew on the particular expertise of the participants themselves. This peer-learning approach was intentional in the design of the course. These were residential field-based courses, with participants from several disciplines (including Geological and Biological Sciences and Social Geography) and three countries (Ireland, Portugal and Germany) working together.

The first course was implemented with the project partners themselves as participants, together with a small number of less experienced staff. We needed to undergo our own ‘staff development’. We came from our own disciplinary backgrounds, but while in the field together we were eager to learn the approaches, techniques, perspectives, and priorities of the others.

However, this did not always come easy. Sometimes it was a struggle to see the relevance of another discipline to the issues we wanted to address, which included aspects of climate change, conservation, people living in a sustainable way, etc. For example, a geologist with expertise in vertical coring of recent sediment demonstrated this disciplinary technique. For geologists, ‘recent’ refers to the past 10,000 years, but for the biologist it may mean only the past decade. A biologist said ‘but that exercise is not relevant to issues of concern in this area today”. This provoked a discussion about the transient nature of the local environment, at times marine, at times fresh water, and at times estuarine. Seeing the layering of light and dark sediment in the core, recovered from just beneath the surface, was a ‘light-bulb’ moment for this biological scientist. He will not forget the added dimension of changing environments over time that vertical coring gave to the local issues under discussion. Until we had experienced this early collaboration ourselves, uncovering the interdependencies, we could not complete the design of a course for our peers who wished to lead interdisciplinary, research-based fieldtrips.

After this implementation we were ready to refine the course for fieldtrip leaders. The refined learning outcomes are presented in Table 1. In subsequent iterations, participants could choose to work towards those learning outcomes most appropriate to themselves, however there was an emphasis on the outcome ‘Assist students to make connections between disciplines and sub-disciplines’. The learning outcomes for the student courses, all of which promote integrative learning, are given as an exemplar in Table 2.

Table 1 Examples of learning outcomes for the staff development course

	By the end of this course participants should be able to:
	• Identify appropriate learning outcomes for field-based learning • Design assessment that allows students to demonstrate achievement of the learning outcomes • Develop learning opportunities that allow students to gain skills, knowledge and understanding required to demonstrate achievement of their learning outcomes • Select and modify rubrics that allow teachers to recognise levels of student achievement of the learning outcomes • Assist students to make connections between disciplines and sub-disciplines • Recognise cultural differences associated with field-based learning • Justify the financial and time commitments associated with residential field courses • Construct a field course logistics spreadsheet, with links to relevant information, appropriate to your institution

Table 2 Learning outcomes for the student course

	By the end of this course participants should be able to:
	• Work in an international interdisciplinary team to carry out scientific field-research • Build on the work of previous scientific investigations by applying a range of relevant in-situ data-collection techniques in a novel field area • Summarise the relevant interconnected scientific features of a field area by making an illustrated sketch/ mindmap/ graphic of the important elements of the natural and/or human landscape • Construct a chronology/ succession/cycle of events related to the field area • Discuss different educational systems and socio-cultural approaches as they exist across Europe • Interact with industry and/ or government and non-government organisations to consider scientific, social and economic aspects of the natural environment in the field area. • Disseminate work, including multiple perspectives, to diverse audiences

Each course iteration was informed by feedback from previous participants, as well as by student feedback from courses running in parallel. What did students appreciate? Students appreciated learning from other disciplines, working in international teams, being given choice, and being challenged to carry out research with the assurance of light guidance from experts when needed. Integration, interactivity and collaboration between students was supported by the move towards teamwork and group-based research in the design of the student curricula.

RESEARCH QUESTION

Research was carried out to gain insights into the impact of this staff development on teaching and learning practice, and in particular the promotion of interdisciplinary learning. The authors asked **'**What is the Impact of field-based interdisciplinary international staff development on teaching and learning practice?'. As the project developed, a sub-question became 'What is interdisciplinarity?'. In higher education there is frequent use of the terms multidisciplinary, interdisciplinary and even transdisciplinary. These terms are often used as if they are interchangeable.

RESEARCH METHOD

Questionnaires were used to gather responses in relation to the research question. The questionnaire issued immediately after the course (S1) focused mainly on course logistics and practicalities with some open comments on the aspects of the course that were most helpful or appreciated.

To investigate the longer-term impact, if any, of the staff development courses, a more extensive questionnaire was developed (S2). This questionnaire allowed quantitative and qualitative information to be collected and was sent to participants 1-3 semesters after they had completed the course. A focus group was held with nine participants from one institution, with follow-up questions and discussion arising from the questionnaire responses.

The participant perceptions of interdisciplinarity were mapped against the taxonomy of interdisciplinarity devised by Klein (2017).

RESULTS AND ANALYSIS

The 58 participants who attended the 5 staff development courses were from 3 countries, Ireland, Germany and Portugal. Over these 5 courses the male/female ratio was near 1:1, though this was not the case for each individual course.

Questionnaire S1, issued immediately after each course, had 18 respondents, representing a 31% response rate. Questions focused on logistics, facilities at the study centre and participant satisfaction. All respondents scored good or excellent to

these questions. This is important, so that participants were able to concentrate on the learning.

The differing needs and priorities of experienced and less experienced participants emerged in response to the open questions, with the latter valuing networking highly. More experienced staff valued design of field exercises to improve teaching and learning ahead of other things like manage, deal with problems, and networking.

Open comments on what participants liked best/ most valued in the course were coded and 5 categories emerged in no particular order:

- The mix of experience levels: appreciated by both experienced and less experienced participants.
- Engaging with colleagues from different disciplines
- Engaging with colleagues from other countries
- Networking with peers
- Field course pedagogy

The valuable feedback from respondents to this initial questionnaire was timely and led to the staff development courses being repeatedly reviewed and modified. How would this translate into longer-term outcomes and teaching and learning practice?

Questionnaire, S2, was issued 4-12 months after each course was completed. There were 27 respondents, representing a 47% response rate. Questionnaire S2 was more extensive and sought to gain insights into the longer-term outcomes of the course for teaching and learning practice and in particular for participants views and perceptions of interdisciplinary and/or international field-based learning.

Of the 27 respondents, 33% were under 40 years of age. The participants above the age of 40 mostly identified as more traditional disciplines such as Geology, Biology and Geography. Younger participants identified with more variety including hydrogeology, geomorphology, marine biology and environmental science.

Respondents' experience of teaching in higher education varied from 1 to 35 years. Mixed experience levels were also evident with 60% of participants having led a field course before. These participants had experiences to share and reflect on, such as the benefits of total immersion of students into the fieldwork, social and informal learning, and evening discussions to resolve conflicts in understanding and consolidate learning. The 40% of participants who had not yet led a student field trip were able to ask questions that they had not voiced before and highlighted to the partners the priorities and anxieties of those who might be thrown-in-at-the deep end. This indicated the unique opportunities for exchange and peer-learning for fieldwork leaders provided by these courses.

Only a small number of respondents referred to working with colleagues from different disciplines and other countries in their initial decision to participate in the field course. However, when asked 'What stood out for you during the field course experience?' it was a different matter. The interdisciplinary and international elements were the most highly valued. Remembering back to an experience after several months, often only a few things will stand out as easily remembered.

“International collaboration / perspectives and multiple disciplinary input” was a characteristic response. All agreed that the interdisciplinary element was a positive experience, and beneficial to staff members.

For some “The section on pedagogy and assessment” stood out. This was a new conversation for them, opening up possibilities in their teaching and curriculum design, including new modes of assessment, related to field-based learning. For others their campus based pedagogical workshops had come to life in this collaborative field-based setting.

Similarly, a breakthrough in thinking was experienced by a participant who reported that “understanding that the data collected by the student can support ecosystem monitoring” stood out for him. Here the student has a role in research, and the teacher acknowledges that. Still related to pedagogy, the fact that “the field exercises were based upon real needs of the local community” indicated the purpose and relevance of the work and was an important motivator to engage. Here participants were engaging in integrative thinking and learning.

A number of questions were asked to gain insights into the impact of the course on perceptions of interdisciplinary teaching and learning. In responses, 71% said they had experience of being involved in interdisciplinary courses. This is surprisingly high and triggered follow-up questions in the subsequent focus group to explore the nature of these courses to see if they were truly interdisciplinary. When asked to give a definition of interdisciplinarity there was a wide range of responses with only 25% expressing something that was potentially interdisciplinary. When mapped against the taxonomy of interdisciplinarity (Klein, 2017), most definitions did not describe interdisciplinarity but rather multidisciplinarity. A programme of study can contain modules from more than one discipline, but that does not ensure that meaningful connections are made by the students, and that integration, interactivity and collaboration between disciplines has occurred.

The majority of participants reported being more confident or somewhat more confident in leading future field courses, and in interdisciplinary teaching and learning. Interestingly, male and female participants were equally confident going forward. This is unlike some surveys that show females declaring to be less confident in new situations compared to males.

Internationality: Working with international colleagues was unanimously considered beneficial. Health and safety and risk assessment protocols were totally new to 2 of the 3 participating countries, even to experienced field course leaders. Some participants indicated the 3rd country went ‘over the top’ with these, but agreed some should be introduced. Individual participants raised particular issues, for example, “it is a problem that too many people have to fly too much” in relation to the carbon-footprint of international field-courses. One participant raised the issue of accreditation of the course, so that CPD credit awarded in one country could be received in another.

The focus group: In a subsequent focus group participants were asked if they were involved in interdisciplinary courses. Responses were at first less clear about what

constitutes an interdisciplinary course, naming undergraduate programmes with discreet disciplinary modules. When a 5-day field course with a focus on water was described by one participant, with the challenge of creating a drinking water supply for Cork City, others began to see what interdisciplinary integration looked like. This triggered responses from others in the group, for example an undergraduate final year residential field course challenges students to “interpret the landscape” integrating perspectives from environmental science, plant science, ecology, archaeology, and culture together with human interaction with the landscape. Here the course is topic-led and demands an interdisciplinary approach. The leader stated the course was “rich and rewarding, with students from different backgrounds bringing their own experiences”.

When participants were asked ‘has the course caused you to do anything differently in your approach to teaching and learning?’ there were a number of responses. One biologist had seen the potential of integrating geological perspectives into consideration of habitat diversity and was keen to implement this on future fieldtrips. Another saw more scope for collaboration between what are currently discrete modules in a BSc Earth Science programme. An international field course for geology students to an area of seismic activity previously contained minor reference to local community coping strategies. The leader could now see the benefits for students of taking a broader stakeholder view, that once had been “outside my comfort zone”. Other participants who at first thought their field course had no potential for interdisciplinary work began to get ideas that enthused them. One began to develop the idea of co-creating a virtual field course, around a map of Ireland, with student choice of project being front and centre. This led to discussion of addressing Sustainable Development Goals through interdisciplinary fieldtrips. One participant had changed the approach to assessment “bringing students into the discussion of assessment and giving choice – I’m more open to that.” Participants were beginning to discuss the idea of greater student autonomy.

There was discussion about the best time to introduce greater interdisciplinarity into student undergraduate programmes. A range of views emerged. One view was that the first year was the only time this could be incorporated, before disciplinary specialisations took over, while another view was that 4th year was the most appropriate time to ask students to pull together their learning in a capstone course.

Several participants thought that the staff development course could have been longer, with more time for collaboration and peer-learning. There was a real benefit to “staff bringing something to the table” and more time was needed for this.

One participant concluded that she would like “to get together with UCC colleagues in other disciplines – we don’t do this enough” and others agreed. There followed a proposal that this group would organise events to continue their own conversations on interdisciplinary field-based learning. The idea of a new module for students, with integration, interaction and collaboration between geology, biology and geography disciplines brought the focus group to a positive end.

DISCUSSION

The staff development courses for leaders caused participants to reflect on the need to provide their students with opportunities for interdisciplinary learning. However, the views on what represented interdisciplinarity varied widely. This was not a surprising finding, given the broad use of the term on the staff development courses themselves. In support of the approach, the lack of a strict definition of interdisciplinarity was welcomed in feedback in a panel presentation at the EuroSoTL2021 Conference, with the premise that it allowed staff to navigate their own route and gave space for creativity.

However, the mapping of participant understandings against Klein's (2017) taxonomy was a useful exercise. It allowed the project partners to better understand the wide variety of ways in which interdisciplinarity can be fostered, and improved. The design of learning outcomes, assessment and field-based activities can encourage interdisciplinary learning or hinder it. If field course leaders have a better understanding of interdisciplinarity they can design more appropriate curricula, assess students' levels of achievement, and give appropriate and supportive feedback.

During the focus group it was clear that some programmes and activities that were called interdisciplinary were at best multidisciplinary. However, as discussion progressed participants began to describe topic-based programmes and activities that had greater possibilities of interdisciplinarity. Participants differed in their views as to when these interventions were appropriate. The researchers on the Integrative learning project concluded that if integrative learning is beneficial then it should be promoted from first year, gradually building students' capacities to be integrative thinkers and learners (Huber and Hutchings, 2004). Higgs (2015) concluded that for field scientists, the end of year field-course provides an annual capstone opportunity to pull together the packages of learning experienced throughout the year, in a meaningful setting.

The participants unanimously agreed that the international element of the staff development course was of benefit. Akin to interdisciplinarity, present day research and complex global challenges necessitate international collaboration. Participants appreciated the inter-cultural experience and felt they benefited from discovering what differed from country to country in teaching and learning practice as well as what they had in common. One partner captured some of the spirit of the international collaboration, "this was a key outcome. The group worked, cooked and sang brilliantly together. Everyone appreciated the different cultures and learned from each other."

Providing a residential course, away from the distraction of campus-based activity was unanimously welcomed to allow an immersive experience in which participants could interact for 12 hours a day. The informal learning outside of scheduled activities was considered of great importance and difficult to replicate in a campus-based setting.

Limitations of the study: Participants were self-selecting, and the findings could be different with other cohorts. The focus group was held with participants from the Irish institution only. While additional insights would have been gained with German and Portuguese participants, the focus group allowed participants to identify needs that together they could begin to address in a sustainable way within their own context.

CONCLUSIONS

By the end of this project, the partners had learned, by trial and error, and by participant feedback, what was appreciated by experienced and inexperienced field-course leaders, and what impact this was having or might have on their teaching and learning practice. Insights were gained into how staff development can help overcome the bottlenecks that participants experience in fostering interdisciplinary learning.

Mapping perceptions against a taxonomy of interdisciplinarity pointed to ways of becoming more intentionally integrative, interactive and collaborative. Participants involved in topic-based teaching around local, national and global challenges recognised and defined interdisciplinarity most clearly. These complex challenges appear to facilitate interdisciplinary discourse and outcomes.

Participants expressed ways in which their learning outcomes, assessment and teaching activities would be modified as a result of this staff development experience. They would seek opportunities to help students see the interconnectedness of disciplines with a view to their future careers. The ultimate is new learning that could not have been achieved by viewing from one discipline alone.

An important outcome was that the project partners themselves moved from disciplinary thinking through multidisciplinary activity towards interdisciplinarity. The learning journey transformed those involved and will inform the implementation of future staff development courses.

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Feedback to the quiz-tests in histology practical sessions

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ABSTRACT

Feedback on new methods is becoming more important in the new teaching strategies introduced by universities in recent years, which activate learners before class. Although quizzes have become popular among pre-and auditory learning activities, there are currently few examples of quiz feedback questionnaires. The aim of the current study was to compile and use a questionnaire for quiz tests used in teaching of histology, a subject in the basic medical curriculum. The composed feedback questionnaire was used at the University of Tartu, Estonia, at the end of the autumn semester 2021/2022.

INTRODUCTION

In recent years, due to the the decreased hours of contact learning in classrooms and the need and possibility of using new technologies, new teaching strategies and methods have been introduced at universities (Martín-Blas & Serrano-Fernández, 2009; Yusuf & Al-Banawi, 2013). One of the new teaching strategies is the flipped classroom (Fraga & Harmon, 2014; Kurtz et al.2014, Al-Samarraie et al.2020), the design of which consists of three phases: the preparation phase before the scheduled class session, practice phase during the class and the phase for after-class follow-ups. In the preparation phase the lecturers create and introduce to the students instructional materials; tutorial videos and chapters of textbooks (Heiner et al., 2014). In order to gain a high learning effect, the materials have to be interactive: quizzes, forums, polls embedded within or required after a videos, allowing the students automated feedback to help them assess their initial understanding (Munyofu et al., 2007). In the contact-learning phase active learning activities are applied to the content they reviewed before class. Solving quizzes or polls individually or in groups, discussions, presentations, hands-on works are common. In the third phase of the after-class follow-ups students should review, reflect, and act upon the feedback and experiences from the two first phases.

Among learning activities quizzes have become popular. Quizzes are often solved using the the interactive presentation software Mentimeter (Sweden) which allows students to answer digital questions using a mobile device. During quizzes the questions, answers, and feedback of the session can be saved as data for further analysis. Mentimeter is a web-based Clicker, Audience Response System (ARS) or Student Response System (SRS) which allows students to answer digital questions using a mobile device (Mohin et al., 2020). Likewise in Kahoot® (NTNU), in Mentimeter the quizzes can be utilized in a live, class setting in two ways: 1) Questions are projected on a large screen and each student answers the questions on their mobile device. 2) Students view the questions on their own mobile device and submit the answers (Felszeghy et al., 2017). The questions, answers, and feedback from a session can be stored as data, e.g. excel file for further analysis. Mentimeter has been proven to promote student engagement, participation, classroom interaction and inclusion which are the key factors for an effective learning

environment. The data can be collected anonymously and they can also be saved for analysis, comparative purposes and educational research (results can be exported, for instance, into Excel format) (Rudolph, 2017).

It has been noted that whilst studying at university students often struggle to understand the complexity of the structure and function of tissues histology (Hamilton & Carachi, 2014; Johnson et al., 2015). Histology educators are usually facing the task of teaching a large volume of content in a limited time (Bergman, 2008; Craig et al., 2010). As the student-focused approaches improve learning compared with more traditional educator-centered strategies (Walker & Leary, 2009) educators are interested more often to include active learning techniques to enhance students' interest in histology and help them to appreciate its clinical relevance (Gould et al., 2008; Felszeghy et al., 2019). Studies suggest that students are more likely to remain engaged in an educational activity if technology is involved. Web-based programs, mobile applications and virtual patient simulations are just a few examples of platforms that can incorporate "gamification" in learning anatomy and histology.

As the contact learning hours have been decreased in recent years also at the University of Tartu and to activate the student's preparation before class sessions, the FC method was introduced to students at schoolterm 2020/2021. The FC method was used in teaching general histology which is a subject in the basic curriculum of medicine. Human histology is a discipline concerning the study of microscopic structures of human tissues and organs and in traditional teaching histology is composed of two separated components, theory and practice (Xiaoye Lu et al., 2016).

Although there are many examples of feedback questionnaires designed for the whole curricula in different subjects, there are few examples of quiz feedback questionnaires. The aim of the current study was to compile and use a questionnaire for Mentimeter quiz tests used in teaching of histology, a subject in the basic medical curriculum.

METHODS

Ethical issues

Prior the quizzes all the students were informed of their participation in the research project and the students were asked in writing form for consent to participate in the study. The participation in quizzes was voluntary and anonymous.

Study design, participants and outcome

At the University of tartu the general histology course is worth 4.0 credits consisting 16 lectures and 16 practical sessions (2-h per session) and covers the microscopic principles of the human body, from the organisation of its cells through major tissues. In teaching histology the flipped classroom method is used. Before the practical sessions the students are asked to prepare themselves for the classroom studies by reading the thematical texts from histology textbook, listening to the audiolectures and solving self(control) tests on the university's Moodle histology e-course (Histoloogia. ARAN.02.005). Quizzes of the

interactive presentation software Mentimeter (Stockholm, Sweden) are used at the beginning or end of the histology practical sessions.

In the autumn semester 2021/2022 70 first year medical students had the possibility individually and voluntary solve the quiz-tests on four topics of general histology (epithelial tissues; fibrous- and fluid connective tissues, muscle tissue). Quizzes consisted of five short questions on the practical session's topics. The students could answer the quizzes using their tablets or mobile phones. At the end of the term the students were asked to voluntary feedback how they experienced the quizzes. In the questionnaire students could answer to the following questions:

- Participation in quiz tests (answer options: always / mostly / sometimes / never)
- Importance of quiz tests – students could mark more than one suitable option (answer options: provide feedback on their pre-classroom learning/ provide feedback on their classroom learning / diversify practical sessions)
- Experiences of one's learning motivation (most motivating at the beginning/end of the session)
- Preference of taken the quizzes (individually/ in groups)
- frequency of the tests (in every session, 3 or 5 times per one school term)

RESULTS

The composed feedback questionnaire for quizzes was used at the end of the autumn term of 2021/2022 after the last quiz test in the practical session of histology. A total of 70 first year medical students were asked for voluntary feedback from which 62 students fulfileld the feedback. From 62 students 52 (83%) participated in all quizzes, 9 in most and 1 in some of the quizzes. 87% students who took the quizzes said that the quizzes help to diversify their studies, 38% of students considered quizzes important to receive feedback to their pre-classroom learning and 79% to their classroom learning. 88% of the students were motivated to solve quizzes at the end of practical sessions and 11% at the beginning. 80% of students preferred to take tests independently, 19 % answered that in a group. Regarding the recommended frequency of quiz tests in one semester, 64% of students said that they would like to take quizzes in each practical session, 25% wished to take 5 tests in one semester and 9% three tests per semester.

Table 1. Feedback to quizzes

Feedback's question	**Number of students (percentage from total number)**
Participation in all quizzes	52 (83 %)
Participation in most quizzes	9 (14 %)
Participation in some quizzes	1 (1,6%)

Never participated in quizzes	0
Importance of receiving feedback on pre-classroom learning	24 (38%)
Importance of receiving feedback on classroom learning	49 (79%)
Diversifying practical studies	54 (87%)
The test are the most motivating learning when carried out in the beginning of the practical sessions	7 (11%)
The test are the most motivating learning when carried out in the end of the practical sessions	55 (88%)
Preference to take tests independently	50 (80%)
Preference to take tests in groups	12(19%)
Recommended frequency of quiz tests – every week in one semester	40 (64%)
Recommended frequency of quiz tests – 3 tests per semester	6 (9%)
Recommended frequency of quiz tests – 5 tests per semester	16 (25%)

CONCLUSIONS

The previous studies have shown that when a large amount of complex information is provided in a short period of time, the lesson material may be partially or entirely forgotten by some students (Wheeler et al., 2003). However the amount of information learned during teaching session may be more easily recalled by students if they are quizzed (Felszeghy et al., 2019). Moreover, the learning readiness after gamification has shown to be highly associated with being prepared - the more prepared the students were for their topic, the more accurately and actively they participated. Therefore the theoretical framework is suggesting that educators can consider integrating new digital technologies into curricula.

The practice-based educational research on the role of quizzes in flipped classroom was carried out at Medical Faculty of Tartu University for the first time. Although comparing the results of the quizzes conducted at the beginning and end of the internships, the scores of the quizzes at the end of the practical sessions were 17% higher, the results of the student's feedback revealed the importance of the quizzes both in their pre-classroom as well as classroom learning. Therefore it can be assumed that further use of quiz tests improves both the level of preparation for contact learning as well as the level of knowledge acquisition during learning.

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Developing religiously and racially inclusive communities in and beyond teaching and learning

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ABSTRACT

The resurgence of the Black Lives Matter movement in the summer of 2020 continue to impact almost every sphere of social life, to which the Scholarship of Learning and Teaching (SoTL) is/should be no different. Positively, we have seen collective action from universities across the world re-commiting efforts related to race and other intersectional forms of inequality. In this presentation, Maisha will reflect upon her own practice and research in this area, looking specifically at our students of colour and Muslim students in HE, in order to ensure our SoTL is inclusive to a racially and religiously diverse body of students.

INTRODUCTION

A renewed sense of commitment to racial equity, mobilised by a global Black Lives Matter (BLM) movement, across the Higher Education (HE) sector was perhaps one of the more unlikely consequences of experiencing the COVID-19 pandemic. Nevertheless, as a racially minoritized individual engaged with teaching, researching and practice related to areas regarding race and intersectional identity, such a seismic shift felt obviously necessary and largely overdue. For decades, we have known that systemic inequalities affecting our racially minoritized students have resulted in long standing disparities in their HE participation and outcomes across the globe – from the high attrition rates seen from Indigenous students in Australia (Gore et al., 2017), to widening gaps for Black students in the United Kingdom (UK) receiving a first-class honours degree compared to their White peers (Dickinson, 2022).

The institutional readiness from universities to better broach these issues means that time spent ‘debating’ these inequalities, or understanding them from a deficit lens (Jones-Devitt et al., 2017), can (to an extent) be bypassed – thus, allowing practitioners to tackle these issues with the culture change required for effective redressal (Universities UK & National Union of Students, 2019). This owes nicely to the theme of this year’s EUROSoTL conference of building communities.

Whilst an equitable shift is apparent, it would be naïve to believe that progress is universal or occurring at an expeditious rate needed to close these gaps in experience and outcomes. For example, some HE systems and contexts may not have adequate data mechanisms in place to begin to understand the extent of racial inequities. We see this to be the case with the Irish HE system which has historically invested more into gender equality, rather than issues related to racial diversity (Scott, 2020). Elsewhere, the mere discussion of race in the classroom, structural racism, or the effects of colonialism in our universities has been undermined and threatened by ‘Critical Race Theory bills’ in the United States and forthcoming Freedom of Speech bills in the UK which position decolonial approaches to teaching as contested political ideologies that interfere with academic freedom (Department

for Education, 2021). It is clear that with these contrasting views, and the sensitive nature of topics like race and other protected characteristics, uniting our SoTL communities to tackle these issues requires thoughtfulness and intentionality.

Overlapping intentions

In light of these dichotomous debates and approaches to race and race equity within HE, it must be said that there are obvious interconnections with race-based equity movements such as BLM, and the broad aims related to the Scholarship of Teaching and Learning. SoTL, at its core, drives practitioners to examine and adjust their approaches to teaching and learning; emphasising self-reflection and inquiry (Fanghanel et al., 2016). In a similar vein, the effects of BLM have swayed universities to do the same. This includes actively investing in research seeking to investigate curriculums, or projects that build a wider sense of learning community (and understanding the barriers to this) for racially minoritized students (Kings College London, 2020). The obvious two-way relationship between the two is exemplified by a reflective piece from Phoenix et al (2020), demonstrating how BLM has been an active vehicle for SoTL in bringing together students and staff to not only debate but also influence wider policy and practices.

Whilst recognising the foundational overlaps between the two practices; how each can also seemingly drive one another, we must remain cognizant of the barriers to having a more inclusive SoTL. Felten et al (2013) have previously drawn attention to the exclusionary practices; unaccommodated ways of working for marginalised groups involved in SoTL projects; and the silencing of certain student voices which all create barriers in making our SoTL spaces inclusive to a wider range of historically under-served student groups.

Whilst there are many student and staff groups who do not benefit from certain privileges within HE, my focus has always been shining a light to how our practices can be more inclusive to racially and religiously minoritized groups (namely, Muslim students) – the latter of whom are often absent from equality, diversity and inclusive SoTL practice (Islam, 2019).

Craving voice

How pertinent it is then to be given the space to speak of inclusive communities and upholding the narratives of student of colour and Muslim students. Having engaged with these student populations, it is clear that these student groups, in the backdrop of predominantly White and Christian HE contexts, crave voice. But to what extent do our classroom-based practices or research opportunities give leeway to facilitating these?

Taking an intersectional approach to answering this question is important in allowing interrogation of those voices least heard. My own research related to Muslim student experience, sense of belonging and student voice highlights how marginalisation can lead to disenfranchising experiences – both in academic and non-academic spaces (Islam & Mercer-Mapstone, 2021).

When hearing the narratives of these students, and of other minoritized groups, we can begin to appreciate the complexities of their lived experiences that both directly or indirectly impact the learning and teaching experience. From unconsciously taking on board heavy caring responsibilities, to a reluctance in seeking academic support for fear of perpetuating stereotypes (Islam, 2021b). It is unsurprising then that equity-based curriculum development programmes, research opportunities and extracurricular activities yield strong engagement and transformative outcomes from a variety of under-represented groups involved, and result in developmental experiences for both students and staff (Hughes et al., 2019; Islam & Valente, 2021; Nottingham Trent University, 2021).

Building communities and un-doing institutional harms

Building more inclusive SoTL communities is becoming a more urgent priority. From a UK perspective, leaders within learning and teaching currently view advancing and embedding equality, diversity and inclusion as a key strategic area of their future work (WonkHE & Kortext, 2022). Here, I humbly offer my own recommendations of doing this, taking inspiration from conversations and practice from colleagues across the sector.

Sense of belonging

The importance of instilling a strong sense of belonging for all students in relation to academic retention and 'success' has been well-established for over a decade (Thomas, 2012). It is reaffirmed as integral for universities to consider, particularly in the aftermath of the COVID-19 pandemic (WonkHE & Pearson, 2022). However, interrogating what this means in the context of 'non-traditional' students may require further work (Thomas, 2018). Again, given the invisibility of discussions related to religion at micro and macro levels, religious inclusivity and literacy need to be extended into conceptualisations of belonging. SoTL which considers the fragility of belonging; the interconnectivity of different facets of belonging both within and outside the learning and teaching environment stimulates engagement with broader, untapped spaces of inquiry with students on our peripheries (Islam, 2021a).

Extending notions of decolonisation

When speaking as part of a Student Success Forum focussed on religion at the University of Leeds, an excellent point was raised from Prof. Jacqueline Stevenson regarding whether conversations related to decolonisation could consider religion, in addition to race and ethnicity. Stevenson noted that Christianity has played a key role in colonisation, with its legacies embedded into the fabric of HE structures. For example, terminology such as Chancellor and Vice-Chancellor having its roots in the organisation of Catholic churches.

Calls to decolonise the curriculum have rightly questioned learning and teaching practices which uphold Eurocentric forms of knowledge – a limited and restrictive pedagogical environment which is particularly exclusionary towards racially minoritized students (Arday et al., 2021) has been seen to affect feelings of connectedness and belonging to the academic space.

By extending such conversations to be inclusive of religious diversity, practitioners can challenge hegemonic structures that falsely claim university spaces as secular. If

these measures are important in tackling racial degree-awarding gaps, so to must they be for our 'Muslim degree-awarding gaps' (Codiroli Mcmaster, 2020).

Combatting institutional harms and violences through care

Finally, practitioners committed to truly inclusive SoTL must also be committed to a socially just way of working. De Bie et al (2021) excellently highlight this by using language consistent with liberatory frameworks such as Critical Race Theory when working in partnership with minoritized students:

> *Only through intentional naming of inequities and injustices – violences – and resulting harms, through equally intentional structuring of opportunities that enact partnership principles, and through further revision of these steps…can pedagogical partnership realise its full potential to redress harms and promote equity and justice* (De Bie et al, 2021, pg. 3).

By acknowledging that the experiences of marginalised students constitute everyday harms and violences, we must develop empathy and passion to the students we engage with. A particular level of care, respect and co-ownership is then required for inclusive SoTL, which has traditionally been exclusive of certain voices being counted at levels of inquiry.

The common thread running through each of the above recommendations is that of affirmation and value. Speaking from my experiences of being an undergraduate student, doctoral student, and staff member within HE, I have often questioned my own sense of place within the academy. This has stemmed from the fact that students and staff most afflicted by certain inequities are not centralised in the endeavours for redressal. When this happens, the possibility of systemic, sustainable, and impactful change is diminished. In re-evaluating our practices, being mindful of the way we engage with our own iterations of inclusive SoTL communities then becomes a practical obligation.

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Developing the community of practice at Tallinn University

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ABSTRACT

In action research, we present how to develop and sustain meaningful SoTL communities at Tallinn University. We supported collaborative research to improve teaching, student learning and organisational development in the professional community. From this, cross-university research cooperation started. For science-based teaching to be valued next to research at the university, the teaching culture and its research has to be kept in focus and needs funding. For a university teacher to feel like a great accomplisher it is important to enable organisational learning in practical communities according to ecological system theory so that experiences can be disseminated and integrated, developing a common learning culture. We conducted action research and the goal was to explain how to support our network of lectors and introduce sustainable practices for the operation of these networks.

According to our research a new way of learning and collaborative culture developed from the community of practice “Academic’s Science LIFE” (Learning in Interdisciplinary Focused Environment) where one´s identity was constructed as a co-learner and its value. During this process the participants understood one´s own activities as well as the university as a whole. In a fast, results-oriented, competitive work culture, learning networking is a slow and resource-intensive process because it is self-directed and targeted by the faculty itself. To motivate lectors, it is important to value their time in such a way that voluntary participation in the SoTL network is a measurable indicator in their attestation, their research (as well as publishing) is valued and acknowledged in the institute and the university.

In order for the new practice to fit in and support organisational learning at the university, it is important to integrate it into rules and procedures. The development of a teaching culture requires additional resources, such as the development of a collaborative teaching grant system and support for the publication of teaching research that ensures sustainable action in educational innovation.

INTRODUCTION

The key feature of the modern educational innovation movement is to move from traditional individualistic activities to collegial collaborative activities (Eisenschmidt, Vanari, & Tammets, 2020). It is therefore important to develop evidence-based sustainable practices at the university that on the one hand ensure the learning of teaching staff and on the other hand organisational learning so that new experiences would take root and allow a common learning culture to develop. It is also important to gain the support of the organisation's leaders and its members. As the university staff operate with both global and local structures, in the influence of stakeholders which are governed by laws, regulations, standards, agreements and beliefs we

address the problem through ecological systems theory. We also open the meaning through organisational learning of the professional communities of practice. We are conducting an action study to find out why people want to participate in the work of the community of practitioners, how to support a new learning culture and how to institutionalise the policies of the communities of practice in TLÜ.

Theory

The challenges for the university, the institute but also for the lecturer are complex, which is why all parties must be empowered through collaboration to bring out innovation (Biesta, Priestley, & Robinson 2015). When implementing changing teaching practices, teachers must take into account socio-cultural factors like the academic community, the institutional norms and rules and infrastructure (Pata, 2020). In order for new practices to be introduced lecturers need support in different close and remote fields and networks, which can be viewed as a complex ecosystem. According to ecological systems theory, an employee in an organisation can both develop intellectually, emotionally, socially, and morally if he or she actively participates in complex interactions with other people, objects and symbols in the immediate environment of the individual (O`Neilla, 2015). In the action research we define the university as a system, and lecturers, students, managers and support staff as members of the higher education.

Professional practice communities are described with shared values, vision and significance of communities of practice, collective responsibility and effort, cooperation and belonging, encouraging group and individual learning, active and long-term communication, as a result of which members develop a common practice and make it visible (Wenger,1998, 2009, 2010; Stoll, 2010; Sheehy et al., 2015). In this way, there is a constant exchange of ideas in the community of practice and learning, testing and evaluating innovative solutions that promote the growth of professionalism and acceptance of educational innovation, but also favours development of the organization (Wenger & Snyder, 2002; Dennick, 2008; Ley, 2020). Communities of practice, like most social learning spaces, people can be involved at several levels of participation (Wenger-Trayner & Wenger-Trayner, 2015). This is because the boundaries of the community of practice are more flexible than those of organizational units or of teams. The following levels of participation are distinguished as the core group, coordinators, active and not so active members and bystanders.

In the community of practice short- and long-term values are created for the organisation as well as the members. (Figure 1)

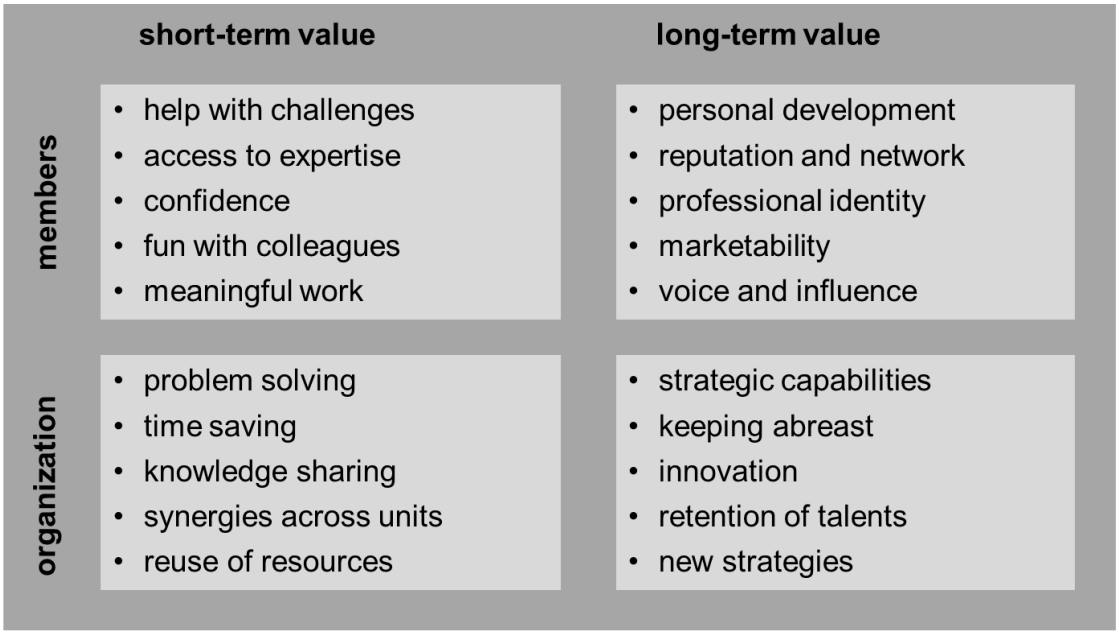

Figure 1. Why focus on communities of practice? Dimensions of value creation

METHOD

By its nature cyclical action research steps are planning, action, observation and analysis steps. In our action research there was a preliminary stage, four main cycles of one semester and a follow-up phase. Data was collected in three ways: a) notes from researchers, b) interviews with researchers, and c) meeting protocols. The study was collegial in nature and we included the participants in the Academic`s Science LIFE to the research. Academic`s Science LIFE is a cross-university and cross-disciplinary research internship community of lecturers, support staff and students resulting student learning and/or organisational development. We conducted semi-structured interviews (n=8) with the participants of Academic`s Science LIFE in order to complement the results from the participants' experience point of view. We were most interested how the respondents (R) experienced the process and what their motives and perceptions of the collaborative process were.

FINDINGS

Academic`s Science LIFE study groups became interdisciplinary, different representatives of institutes and departments with different roles were involved. We had taken such a goal from the beginning to favour faculty collaboration across institutes, which is common in research-based teaching research (SoTL) community work. Researching and changing teaching practices required the change of the rest of the university's organisational culture, so we involved the support unit people and created opportunities for them and lecturers to work together.

The community of practice allowed participants to address the major challenges in which the expert knowledge and confidence increased, thereby understanding the importance of this work. According to R5: „You need that kind of time and place, and

maybe group support to implement your own ideas.“ As a long-term value, it was pointed out that personal development took place as a member joined new network, R4 points out that “Personally, it gives definitely good contacts with the teachers of other institutes and people, also expands my communication network. ”The professional identity of the participants changed, according to R7 „a sense of understanding of your own work in this world; why, what and how should I work with my students in my job, and how it fits in the bigger picture.“

The value of the community of practice to the organization is the growth of whole learning environment and the collective operational capacity, the extension of new ideas and implementation of strategies. R1 formulates „when there are more and more of us, this mentality (in university) is presiding „then there is a completely different learning environment.“ People feel valued and preserved with the support of the community of practice and it has a long-term value to the organization. R10 brings out that „if the organisation cares about me, I care about how we as an organisation are doing, so this increases my mission to develop organisational culture and my teaching.“ Thus, the members of the community of practice formulated important values for both themselves and for the development of the organization.

As a result of the action research, we point out that Academic`s Science LIFE is supported by university leaders which according to Dalkir and Liebowitz (2011) is an important prerequisite and condition for the activities of the community of practice.

Academic and non-academic staff and students participated in Academic`s Science LIFE and their research topics were related to both their teaching research as well as organizational development. The various parties entered into a dialogue and joined forces to ensure that research best supports good organizational change. However, there are a number of obstacles to the development of communities of practice: lack of resources, current culture and beliefs, namely R7 points out that “If the person is overwhelmed, then unfortunately this is not a priority ”. Respondents highlight the low status of teaching sciences at university. R1 indicates: „Researchers say that what lecturers or didactics do is completely meaningless, it has nothing to do with science“. To conclude, teaching sciences are still systematically undervalued and unfunded in the university.

DISCUSSION

In order for the community of practice to develop it is important to support the network of researchers, value and empower participants by increasing their mental well-being. It is important to develop a learning culture where learning together in cocreation is faster and saves time. Based on the theoretical views that have researched the activities of teacher networks say that it should be linked to the teacher career model and their promotion (Euler, 2010). The results show that beginners as well as experienced academic staff wish to participate in communities. For that they need to be motivated and for that the participants’ social, mental,

emotional and environmental needs must be supported. Community of practice “Academic’s Science LIFE” supports the development of a collaborative learning culture at the university, the development of academic staff´s identities and brings out the importance of teaching sciences.

As a solution, we take into account socio-cultural factors: the academic community, institutional norms and rules, and infrastructure (Pata et al., 2020). We assume that to introduce new practices, teachers need community support in various nearby and more distant networks, in the wider trans-university ecosystem. Namely, the ability to operate in an ecosystem depends on the interaction of other members, groups, systems, and structures in the environment. Thus, we offer solutions to support organizational learning at universities and across universities. It is also important to raise the academic status of scholarship of teaching and learning.

- Creating a training development team at Tallinn University, whose main focus is to develop the teaching activities of teachers through evidence-based internships and to develop inter-university cooperation. In addition, there is a need to develop modern ways of self-improvement that supports professional development, creating a new way for the Agency's concept and collective capacity to act.
- Creating a cross-university subject “Evidence-based teaching and its development” in doctoral studies, to offer it to doctoral students and also to beginning teachers.
- Linking the leadership of the community of practice with a tenured professorship that creates sustainability and sectoral knowledge at the university. If resources are available, develop a SoTL career path at the university, i.e. Professor of Practice. To plan university-wide doctoral places in teaching sciences.
- Recognition of teaching sciences and support for publishing opportunities at the university level, including the creation of opportunities for co-writing.
- Creating a website for lecturers as a part of the university's website, which gathers information based on evaluation criteria (teaching-creative activity, social contribution), takes into account the different roles of lecturers (beginning lecturer, lecturer, researcher, etc.) and is connected to other work environments. The web solution makes it possible to show the role of communities of practice to support professional development in accordance with the needs of certification.
- Part of the teaching practice of teachers is action research and the experience shared with others, for example in experience cafés, research articles and university media channels.

An important result of action research is that communities of practice promote organizational learning by empowering its members as well as process leaders.

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Building a peer-to-peer instructor community in kinesiology through online hangouts

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ABSTRACT

This presentation will show findings from a study of a community of practice which uses SoTL principles to support a peer-to-peer instructor community. Touch for Health (TFH) kinesiology is a health and well-being programme which incorporates manual muscle testing with goal setting, massage, acupressure and nutrition. It is taught worldwide by International Kinesiology College certified instructors using a common curriculum in private colleges. Our instructors share a passion for Touch for Health, but historically we only met formally once every three years at country level for the instructor update. In 2018 I set up a peer-to-peer community of instructors called instructor hangouts, with a format guided by SoTL principles.

Evaluation of the community shows that instructor hangouts are considered beneficial by connecting and supporting instructors, fostering a sense of belonging and building TFH knowledge and community.

1. INTRODUCTION

As instructors we teach alone in our classrooms and for some of us this can be an isolated and lonely experience of pedagogical solitude (Shulman 1993). Colleagues gathering and meaningfully learning together may have many benefits, not only for the individual instructor but also for the community of instructors and the discipline.

Wenger et al. (2002) defines communities of practice as

> *Groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge or expertise in this area by interacting on an ongoing basis.* (p.4)

Bass (2013) advises that

> *If you are a scholar in any field, you absolutely have to have a larger community to feel a part of. To have a sense of the questions you're asking, to have an audience for your insights and your interests. ….. You can't advance knowledge in isolation. Knowledge is always developed and advanced in a community*.

In Touch for Health (TFH) Kinesiology, we already share a passion for our health and well-being programme and the introduction of online instructor hangouts allows us to connect and share with colleagues regularly.

The design of hangouts followed SoTL principles and was guided by Shulman (1993) to make our teaching and learning visible, open to peer review and available for others to build on. TFH Hangouts utilise a social learning model to support and build our TFH community and allow us to:

> *fulfil our responsibilities to our professional peers to "pass on" what we discover, discern and experience (Shulman 2000).*

Ryan (2002) outlines their thinking at University College Cork along the journey to find a way to do this:

> *Individual staff had excellent ideas and practices and yet there was no forum for discussion of their ideas and practices, no means of sharing the experiences learnt, by some over many years of teaching. It seemed a needless waste of an extremely valuable resource and we set out to explore ways by which … the knowledge and skills attained could be shared with others.*

TFH instructor hangouts aim to create a channel for instructors to connect, share and make visible the valuable resource of instructor knowledge and understanding.

The aim of this study is to update our progress over the last three years (Lysaght 2019), state our theory of change, identify and map the impact of hangouts to the transformative changes that matter to us.

2. METHODS

2.1 Institutional context

The International Kinesiology College (IKC) is a worldwide organisation where certified instructors teach the TFH programme using a common curriculum in private colleges. The IKC has a hierarchical structure (Executive Board, School Board, Country Faculty, Instructors) and communication with the instructors is mainly through the country faculty. Instructors meet at country level every three years, for a two-day update with their country faculty and peers.

2.2 Instructor Hangout design and rationale

Our community of practice design was informed by Shulman (1993) and Hutchings (2004) which suggests that teaching and learning should be made visible, open to peer review and available for others to build on.

I created online TFH instructor hangouts as a space for instructors to connect, share and build TFH with their peers. The format is a one-hour online zoom meeting, with pre-advised session TFH topics, a maximum of eight participants, engaging in meaningful discussion and participants contributing to an after conversation in a Facebook closed group by posting their key takeaways.

Why each aspect was chosen:

- Online allows us to connect all over the world
- The subject must be a TFH topic which focuses us on meaningful TFH conversations. Instructors may suggest future hangout topics they would like to discuss.
- The maximum of eight participants allows time for everyone to contribute
- There is a no recording policy which creates a safe space for open exchange and encourages active participation in the conversation.
- The after conversation allows us to share more widely and invite other colleagues into the discussion who could not attend the session. As this is in a closed FB group it is also within a safe space.

2.3 Research Questions

- Are TFH instructor hangouts beneficial?
- If so, to whom are they useful?
- What is the value/impact?

2.4 Vision and Theory of Change

My original "vision of the possible" (Hutchings 2000) was of a TFH community where instructors meet regularly to talk about TFH teaching and student learning.

Bamber (2013) encourages us to start by clearly stating our theory of change and

> *Our agenda needs to be explicitly transformative … and we need to articulate our vision (Stefani 2013)*

My theory of change is:

I recognise the value of a CPD developmental approach (McCarthy 2007, 2014) and ongoing significant conversations (Roxå & Mårtensson 2009).

I propose that ongoing regular interactions in TFH instructor hangouts will:

1. make the instructor voices heard
2. make teaching, learning and thinking visible
3. increase feelings of support and belonging
4. build TFH & professional knowledge
5. build community

Anticipated changes might happen at a local level where the culture is open and supportive to change, in what Mårtensson and Roxå 2016 refer to as dialogical microcultures. I understand that any change will be likely to happen slowly, like "a battle of snails" described by Schön 1995. Regular monitoring and patience will be required to allow time for evidence of educational improvement to emerge.

2.5 Impact Criteria

The Lysaght (2019) study mapped impact against the criteria listed in points 1-3 below. In addition, I would now like to review impact against what is important to me and my organisation, as suggested by Wuetherick in Woolmer 2022, points 4-5 below:

1. Changes in the number, frequency and quality of conversations (Mårtensson 2017 p. 6)
2. Changes in thought, awareness and understanding (Hutchings 2000 p.8; Stoakes 2013 p.37)
3. Changes in practice and policy (Hutchings 2000 p.8; Stoakes 2013 p.37)
4. What impact is important to me?
5. What impact is important to my institution?

2.6 Data Collection and Analysis

A study of hangout participants used a qualitative approach. Questionnaires were sent by email in February 2022 to twelve hangout facilitators and 7 were returned. A further call to TFH instructors was sent through the closed UK Facebook group which returned 1 more completed questionnaire. (Total completed questionnaires: n=8). We also used an autoethnography methodology by analysing the co-ordinator's ongoing diary reflections.

3. RESULTS

Section 3.1 details the project outputs while the remaining sections 3.2 to 3.5 outline details of outcomes.

3.1 Impact Criteria 1 - Changes in the number, frequency and quality of conversations

Numbers of Instructor Hangouts & Participants

Year	**# Instructor Hangouts**	**# Hangout Participants**
2018 (Pilot)	3	24
2019	12	62
2020	12	59
2021	11	47
2022 (Jan-April)	6	34
TOTAL	**44**	**226**

Table 1: Instructor Hangout Outputs

In addition to instructor hangouts, new hangout categories have been developed for student, in practice and new instructor hangouts. In total, we have facilitated **529** conversations in all hangout categories over 4+ years. The initiative is now supported by a team of fifteen certified hangout facilitators. It is recognised by the IKC with certified CPD hours being awarded for participation.

3.2 Impact criteria 2 - Changes in thought, awareness and understanding

Instructors reported changes such as a reminder of possibilities they may have forgotten, going back to basics, using games as an entry point to learning and not just to reinforce learning, highlighting blind spots and building TFH knowledge – Country heads found it useful to understand where instructors wanted more input.

3.3 Impact Criteria 3 - Changes in practice and policy

In the study, participants noted the difficulty of putting changes into practice during lockdowns. Nevertheless, some changes were reported for example investing in and using new props, engaging students more, improved variety on presentations, changes to evaluation form questions, offering the possibility of drawing in addition to writing.

There have also been changes in policy for example the UK introduced two new policies – the roll out of an interim instructor update requirement after eighteen months for new instructors and the introduction of a workshop on student-centred learning as part of the three year instructor update. From 2020 to 2022 all UK instructors have participated in this exploration of their practice.

3.4 Impact criteria 4 - What impact is important to me?

My vision and the transformation that is important to me is detailed in my Theory of Change, see 2.4 above. Participant feedback shows that hangouts are valued by the community. It is an affordable way to connect regularly, it fosters a sense of belonging and builds TFH knowledge and community.

3.5 Impact criteria 5 - What impact is important to my institution?

One of the IKC's 2022 strategies is to build community and support. The data shows that hangouts contribute to the achievement of this goal.

4. DISCUSSION

This paper describes an ongoing study and preliminary findings from 2019 to 2022, which is a continuation of and updates our study from 2015 to 2018 presented in Lysaght 2019. The emerging findings are that there is evidence of impact in categories 2-5 in 2.5 above - changes in thought, awareness and understanding, changes in practice and policy, and also changes in the impact that is important to me and the impact that is important to my institution.

We did not see changes in the number, frequency and quality of conversations, criteria 1 in 2.5 requires an explanation. After the initial trial period in 2018, the number of instructor hangouts remained constant at approximately one per month during the period 2019 to 2021. While we initially envisaged a growth in hangouts for a number of years, this study covers the COVID 19 period when TFH in person teaching ceased and partially transferred to online delivery. Given the challenges of the pandemic, it is an achievement that we maintained the number of hangouts and this points to the value perceived by the participants in participating. Like colleges around the world, this period brought other professional and personal challenges. The hangouts organiser also took personal leave during most of 2021 due to care responsibilities. This unexpected absence highlights the importance of building sustainability into hangouts programme and this will be a key consideration going forward. The figures for January to April 2022 show an increase in the number and frequency of conversations and if this trend continues, 2022 final figures will be an increase of at least one and half times each of the previous three years.

We have noted also other indirect impacts. In Maple League of Universities (2022, 6.13) Kenny highlights the importance of “relationships before tasks”. Instructor hangouts are doing an amazing job of building and nurturing relationships with TFH instructors. The established instructor hangout structure and engaged instructor community enabled me to support instructors in the partial shift to online teaching and learning. I quickly launched a COVID response by creating and facilitating a new workshop “Facilitating Online Teaching and Learning” and weekly Play & Practise sessions from March to August 2020. This process was organised by hangouts and peer led with colleagues sharing and supporting each other.

In this study I also mapped impact against my theory of change and the organisational strategy. The original vision is becoming a reality in all areas (1-5, detailed in 2.4). However, I had anticipated only changes at a local meso level, in the dialogical micro cultures, where the culture is open to it. We are now, after seven years, also beginning to see initial signs of engagement in one of the non-dialogical meso cultures and this is a surprising and welcome development.

Mårtensson (2017)

> *inevitably, old patterns will transform when put to scrutiny, when being systematically observed and analysed, or influenced by conversations with new people*

Schön (1995)

> *It is a battle of snails, proceeding so slowly that you have to look very carefully in order to see it going on. But it is happening nonetheless.*

There are also indications of change taking place at the macro-organisational level with a focus on community and invites to contribute to projects. Perhaps it is the time now to strengthen our organisational growth at all levels, micro, meso and macro both through our informal significant network of instructor hangouts and formal policies, structures and resources. (Kenny 2021)

A limitation of the study is the sole use of questionnaires to gather feedback. Semi-structured interviews may provide a higher response rate and deeper understanding of the needs of the community. Participant selection could be targeted, not only to the core and active groups but also to peripheral and outsider groups to gain more insight. (Wenger et al. 2002, p.57). This however would require significant time to transcribe interviews.

The next steps in the development of instructor hangouts will be to design a feedback loop where instructors document the changes they make in practice, how it worked out, reporting back to the hangout group for further discussion. There is also a space to make our insights visible by creating resources as a result of these ongoing conversations.

Future studies should investigate how we can make this community of practice sustainable into the future and how to link instructor hangouts directly to the impact on student learning.

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In pursuit of the academic development project – the formation of a teaching academy and its integration with higher educational developers work

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ABSTRACT

Many Swedish universities have established merit systems to reward teachers' pedagogical merits (Winka & Ryegård, 2021), in order to turn the engagement of promoted teachers into an advantage at the strategic and faculty levels (Spowart et al., 2019). Kristianstad University (KU) in Sweden started a promotion system in 2013 and since 2017 the promoted teachers become part of a Teacher Academy (TA). This presentation will discuss the formation of the TA, and the beneficial interdependence between higher education developers (HED) and the members of the TA in their common pursuit of "the academic development project" (Sutherland, 2018).

The "academic development project" summarizes work with conditions that supports and improves teaching and learning in higher education (Leibowitz, 2014; Sutherland, 2018). The field has three focus areas: academic developers work, academic development as a field and academic development in action (Baume, 2016). This paper is about conditions and processes that support teaching and learning in a broader sense in that it focuses on what can generate and boost conditions that are supportive for building a pedagogical development culture.

KU is a teaching intensive university with a focus on professional programs such as nursing, pre-school teacher education and business administration. A diverse student body makes it essential to promote high quality student-centred teaching and build an environment that supports pedagogical development. One way of doing so was through establishing a merit system that rewards pedagogical skilled teachers both in terms of salary and title as qualified or excellent teachers. After a few years when the number of rewarded teachers increased, there came a desire to raise the impact of the rewarded teachers as a community at a faculty and university level, thus a TA was initiated. But what should the TA achieve and how to go about it in the organisation?

The idea of the TA as a community for pedagogical development was not there to begin with but developed over time. Some were invited to teach higher education courses or asked to participate in different committees, but these efforts were not formalized. The teachers in the TA were not only divided by disciplines, but they were also, as you would expect, very busy teaching and doing research within their own field of work. It was hard to motivate some to participate in meetings or to take on any of the few assignments that were linked to the TA.

So how was the TA community built? Apart from being invited to regular TA-meetings to get to know each other, the first steps were very action oriented. The university management, in dialog with a steering group, consisting of TA members

and HED, formulated assignments for the TA annually. To start with the assignments were measures with little overlap. The first year these were expressed in six points. For example, firstly, TA members supported the HED in hosting of internal HE conferences, where teacher project groups from the whole university share good examples from teaching and learning development projects. Secondly, three TA members were part of the editorial staff together with the HED for the local HE journal, and thirdly, four TA members were to support other teachers when writing their pedagogical portfolios, and be part of the Merit system committee. As such, the TA members were supporting the HED at the Academic Development Department (ADD) in their work.

As the number of promoted teachers increased, the pressure and interest from management to use this under exploited asset also increased. Thus, since then, the assignments began to take on a more holistic shape. They are now formulated based on promoting HE development and teaching in three domains: the university level, the faculty level and research wise. The statement of domains has been helpful in that they specify that HE development must be driven at different levels in the organization and in different ways and you can say that they represent the diverse nature of SoTL. Each domain has a number of specific assignments with a clear funding attached to them.

At the university level, the assignments aim to build a SoTL culture. For example, the TA and HED has now together both organized and hosted the internal conferences the last two years, and the keynote themes are decided in the TA. In addition, staff from the support organization (from departments like HR and Innovation) take part and present projects that links well into and help building the SoTL culture. Thus, the conferences have become an important part of the ‘narrative’ about the academic development project.

At faculty level, TA members have been given funding with the aim of building smaller communities that can foster the SoTL culture at the macro level. For example, in one faculty this has resulted in regular lunch-seminars with different SoTL-themes. In another faculty TA-members arranged a course about active teaching and learning online for all teachers in the faculty. A third group has organised seminars where teachers of that faculty together discuss various topics such as the use and value of formative feedback and possible implementation in their respective courses. These are good examples of attempts to build “inclusive communities”, and where members of the TA now not only act as supporters to the ADD but act *as* HED in their respective faculties. These types of efforts had taken place also earlier, but they are now funded by the TA and defined as TA assignments.

Finally, research wise, a new research group has been initiated with fundings from the university. The group, which is jointly lead by a TA member and a HED, has the aim to build a HE research community where faculty from various disciplines can conjoin based on their common interest in higher education research. The group is in its early stages, however thanks to the community building efforts done at university and faculty level, its establishment has so far been perceived as uncontroversial, and it fits in well with other domain specific research groups.

To conclude, the TA has become an important part in the community that are engaged in the joint academic development project. From the start, the mission of

the TA was threefold. Firstly, the TA should support the development of teaching practices; secondly, it should be a catalysis for SoTL, and thirdly, an arena for development of new knowledge of higher education at the university. This professional field was already inhabited by HED at the ADD. The TA was initiated in a time when HED work grew from a focus on the development of individual or groups of teachers towards an added focus on SoTL-driven strategic pedagogical development. New tasks and responsibilities were added to the existing ones. This change derives partly from extrinsic development processes at the national level that entails an increased need for professionalisation, management and control. For example, nowadays much more time and effort are devoted to branding and being attractive to students and future employees (Stensaker, 2018).

SoTL-driven pedagogical development is one way of being attractive and one solution would have been to just hire more HED to the ADD. Instead, cojoining the HED with the TA members is a much more sustainable arrangement. One challenge for universities has been how to incorporate a TA within the holistic academic development (Pyörälä, Korsberg, & Peltonen, 2021). After a transition process of five years the TA has turned out to be a link between the management, the HED/ADD and the teaching staff at the faculty level. It has not been an easy journey but with enduring managerial support, the establishment and administration of the TA has led to an expanded lifeworld (Mårtensson & Roxå, 2021), not only for the HED but also for the TA teachers. Thanks to the TA context, the role of the HED has expanded to interdependently operate within the strategic, faculty as well as the research work-frame. The perspective of the TA members has also expanded as they shift from their own lifeworld to incorporate that of the HED. The work of both TA members and HED undergoes a transition from a more local focus to a more desired holistic view of HE development (Fossland & Sandvoll, 2021).

To conclude, there are several critical elements that are part of the journey towards building this joint HE development community. Besides the formalizing and structural elements, it is about synchronizing and building new relations between existing parts in a way that serves the purpose.

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Co-writing motives at Tallinn University

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ABSTRACT

Co-writing has become the dominant academic practice favoured by both the science funding policy and the accreditation system, while co-writing allows increased individual and institutional quantitative research indicators. But co-writing also allows support to the self-realization and meaningful research of the members of the organization at the university. We reveal the co-writing motives of 14 university members of Tallinn University`s SoTL network. Seglen (1996), Kyvik (2010), and Ponomariov and Boardman (2016) emphasize that when co-writers personal academic motives and organizational goals coincide, university members feel more capable and efficient in the organization. The results of our study concur with those conclusions.

EXTENDED SUMMARY

A critical discourse analysis of higher education and research policies highlights the long-term impact of neoliberal ideology. Taking as a starting point a critical theory that grew out of the Frankfurt school and examines the impact of the dominant ideology on social relations (Wake, Malpas 2015), contemporary scientific research can be described as the production of high-score academic articles where the place of publication, citation and H-index are most important criteria (Billot & Codling, 2013, 76; Jung et al., 2021; Ubar, 2018; Waaijer et al., 2018). In 2018, Sameer Kumar found that while in the 1940s, 91% of publications were authored by one person, in the 1990s, this number had decreased to 66%. At present, scientific texts by one author are rather rare (Waaijer et al., 2018). Large-scale industrial projects, the development of communication tools and research mobility created favourable ground for researchers to collaborate (Kumar, 2018). Thus, the academic environment is described as hypercompetitive, where everyone writes and publishes more and more (Waaijer et al., 2018). But it has been pointed out that competition for resources creates a negative research environment (Chiang 2004; Jung et al., 2021) and the evaluation of research on the basis of quantitatively measurable research has increased the anxiety of the academic community between internal stakeholders in the university. Lecturers and researchers themselves acknowledge that performance appraisal is incompatible with the nature of scientific research (Kalfa et al., 2018; Baldry & Barnes, 2012, 230), as it has significantly increased competition between researchers and universities (Kallio et al., 2016, 702), because they have adapted to the principles of business and management logic acting as service providers in the free market (Kalfa et al., 2018; Faulconbridge & Muzio 2008, 8). The contradictory position of alliances of competitors in a university leads to new forms of collaboration and shapes social norms (Musselin, 2018), influencing both the nature of research and the identity of the writer and researcher. Evaluation on the basis of quantitative results has increased individual indicators (see Gerhart & Fang, 2015), but reduced the sense of belonging and commitment to one particular academic organization (see Colquitt et al., 2013; Balven et al., 2018). In addition, competition for funding creates a negative research environment with adverse effects on collegiality (Archer, 2008; Chiang, 2004; Jung et al., 2021). Conflicting expectations of the academy and a competitive work culture favour new roles and affect the

university's organizational culture (Barnett, 2004; Mattiesen, 2019; Rosewell & Ashwin, 2019).

In 2020, Tallinn University (TLU) launched SoTL network-based project of a community of practice “Academic’s Science LIFE” brought together internal stakeholders from the university (lecturers, professors, faculty and academic support staff, researchers, science administrators, academic project managers, developers) to study their own teaching. It also aimed to solve various organizational challenges related to learning and teaching.

The aim of the current study is to reveal the motives, and expectations of the university's members (lecturers, faculty and academic support staff, researchers, science administrators, and project developers) in writing together. Also, we studied how different stakeholders at university want to be supported in the academic organisation. We hope to find ways to enhance meaningful self-realisation through the university's inclusive, collaborative organizational culture and to support academy members in order to minimize the impact of competition culture. We seek answers to the following research questions: 1) what are the previous co-writing motives of the TLU members (lecturers, faculty, academic support staff, researchers, science administrators, and project developers) and 2) how to support the academic organizational culture in the TLU through a culture of collaboration?

THEORETICAL FRAMEWORK

According to Lev Vygotsky (1978), collaborative development can take place when group members exchange ideas and thoughts in order to achieve a jointly set goal. The dilemmas that arise in the course of collaboration trigger discussions that promote joint learning and development, because the members of the collaboration group are also learners who reflect on their own and others' ideas, explain their views, discuss, while professional development takes place during each collaboration and new knowledge is gained from collaborative communication (Vygotsky, 1978; Barros et al., 2002).

Meaningful scientific research presupposes a common space for thought and discussion and promotes an exploratory approach to collaboration, thus forming a common learning space. An equal opportunity to intervene in collaborative activities is important, even though the members of the group are not equal in terms of prior knowledge or other social, cognitive characteristics (Katz & Martin, 1997). Rowena Murray (2014) emphasizes the importance of social relationships in co-writing because activities are directly related to community building. In the communicative community, a common journey is mapped out, mutual support is sought, diverse forms of participation are found, as well as exclusion, negotiation of one's own and others' competing values, coping with pressure, power and control (Lave & Wenger, 1991; Murray, 2012; 2014).

In a situation where evaluation and responsibility play an increasingly important role in academic teaching, learning and scientific research, it is important to pay attention to the ways of experiencing research collaboration and being a member of the academy (Åkerlind, 2008). Gerlese S. Åkerlind (2008) describes two contradictions here: on the one hand, researchers are driven by an ambitious will to contribute to society, while external criteria must be met in order to justify themselves as a

researcher in the eyes of society and the organization. Every member of the academy has a will to contribute to their field by conducting research with a specific narrow focus, which, however, may not have a project-based research order or grant. Åkerlind (2008) emphasizes that a member of the academy wants to experience his or her work as meaningful and his or her academic identity as complete. In order for a member of an organization to perceive himself or herself as capable, it is important that the personal and organizational goals of the organization's internal stakeholders coincide (Nygaard, 2017). In the university, it is important to emphasize the significance of each member of the university through the organizational culture of collaboration, thus supporting the internal motives of the members of the university. As the authors of the article, we define motives as the reasons or motives for the actions arising from the need (Estonian Educational Dictionary, n.d.).

Table 1 is modified by authors of current study and summarizes the statements of theorists on both internal and external motives for co-writing, which differ at three different levels: collaboration as a member of a group, an organization, and society.

Table 1. Motives for collaboration and co-writing at the group, organizational, and societal levels (Åkerlind, 2008; Johnson & Johnson, 2009; Katz & Martin 1997; Nygaard, 2017).

Level	External motives	Internal motives
Individual member of the research or teaching group	Publish as much as possible; belong to important and many research projects or groups; be published more quickly in high-score publications.	To reflect together, to make sense of academic work; to develop as a member of a research group, find new meanings, increase the well-being of others and oneself.
Member of academic organization	Meet the evaluation requirements; adapt to increased institutional expectations; increase the number of published research articles and texts.	Ambition to develop, influence the organization; to do meaningful work at the university.
Member of society, community	Receive funding for national and international research projects; receive recognition for successful publication, research.	An altruistic ambition to influence society and society through research and teaching at university.

METHODOLOGY

As the motives for co-researching, co-writing and co-publishing are difficult to identify, as there is an indeterminate link between the activities to be quantified and the intangible contribution (Musselin, 2018; Kumar, 2018), it is extremely difficult to assess the real collaboration. Therefore, a qualitative approach has been chosen in the study and individual semi-structured in-depth interviews have been used as a data collection method. The starting points for the preparation of the in-depth interview questions have been the topics of discussion that emerged at the eight

“Academic’s Science LIFE” seminars (autumn-winter 2020). To this end, we conducted14 semi-structured in-depth interviews (in spring 2021) with those who joined to a community of practice “Academic’s Science LIFE” project at Tallinn University. We used qualitative content analysis to analyse the data.

The questions in the semi-structured interview were divided into two topic blocks, each with 14 separate questions. The first block of the interview focused on co-writing motives: we asked why members of the academy write and research together, then we researched the interviewee's personal experiences of writing together, the motives for writing together, the difficulties encountered in writing, and the dangers. The second topic block of the interview was dedicated to the “Academic’s Science LIFE” project and the links between co-writing and organizational culture. The thematic focus of the questions was guided by the view that it is possible to shape and influence the organizational culture through the common goal and direct collaboration of the members of the academic organization. The content of the questions is based on the views that collaborative activities (incl. co-writing, co-research, co-teaching) help to make sense of academic identity, and collaborative activities involve meaningful networking and analysis and discussion.

RESULTS

The current study results revealed that writing together takes place mainly due to the lack of time to contribute in-depth research, but mostly the aim is publishing more in high-score publications. The benefit of co-writing is that it is possible to learn faster from co-authors, and belonging to academically dignified collaboration groups increases the status of a writer. According to the respondents, the order of co-authorship develops naturally and by itself, especially in terms of contribution or alphabetically, the relationship between authorship is not much discussed.

Respondents express ambivalent views: on the one hand, there is an academic culture of competition in co-writing, to which some are better adapted and others less well-adapted. On the other hand, the internal goals - the need to do research and serve society - are expressed. Respondents recognize that they need more time and opportunities for meaningful co-writing and reflection of their scientific work. The respondents have experienced both acute and positive as well as problematic and negative experiences of co-writing, especially the experience of relationships with co-authors. Compiling the joint text is motivated by an increase in topic-specific expertise, shared responsibility for completing a study or text, all of which increase the chances that the text will still be completed despite the enormous workload in academia.

The motives for co-writing are varied and ambivalent. Both Table 1 and the motives for co-writing outlined by Akerlind (2008) are represented in the respondents' opinions. At the academy, certification motivates both to write together as an external motive and as an internal motive in the research work for the benefit of the university, society and the profession. In the results of our study, all four hierarchical categories of Åkerlind's (2008b) research were protruding:
1) focusing on meeting external requirements (*I would like to write about a common goal, but I'm afraid there is still pressure*); 2) establishing myself as a researcher through research (*It was important for me to contribute somewhere to a group or a group that makes a difference and I can actually contribute somewhere*); 3) internal

interest in being a researcher (self-realization) and self-development (*I have a huge internal need, myself*); 4) being a researcher, which connects external and internal experiences in order to realize altruistic goals and wider changes both in one's field of research and in society (*Let's study together in order to influence society*). It is important for the respondents to do meaningful work at the university, but they feel unable to fulfil their mission (*If it is aware or visible in every project or for the researcher, it is like a question mark*).

The evaluation and certification in academic position is expected to produce good results in both teaching and research, including effectiveness in publishing, activity and success in applying for competitive funding, and societal and institutional contributions. Respondents do not consider this possible or sustainable: *First of all, it is not humanly possible. That you can no longer delve into any field. And you cannot be strong in all things*. Reorientation with the new requirements creates weakness in the members of the academy, because in the certification, election to the academic positions, the members of the academy are evaluated individually on the basis of quantitative results (*You have to reorient*). Thus, respondents believe that collaboration is needed today to increase academic competition (*I would like to hope for a common goal, but I am afraid there is still pressure*). University members experience being in the position of competing allies (*We terribly want to pair up, pretending to work together, but constantly fighting each other*).
Respondents in our survey express the view that if a university trusts its members, there is a stronger identity within the organization (*Responsibility for the formation of the identity of its team members*`).

Although respondents to our survey value collaborative research for the development of their organization and society, respondents do not believe that motivating, supporting and engaging in their university collaboration is sustainable at the moment (*On the one hand, management works to bring people together, impression*) and that resources are allocated for this (*The university as an organization should probably be supported primarily financially, but this is unlikely to work*). Thus, the members of the university included in the sample of our study also see increasing the individuality of the university as a possible and sustainable solution. According to the respondents, imposing the same requirements on all members of the academy is not sustainable, it is important to bring intellectual and academic freedom back to the university (*Some are stronger in one, others in another and should form a homogeneous whole*). Diversity and meaningful science is important for university internal stakeholders.

CONCLUDING DISCUSSION

According to our study the internal stakeholders of the university perceive problems in adapting to the new academic culture and contradictions in the change of academic identity. University members have adapted differently to the new (neoliberal) higher education policy. There are respondents who perceive themselves as successful. Even with a quantitatively competitive culture of competition, there are successful adapters who emphasize that you are no one unless you are quoted. However, less well-adapted respondents also express an inability to adapt to the new organizational culture (*Although you are fighting against it, you will inevitably submit*). The survey revealed that it is difficult for an academic to cope with the expectations placed on him / her (*You are going to do absolutely*

everything to get a so-called click machine (more citations) *to work*). Status is decisive in competition, as opportunities for collaboration are directly related to academic status (Katz & Martin, 1997; Lee & Bozeman, 2005; Musselin, 2018). Respondents in our survey emphasize that in the context of collaboration and co-writing, all members of the co-writing group must have equal rights (*The subject of justice, there is* (in co-writing) *well-felt justice*).

The results of the study showed that co-writing allows for reflection (*Sharing of values and knowledge, complementarity, co-creation and learning, discussion and support, self-development*). The results also confirm that co-writing helps to make sense of academic identity and organizational culture (*And there should be some kind of anchor in the university itself that holds the identity*). According to various authors, academic collaboration and reflection in networks allow us to make sense of academic work and experience it as meaningful (Archer, 2008; Lee & Kamler, 2008; Löfström & Pyhältö, 2017; Tusting et al., 2019; Lucas, 2006; Jung, et al., 2021; Murray, 2012; 2014). Participants in the study want collaborative processes at the university to be valued so that members of academia gain more responsibility (*Leaders must sacrifice their power and spray the sanctity of their power on the group*). The solutions proposed by the respondents to our study also overlap with the view of Tustingu et al. (2019) - namely, the respondents emphasized the need to systematically support intra-unit and certainly inter-unit interdisciplinary research collaboration at the university.

Thus, the present study confirms Musselin's (2018) view that being in a contradictory position of competing allies leads to new forms of collaboration, shaping new academic identities and social norms, thus influencing the meaning of higher education and the nature of research. There are differences between disciplines and sectoral writing and publishing behaviour, which is also highlighted in international studies (Musselini, 2018; Tustingu et al., 2019). Respondents of our study point out the differences between the research field (*First of all, humanitarians are not particularly interested in this collaboration*).

Based on the results, it can be said that understanding the professional development of lecturers, researchers, and internal stakeholders of the academy by supporting the co-writing process must be a well-thought-out, research-based and strategic area, which is important to support the co-creation of support units and academic units. By supporting and valuing collaborative writing, it is possible to reduce the perception of a competitive culture in an organization and increase the experience of a collaborative, elaborative organizational culture. Collaboration and co-writing enable the creation of a common space of thought, uniting the different members of the academy and jointly shaping the organizational culture of the university.
The biggest limitation of our study is the fact that in the context of the university, the sample included those members who had a greater interest in contributing to the development of the academic organization. Therefore, there is a danger that we make too many generalizations that university internal stakeholders have strong internal motives to contribute to the development of the organization and society. Therefore, it is important to interview other members and stakeholders of the academy in the future in order to explain the motives of the collaboration and co-writing of the members of the different parties and centres of the university as a whole.

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Facilitating a SoTL Community of Practice for Teaching in a trauma-sensitive classroom

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ABSTRACT

How can we support faculty in enhancing student learning and creating a welcoming learning environment in a trauma-sensitive classroom? The research shows that fostering the scholarship of teaching and learning is more effective through faculty learning communities compared to individual teaching grants, seminars, and workshops for faculty (cf. Cox, 2003).

This paper presents the case study of building a faculty learning community, or a community of practice (cf. Cox & McDonald, 2017; Wenger et al., 2002; Wenger, 2011), among faculty in the university weekend/preparatory programme for refugees (OLIve) in Budapest and Berlin in AY 2020-2021. Refugee learners carry diverse experiences of displacement, having endured a unique trauma as a result of conflict in their homeland. Since trauma affects students' capacity to learn and develop academic skills (cf. Kroó, 2020), it is even more important to provide tailored support to faculty who teach them. Community of practice (CoP) aimed to support faculty development along the continuum of growth towards the scholarship of teaching - from reflecting and growing in their own teaching, to engaging in a dialogue with colleagues about their teaching practises (cf. Weston & McAlpine, 2001).

We present strategies, processes, and activities used to build the CoP - by providing a safe and supportive online space in which faculty can share and discuss challenges, investigate new approaches to teaching, and with the help of facilitators, engage with relevant SoTL research. The discussed approach is not only relevant to any trauma sensitive classroom, but also more broadly for building CoP and supporting faculty, especially in a challenging pandemic context.

INTRODUCTION

Being trauma informed requires recognising and understanding how trauma influences individuals and, in education, designing teaching and learning environments in a way that meets students' needs. This means establishing trust, encouraging collaboration and empowerment, as well as ensuring safety and flexibility in classroom management (cf. Carello & Butler, 2015; Crosby et al., 2018). Refugee learners carry diverse experiences of displacement, being exposed to a unique trauma as a result of conflict in their homeland. The research shows that trauma is a strong predictor of academic failure; it is connected to low student engagement, high absenteeism, and poor academic performance (Harrison et al., 2020). Trauma affects students' capacity to learn and develop academic skills. It affects students' self-regulation skills and makes it harder for students to focus, maintain attention, plan, remember and organise new information, problem solve or follow instruction (cf. Davidson, 2017; Kroó, 2020). Since students with traumatic history often feel low self-esteem, anxiety, and lack of control, creating a safe

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learning environment is crucial for student learning. To achieve this, some trauma-sensitive norms that can be introduced include ensuring an orderly physical environment, predictable classroom routines, multiple ways to participate and respond, active supervision, clear norms and expectations, and being prepared to offer additional support to students (Wynard et al., 2020).

Instructors play a vital role in providing mental health and psychosocial support to students – they are the ones identifying and responding to students' needs (Falk et al., 2021). However, working with trauma-sensitive classrooms and trauma-affected learners makes the instructors vulnerable to the effects of trauma, and keeping the balance between empathy and overidentification is critical (cf. Davidson, 2017). This is why supporting instructors in a trauma-sensitive classroom is crucial.
In this paper we discuss how we supported instructors to enhance student learning and create a welcoming learning environment in a trauma-sensitive classroom by facilitating communities of practice (CoPs). CoPs are more than a community of interested people; a CoP implies regular interaction, a common passion or concern, and sharing practice with the group to improve and learn (Wenger et al., 2002; Wenger, 2011). Along those lines, Cox (2004) defines faculty learning communities (FLC) as voluntary, structured, yearlong, multi-disciplinary CoPs of around 6–12 participants that include building community and focus on the development of scholarly teaching and the scholarship of teaching and learning. The research shows that fostering the scholarship of teaching and learning is more effective through faculty learning communities compared to individual teaching grants, seminars, and workshops for instructors (cf. Cox, 2003).

In this paper, we focus on the common aspects of CoPs and FCLs, and building on the developmental model suggested in Weston & McAlpine (2001), we present the case study of an adapted model of a faculty community of practice among instructors in the weekend (part time) and university preparatory (full time) program for refugees (OLIve) in Budapest and Berlin in AY 2020-2021. Due to the Covid-19 pandemic, most of the teaching was done online, which was an additional challenge both for teaching, and creating and facilitating a CoP. In the remainder of this paper, we share our model, facilitation practices, and our observations about the impact on learners and instructors. To this end, we first briefly describe the context of the Open Learning Initiative.

CASE STUDY: OPEN LEARNING INITIATIVE

Open Learning Initiative (OLIve)[5] started in 2016 at Central European University in Budapest, following the 2015 refugee crisis. It runs two non-degree programs, OLIve Weekend Program (OLIve-WP) and OLIve University Preparatory Program (OLIve-UP). OLIve-WP[6] is designed for asylum seekers and refugees in Hungary, aiming to provide access to education, job market training, and English language skills. It runs every Saturday following the academic year calendar. OLIve-UP is a full-time, one year, fully funded university preparatory program for people with refugee status. The

[5] See more about OLIve here: https://olive.ceu.edu/about-olive

[6] See more about OLIve-WP here: https://openeducation.group/

aim of the programme is to develop and strengthen students' academic skills that are necessary to apply, get accepted to, and succeed in a graduate program in English.

Both programmes are based on small groups, tutorials, and student-centred teaching, focusing especially on creating an inclusive and welcoming learning environment. This was particularly relevant because of the highly diverse student body; students differed in their (academic) English skills, academic and study skills, disciplinary background, motivations for learning, and pace of learning. In addition, the learning environment is often marked by a lack of trust among students, and the likelihood to trigger past traumas. To address the diversity and ensure inclusiveness, the teaching methods include careful scaffolding, clear instruction, individualised approach and feedback, as well as tailoring the materials towards students' interest and backgrounds. It also includes diverse learning activities and assignments, so that students can demonstrate their learning in various ways.

In AY 2020-2021 OLIve-UP[7] enrolled 12 students who were taught by seven instructors. The Program offered three types of courses: English support courses, academic disciplinary foundation courses, and academic skills courses. Students were tutored in four disciplines, namely Business Studies, Human Rights, Political and Social Sciences, and Public Policy. OLIve-WP in AY 2020-2021 supported 60 students. The courses and workshops were developed and taught by 20 instructors in Social Sciences disciplines, and teachers of English and Hungarian. Given the curriculum differences and specifics of OLIve-UP and OLIve-WP programs, as well as diverse learning needs, two CoPs were formed and interacted separately, yet both relied on the same faculty development model as described in the next section.

[7]See more about 2020/2021 OLIve-UP at Bard College Berlin here: https://berlin.bard.edu/civic-engagement/institutional-engagement/olive/courses/

BUILDING A COMMUNITY OF PRACTICE: THE MODEL

While reflecting on the evolution of OLIve CoPs, we found the developmental model suggested in Weston & McAlpine (2001) to be the most accurate in grasping the growth trajectories of OLIve instructors. The model describes faculty growth continuum along the three phases: 1) growth in own teaching; 2) dialogue with colleagues about teaching and learning; 3) growth in scholarship of teaching (p. 91). The model anticipates that faculty development may occur within each phase when individuals move along the continuum from easier to more complex processes of action, reflection and improvement. Likewise, the development can move across phases signalling faculty advancement towards SoTL.

Our aims in engaging with this model were twofold. The primary goal was to facilitate the development of the CoP among instructors, so they could grow in their own teaching by jointly reflecting on their practice, brainstorming teaching solutions, and connecting their experiences with relevant SoTL concepts. The long-term aim was to jointly develop a 'toolkit' of good practices and evidence of effective teaching to further contribute to SoTL with regard to teaching in refugee education programmes. There was also a particular practical aim towards the needs of instructors in facilitating an already challenging teaching and learning context in an online environment (due to Covid-19).

The aims for developing a CoP in OLIve shaped the role of faculty development professionals in organising and facilitating OLIve teaching sharing sessions and professional development trajectories. In both cases faculty developers served as mentors and mediators for OLIve instructors. On the one hand, they assisted teachers in individual and group reflections on teaching practice with the aim to help them learn about their own teaching and advance on the spectrum of complexity (consistent with Phase 1 of Weston & McAlpine developmental model). On the other hand, faculty developers supported teachers in having professional discussions about teaching and making relevant connections between their professional experience and SoTL (consistent with Phase 2 and partially Phase 3 of the model).

Following the Weston & McAlpine (2001) developmental model, the sharing and development process in OLIve CoPs included three stages:

- Online asynchronous reflection and sharing practice (and student progress in OLIve-UP) ahead of the synchronous meeting;
- Discussion and sharing in a synchronous facilitated meeting; peer learning and brainstorming teaching strategies to address current challenges;
- Collaboration and growth in scholarship of teaching.

Instructors were invited to share personal reflections, teaching dilemmas, and effective teaching practices in a simple template. They were invited to reflect on any teaching strategies they were using to address a particular challenge or aim regarding teaching students with different English levels (or generally different skills or familiarity with the discipline); building a friendly class atmosphere and fostering collaboration; talking about sensitive topics; understanding what it means to come prepared to the class or participate; as well as the aims and rationale for using different learning materials and activities. An example is presented in Table 1 below.

Table 1: Example of practice sharing (asynchronous reflection)

AIM OR CHALLENGE	TEACHING STRATEGY
- Fostering a more collegial environment and communication among students. Some never spoke to each other; some are quite introverted and shy. - Better understanding of the format/assessment criteria and the structure of a motivation letter.	I will ask students to give peer feedback to each other on the first draft of the motivation letter. I expect this is not going to be comfortable for some of them. Still, this is going to be presented as a professional task with clear guidelines on how to give feedback (i.e., questions and criteria they need to reflect on). I plan to pair them with people they don't interact that much with, also considering different English levels - hoping this could help them to start communication and give an opportunity to help each other. **UPDATE:** there is a lot of resistance and unease with the idea of this assignment. Some consider it too personal to share, others think it's a waste of time because they don't know how to write a motivation letter - they can't give good advice, and they wouldn't trust peer advice either. I changed the strategy in the following way: peer feedback is postponed. Until then, I am holding group consultations for those students who want to discuss their writing. Everyone will get my feedback first, and I will direct them to each other to ask for specific advice based on the strengths of their motivation letter (using a guided template with the criteria), just to get used to the idea that they can learn from each other even if they are not specialists in this area.
- Introducing midterm self-assessment for better understanding of requirements and the grading process; - Guided feedback for improvement aiming to minimise any negative	The first aim was to reflect on the requirements and understand the grading system. I gave students a table with criteria and grading table, asking them to assess how they did in each segment of the class. I added my response to that in the midterm feedback. The second aim was to give targeted feedback in response to their assessment, and try to make sure they see assessment as a transparent and

	emotional reactions that would affect motivation	just process - which will hopefully positively affect motivation and their further work. **UPDATE:** Most of the students had a fair and realistic self-assessment, and received well feedback for improvement till the end of the semester.

Sharing teaching practices differed in OLIve-WP and OLIve-UP. The participation in the OLIve-WP CoP monthly meeting was voluntary[8] and instructors 'submitted' their input ahead of the meeting through a Shared Google Form. These inputs were also voluntary, and CoP members could choose whether to share a successful classroom practice, describe a teaching dilemma they faced, or pose a question for discussion to the CoP group and to the faculty development facilitator (FDF). These entries were then reviewed and synthesised by the FDF into points for group discussion at the CoP meeting. The majority of entries here concerned teaching dilemmas and challenges of teaching in a sensitive context that were later jointly brainstormed at the CoP meetings (Teachers' Sharing Sessions). Beyond brainstorming the solutions as a group, these meetings also served as an important introduction to SoTL. This is where the role of FDF was essential - helping to conceptualise dilemmas and teaching practices through the prism of education research and contributing solutions and best practices from the scholarship to either validate or further improve teaching solutions gained from instructors' personal experiences. As a follow up to the meeting, SoTL research that was relevant to the discussion or referenced in the meeting was shared with the group via email.

Conversely, since it is a smaller and a full-time programme with a concrete aim (i.e., successful MA application and preparing students for further studies), OLIve-UP monthly meetings were in principle mandatory rather than optional and revolved around overall student progress and included both discussion on teaching and student performance. Instructors were also sharing their input asynchronously at their own pace throughout the month (i.e., not necessarily just ahead for the meeting). To make it accessible at all times to the whole CoP, shared Google documents and spreadsheets were used. In this way, all instructors and the FDF[9] had insight into individual students, as well as the challenges and teaching strategies colleagues were experiencing and implementing. Monthly synchronous meetings were then used to discuss any outstanding issues either regarding student progress or collaboration and teaching strategies. Ideally, a CoP should be a fully voluntary group, however in this case, the size of the group (of both students and instructors), a strong commitment to student progress and wellbeing, and interconnectedness of courses and skills to be developed, gave a rationale for having all instructors contributing to the CoP. Thisdid not undermine the dynamic or learning in the CoP.

An additional support feature in OLIve- UP was the invitation of a psychologist to one of the meetings. As mentioned earlier, instructors working with trauma-affected students are themselves in a vulnerable position. They have to balance creating trust and close relationships with the students, while at the same time making sure they

[8] Attended by 15 out of 20 instructors, on average.

[9] FDF in OLIve-UP had a shared role as an instructor and education manager of the program

do not get overly involved and affected (secondary trauma). Creating a learning environment that is 100% safe is not possible, and instructors did face student reactions that they were not fully sure how to react to, while continuing to respond to students' needs, deliver a safe environment for all, and ensure learning. Discussing these boundaries, balance, and ways of responding were some of the main issues raised with the psychologist.

DISCUSSION

Several important implications emerged from fostering OLIve CoP that had a positive impact on learners, instructors, and the Programme's collective experience.

Implications for learners

Opportunity to have professional conversations about teaching in a sensitive context especially during the pandemic enabled instructors to form a more nuanced understanding about their learners' needs and about the teaching context. Essentially, these sessions were the only opportunity for instructors to meet and exchange ideas about how teaching has been going. Their access to students was also limited to weekly online meetings as no socialising outside the class was possible due to the pandemic. In this regard, group sessions and reflections enabled them to gather information from each other about their students' learning context and their specific life situations and challenges that were exacerbated by Covid-19. For example, one of the dilemmas discussed in the sessions in OLIve-WP was that many students stopped handing in homework assignments. Through discussions it became clear that many of them lacked quiet study space at home to focus on learning, lacked devices, or had to give up on homework time for caregiving tasks or extra jobs. As a result, many students had to carve time from their regular work to prepare for classes, which impacted the quality of work handed in. This prompted discussions about tailoring to students' needs, and reflections on redesigning the courses with more blended and asynchronous learning formats, as well as re-adjusted workload to account for the changing context.

Similarly, CoP discussions and sharing student progress and performances across courses in OLIve-UP enabled the whole CoP to identify if a particular student was having problems in all courses, attendance, or with the same types of assignments. This, in turn, ensured that any issues could be identified in time, and tailored support could be offered to the student ensuring they did not drop out.

Implications for instructors

OLIve CoP initiative contributed to the individual development of educators prompting them to move along the level of complexity in teaching practices (Phase 1), as well as entering into professional discussions with colleagues and engaging with SoTL (Phase 2 and 3). In the OLIve-WP feedback session, most instructors identified discussions with colleagues as the most useful tool to improve their teaching. Some even suggested organising peer observations among instructors in CoP to further collect useful feedback on their practice. Some instructors referenced those discussions as helpful not only for learning new 'strategies' but also 'ways of looking at things' in terms of approaching sensitive context, session planning, and dealing with challenges and emotions in the classroom. Having access to online CoP during the pandemic was also essential for instructors to stay afloat. As one of the participants observed: "Before

the pandemic, I could discuss syllabi with colleagues randomly or even ask someone to sit in their classroom for a session or have them in mine for feedback. The pandemic took that away - so having this very friendly place where we can just share how things are going was really valuable to me."

In addition to collegial support, CoP in OLIve-UP resulted in cross course collaboration in order to enhance student learning and the quality of assignments, which was important for student motivation and self-esteem. For instance, English language instructors would design shared assignments in one course where students were practising verbal skills and interviewing each other. This interview was then taken as a basis for practising writing narratives in a different English language course. In the same way English course assignments followed the assignments in disciplinary tutorials: in English courses students would practise paraphrasing using the literature they need for their tutorial final paper. Academic skills courses in the same way supported writing and research design aspects of the final papers in the disciplinary tutorials. This synergy among assignments and across courses was planned and discussed in monthly meetings, but also individually among instructors in particular assignments. Clearly, this also had implications on student learning, as they had the opportunity to practice their skills from different lenses, and to get tailored feedback on their work from different perspectives.

Implications for Strengthening the Community of Practice

The positive experiences of CoP in OLIve-WP resulted in institutionalising this process as a regular professional development option for instructors. The core group of instructors who teach in the programme for several semesters, have the opportunity to capitalise on their previous experience to introduce novice teachers to the specificities of OLIve context - or what Martesson (2014) would call 'teaching and learning microculture'. In the follow-up academic year these sessions were aided by a parallel series of discussions (workshops) co-facilitated by OLIve instructors on topical areas such as inclusive learning, trauma-sensitive education, etc.

Implications for Faculty Development

FDFs were essential to facilitate the evolution of community-building and individual professional development of instructors - particularly for acting as intermediaries between Phases 1 and 2 of the faculty growth continuum. While individual reflections on teaching are essential, they would not necessarily prompt instructors to engage in SoTL or develop along the complexity of teaching practices. As Weston and McAlpine (2001) suggest, instructors may also stay within one stage without progressing in development towards SoTL (p.90). In this regard, FDF as an intermediary took an important role in facilitating the evolution of CoP by facilitating meaningful interactions among instructors about their practice, and by helping them conceptualise their practice via SoTL models and principles. It is also important to observe that the CoP model designed via the phases of the faculty development continuum was also effective in an online setting. The 'onlineness' became especially prominent given that otherwise instructors would be completely isolated both from students and from each other during the pandemic. The combination of synchronous meetings with asynchronous shared documenting of practices provided forums for much needed flexible engagements with colleagues in the CoP.

CONCLUSION

Building on the developmental model suggested in Weston & McAlpine (2001), the paper present the case study of an adapted model of CoP among instructors in a trauma sensitive context - weekend and university preparatory programme for refugees. We discussed strategies, processes, and activities used to facilitate practice sharing and learning in the CoP - by providing a safe and supportive online space in which faculty could reflect, share and discuss challenges, investigate new approaches to teaching, and with the help of faculty development facilitators, engage with relevant SoTL research.

Several important implications emerged from fostering OLIve CoP that had an impact on learners, instructors, and faculty development in general. First, the CoP discussions and sharing positively impacted student learning: not only in terms of more nuanced teaching strategies and responses to students' needs, but also in being able to follow overall student progress. Second, OLIve CoP initiative contributed to the individual development of educators prompting them to move along the level of complexity in teaching practices, as well as entering into professional discussions with colleagues and engaging with SoTL. Third, in the long run, the positive experiences of CoP in OLIve-WP resulted in institutionalising this process as a regular professional development option for instructors. Finally, the model and practice showed FDFs as essential in facilitating the evolution of community-building and professional development of instructors - FDFs as an intermediary took an important role in fostering the evolution of CoP by facilitating meaningful interactions among instructors about their practice, and by helping them conceptualise their practice via SoTL models and principles.

The discussed approach is not only relevant to any trauma sensitive classroom, but also more broadly for building CoP and supporting faculty, especially in a challenging pandemic context, but also beyond.

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Decolonising higher education curricula: Authentic guiding narratives from academic and learner communities

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ABSTRACT

Decolonising the higher education curriculum is necessary to address the legacy of colonialism that has resulted in racial inequality, including persistent awarding gaps. In practice, there are numerous competing demands on academics' time, particularly in a landscape of post-Covid re-adjustment. To inform the process, authentic narratives from two contrasting, but inextricably connected communities are explored: In the *Student Diary Project,* Black, Asian and Minority Ethnic undergraduate student diaries provide powerful, personal perspectives that underpin the need for decolonising. These first year students draw on personal experiences of 'otherness' and cultural difference, as well as advocating a range of practical measures. In *Stories from Scholars,* academic narratives provide an insight into 'teacher' perspectives on decolonising. Collectively, these demonstrate an understanding of the transformational value of the process, not only for curricula, but also for individual students and wider society. There is considerable commonality between these two community narratives, though students seem less aware of the potential benefits of decolonising on their own personal role in future society. Authentic community narratives such as these provide compelling evidence that will help persuade, engage, and guide academic and learner partnerships in their decolonising activity.

1. Background

Multiple recent global events have shone a light on racial inequality and injustice (e.g. the felling of statues - Cecil Rhodes in Cape Town and Colston in Bristol, the murder of George Floyd, and the emergence of the #BlackLivesMatter movement). In the UK, race inequality has been further highlighted in the post-Brexit growth of nationalism (Official statistics, 2020a), the unequal impact of Covid-19 in socio-economically disadvantaged Black, Asian and Minority Ethnic (BAME) communities (Office for National Statistics, 2020b), and in HE, persistent awarding gaps between white and non-white students (Universities UK and NUS, 2019).

While there have been efforts to close awarding gaps and eliminate racism, these recent events have accelerated both the need for, and the desire, to see real, lasting advancement and success. One response to this has been a plethora of decolonising the curriculum initiatives in HEIs. Decolonising allows us to identify and acknowledge the impact of colonialism upon perceived knowledge, pedagogical strategies and learning (Arshad, 2021a, 2021b). It requires us to reflect upon, and address the legacy of disadvantage, injustice and racism, and seeks to re-balance and enrich learning in HE by integrating a much wider range of perspectives in *what* and *how* we teach, and in the *wider learning environment* (Liyanage, 2020).

Decolonising work requires guidance and support, but central to effective curricula transformation is obtaining buy-in from academics. Firstly, this means listening to students (Brown, 2020) who bring perspectives from their experiences inside and outside the classroom, and which when integrated, can strengthen curricula (Shay, 2016). Through the *Student Diary Project*, the research aims to capture insights into the daily, lived experience of university life for BAME students. Secondly, it also means academics travelling together on a journey in a communal, supportive and non-judgmental manner. Through *Stories from Scholars,* the research seeks to explore perspectives on decolonising from academics; what it means, its importance and potential benefits. Authentic narratives from these two communities have different, but crucial roles in engaging the wider academic community in decolonising, and in transforming our curricula.

2. Methods

2.1 *Student Diary Project*

This study adopted a qualitative phenomenological approach, using a solicited text-based respondent diary (Meth, 2003). While there are some weaknesses in this approach, it is a useful tool for capturing the rhythms and lived experiences of day-to-day life (Latham, 2014). Fourteen first-year undergraduate students from three science and engineering departments responded to an open call to participate in the BAME Student Diary Project, forming part of the Faculty's decolonising the curriculum work. Diarists were incentivised with a gift voucher and asked to submit a weekly online diary over a period of six weeks during their first term. Some general, non-prescriptive guidance was given on content and length. For their final diary, participants were asked to add their thoughts and observations on decolonising the curriculum. Diary entries were collated and the text coded to identify emerging themes. The purpose was to capture the lived experience of university life for BAME students.

2.2 *Stories from Scholars*

Here, data were collected using the qualitative narrative inquiry method. Eight academic staff, traversing a range of science and engineering disciplines, were invited to prepare a written narrative in which they responded to a series of 'prompt' questions. Most participants were members of the Faculty 'Narrowing the Gap' task group. The purpose was twofold;

- to explore the range of knowledge, understanding and experience of decolonising curricula across a range of individuals and disciplines, and
- to provide encouragement to colleagues.

Prompt questions invited participants to explain what decolonising the curriculum meant to them, why they think it is important in HE, how it might benefit their discipline, and how it might impact on students' experiences.

For both sets of data, written text was analysed inductively with NVivo, beginning with open and descriptive coding, and progressing iteratively to establish a coding hierarchy, and ultimately to identify emerging themes. These are presented and discussed below.

3. Results

3.1 *Student Diary Project*

Four key themes emerged from the data and these are outlined below.

a) Theme 1: Being seen as 'other'

Students reflected on the impact of personal experiences of racial inequality and marginalisation, and of feeling, and being seen as, 'other':

The fact that terms like 'People of Colour', and 'BAME' even exist is proof that we're still seen as 'other'.

Times I felt I was being discriminated against. This wasn't something I was expecting or prepared for because back at home I didn't experience anything like this - such as being marginalised or feeling left out.

They express their feelings concerning some of the wider societal and institutional consequences of racism:

One of the lecturers talked about how BAME students end up not doing as well at university compared to other students. This genuinely upset me because I couldn't understand why there is a gap when we are all on the same course!

But not all share the same experiences:

The colour of my skin hasn't hindered the way I interact with people, nor has it affected the way I have learnt. The fact that other people have to deal with racism or backward thinking is saddening and I am glad I chose a university that I feel safe walking around.

b) Theme 2: Identity safety

Students reflected on aspects of the university environment that influence their sense of feeling valued and belonging. This can be conceptualised as *identity safety* (Davies *et al.,* 2005, p278):

".....identity-safe environments involve[s] assuring individuals that their stigmatized social identities are not a barrier to success in targeted domains.... assuring individuals that they are welcomed, supported, and valued whatever their background."

A contributory factor for identity safety was seeing other people like themselves on the course:

What I really like about my course is the diversity. I am different from a lot of people, but as it's a really diverse place, it's a difference that is embraced.

I didn't anticipate how few people of colour would be on my course - it is pure euphoria seeing a person of colour on my course because it's so rare!

Students also commented on formal and informal personal support from friendship groups:

I'm very grateful to have friends - who are also people of colour - who are struggling with the same things as me.

I'm settling down to university and so far, my experience has been amazing!!! Especially with the people around me - I have a group of course mates and they're lovely and supportive.

And of the value of working and learning together for mutual support and identity safety:

The high point of this week was doing a practical as a group. This helped me develop my skills of working with other people and taking account of other people's ideas and perspectives.

c) Theme 3: Family, home and cultural difference

This theme captures student reflections on the impact of cultural differences around religious festivals and practices:

Last year on Eid I had an exam instead of spending the day with my family - but if it was Christmas, there's no way that would happen.

Being able to pray Friday Prayers today while at University - instead of travelling to a local mosque - is such a positive.

Students also comment on home and family cultural differences and their impact and role in the university experience and study:

I am commuting and it's getting dark quicker, and my parents don't like me being out when it is dark, doesn't help - 'cause then I can't stay at Uni late.

Recently, I've been thinking about getting student accommodation as I feel like I need more independence.

In BAME cultures, the topic of mental health isn't something talked about at home, and consequently, it's rarely ever spoken about with peers.

I think sometimes in Asian families there's this pressure to get a good degree and a good job. I revisit this constant fear on a daily basis of letting my parents down and disappointing them....

d) Theme 4: Decolonising the curriculum

Students commented on the importance of seeing themselves reflected in the curriculum, and of being exposed to role models who inspire and motivate them to achieve:

I want to hear about a Bengali scientific researcher making some cool science discovery, or seeing more females in STEM that are from a different ethnicity too.

And they suggested ways in which this could be enhanced through decolonising:

Decolonising.... could be done by promoting research papers by people from different backgrounds, reconstructing the curriculum to learn about other cultures and traditions.

Students themselves developed a greater understanding of other cultures through diversity in the classroom:

I did end up making some amazing friends who aren't of the same ethnic and cultural background as me. This was interesting - and good for me - because I had never met people from those backgrounds, and I got to understand them better.

In relation to this they expressed a desire for mechanisms built into curricula to facilitate socialisation and community-building:

Have students actively working together, not just in labs but in workshops... so everyone gets to meet people from their course and work with them.

Finally, students made some suggestions about the *process* of decolonising:

It needs to begin by decolonising people's thoughts!

Just rearranging things doesn't solve a problem, dealing with it head on so the problem no longer exists is the long term solution.

Highlighting the importance of engaging with students as partners:

It needs to be an open and honest conversation - including us.

3.2 *Stories from Scholars*

There was a recognition among academic staff that while decolonising the curriculum will involve reviewing content, the process is also about identity safety; providing greater equity in the classroom environment and in learning activities:

Decolonising the curriculum means introducing previously ignored voices, images, authors, topics, theories and arguments.... creating a classroom and environment in which everybody feels safe, valued, respected and able to learn effectively.

This needs a re-think of the pedagogical basis for teaching, learning and assessment that stretches beyond formal curricula and into the hidden curriculum. To achieve this will require going beyond mere completion of tasks, to transformational thinking:

It is not only about taking practical steps.... it requires internal changes through reflection on our identity, agency and individuality - this is hard especially when you are in a position of power or privilege because relinquishing power and privilege is not often appealing.

There a number of reasons that decolonising is seen by academic staff as a necessary, valuable process. From a pragmatic perspective, decolonising should enhance student engagement and help address inequalities such as award gaps:

It's important.... to signal a clean break between the dark deeds of our colonialist past, and our modern day curricula. Otherwise we merely reproduce and reinforce the inequalities that exist.

Decolonising also has benefits for individual students, empowering them to grow in confidence and realise their full potential. This has knock-on effects for society, for feeding a pipeline towards a more diverse workforce in a globalised world, working towards responsible futures with enlightened global citizens:

Decolonisation... will give students a greater awareness and understanding of the impact of past actions on present humanity.... increase their critical understanding of the inter-connected human-natural-economic systems that make up our world, and better equip them as responsible global citizens and agents of the future.

Decolonising will also enable disciplines to be grounded in their historic context, challenging assumptions about the sources of knowledge, and integrating a wider body of knowledge, perspectives, and practices:

Engaging more deeply with every aspect of decolonising the curriculum should help us deliver an equitable educational experience and outcome for all our students. It might well also contribute to a broader.... more critical.... contemporary.... futureproof education.

Academic staff cited a number of curriculum adaptations for decolonising. They include modifying interactions with students (e.g. learning preferred names, treating students as individuals), reviewing curriculum content (e.g. using diverse images, information sources and case studies, inviting guest speakers from non-traditional backgrounds), and modifying learning activities (e.g. offering flexibility and choice in activities and assessment). A common over-arching theme was the need for open, honest dialogue between students and staff. Some of the challenges of decolonising were also acknowledged, including the role and position of BAME staff:

I don't feel I can say I will be decolonising my teaching as I'm often seen as the 'other' and the 'different' already.

4. Discussion and conclusions

Student diaries reveal a range of personal experiences of 'otherness' and cultural difference, together with a strong recognition of the value of friendships and community-building for identity safety. Curriculum adaptations suggested by students placed more emphasis on content, particularly in relation to representation and role models. Nevertheless, there was also recognition of the need for a holistic approach that encompasses learning activities (including extra-curricular), and for staff engagement with students as partners in the process (Shay, 2016). Academic narratives demonstrate a collective understanding of the transformational value of decolonising, not only for curricula, but also for individual students and wider society. Promisingly, academics also recognise the importance of working in partnership with students to decolonise, and are aware of the complexities and difficulties of the task ahead.

Overall, there is considerable commonality between these two community narratives, though students place less emphasis on the potential benefits of decolonising for their own future contribution in a globalised society. This may indicate a lack of self-confidence and personal aspiration, potentially borne of previous 'otherness' experiences. Or, it may show that students find it harder to make the connection between equity and empowerment in education, and the increased opportunities that this affords for their role in wider society. As has previously been observed (Meth, 2003), for some, participation in the diary project was an inward-looking, empowering experience:

I appreciate this Diary Project opportunity a lot... I feel like many of us with ethnic backgrounds have something which bothers us on a day-to-day basis but never really speak out about it. To be given this opportunity not only helped me speak out, but also helped my mental health,

While others saw the outward-looking benefits:

It would be really nice if all people from ethnic backgrounds had the chance to write anonymous diary entries showing their struggles and giving the university an opportunity to combat racism.

Our own university, like many HEIs, is increasingly prioritising Education for Sustainable Development (ESD) and embedding it in curricula. The critical, global, systems thinking at the heart of ESD may provide a useful mechanism for encouraging greater confidence and aspiration within a decolonised curriculum.

5. Conclusion

Decolonising the curriculum needs to be addressed as an ongoing process, rather than a set of tasks, and it will take time. However, there are numerous competing demands on academics (Liyanage, 2020), particularly in a landscape of post-Covid re-adjustment and REF outcomes. Even where there is clear quantitative evidence of inequality (e.g. the award gap), many academics may simply be unaware of the daily challenges faced by students as consequence of the colonial legacy. They may also feel that they do not possess the necessary knowledge and expertise. It is here that authentic narratives from these inextricably connected staff and student communities can play a crucial role. On the one hand, insightful narratives from non-expert academic colleagues show there is considerable support for decolonising, and they identify a range of benefits and a realistic awareness of the size and complexity of the task ahead (e.g. Le Grange, 2016). Sharing these narratives through our online toolkit to support decolonising the curriculum will help promote an open and honest, middle-out, bottom-up collegiate approach in which teams of staff work and learn through the process together, using the guidance and resources made available (Taylor and Riaz, 2021). On the other hand, real, powerful and impactful stories from BAME students provide compelling evidence of the *need* for decolonising and will help gain *affective* buy-in. We have created narrated videos around key themes to support this. Students are the experts here, and working in partnership with them will ensure effective curriculum adaptations *and* an empowered student body (Taylor and Riaz, 2021).

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Taught by experience - an approach to integrated learning for first year students in Electrical Engineering.

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ABSTRACT

The OECD (Organisation for Economic Co-operation and Development) provides a list of key competencies which current learners/student should acquire to be future-proof. The three key competencies are „(1) Use tools (language, technology…) interactively“, „(2) Act autonomously“ and „(3) Interact in heterogeneous groups“.

Traditional teaching focuses on providing information. I redesigned the structure of my class “Electrical Engineering” (EE) for first year Bachelor students in order to provide not only fact knowledge transfer, but also to gain and improve said key competencies. In my talk I will present methods and materials, I use, to give my students that expertise. The class format has been changed to an inverted classroom concept. In preparation of the course, the class students work self-paced on teaching videos and easy test questions to gain basic knowledge about a topic (Key 2). In class, students are stimulated to get into discussion with their colleagues via Peer Instruction (PI) questions. To support the discussion between students (Key 3), small whiteboards are handed to student-groups at the beginning of each class. Besides, those whiteboards are used for solving assignments during class time. A supervisor can walk through the room and assesses the progress of the teams. Solutions or mistakes that are worth discussing are presented in the plenum by streaming the whiteboard via a document camera. The teacher establishes a positive

culture of failure, as there is no blaming and shaming, but collaborative learning. The whiteboards are a game changer in the attendance time.

To encourage the use of different tools (Key 1), simulations of ideal electrical components are integrated in the teaching part. For showing the difference to real live, electrical components as resistor, multimeters etc. were handed to the students during class for guided experiments. This trains scientific working along the lines of thesis - experiment - result - conclusion, but also forces students to think about the differences between ideal models and reality. The modified course concept has been widely complimented by students, stating they are very happy to be in that class and feel well prepared for the exam.

> "Teaching largely addresses deficits in motivation and effort, learning is largely achieved by the learner." (Clark, 2021)

GOALS AND OBJECTIVES

The purpose of studying is to be qualified and skilled for a future job. As a professor, it is my duty to teach those skills and technical expertise to the students. The questions arising are; what students will have to know in the future and which skills will they need. The fast technological progress makes it more or less impossible to define which technologies will be relevant in the future. Who studied in the 1990s probably did not expect, that everybody will carry around a high performance computer with permanent connection to worldwide databases in his or her pocket. As we could not predict this in the 90s it is nowadays hard to guess which technologies will be relevant in the 2040s.

So what skills, besides the technical knowledge, will be relevant to future proof young people? Those were analysed by experts in an OECD Project named DeSeCo ("Definition and Selection of Competencies"), a follow up project of the PISA ("Programme for International Student Assessment") study. The study states three competence fields: (OECD - Organisation for Economic Cooperation and Development, 2005)

1. *Use tools interactively (e.g. language, technology)*

   Why:

   - *The need to keep up to date with technologies*
   - *The need to adapt tools to own purposes*
   - *The need to conduct active dialogue with the world*

   What competencies:

   - *Use language, symbols and texts interactively*
   - *Use knowledge and information interactively*
   - *Use technology interactively*

2. *Interact in heterogeneous groups*

   Why:

- *The need to deal with diversity in pluralistic societies*
- *The importance of empathy*
- *The importance of social capital*

What competencies:

- *Relate well to others*
- *Co-operate, work in teams*
- *Manage and resolve conflicts*

3. Act autonomously

Why:

- *The need to realise one's identity and set goals, in complex world*
- *The need to exercise rights and take responsibility*
- *The need to understand one's environment and its functioning*

What competencies:

- *Act within the big picture*
- *Form and conduct life plans and personal projects*
- *Defend and assert rights, interests, limits and needs*

Only a few items of this list can be taught with a classical teaching approach. Teaching via chalk and talk, for example, does not teach how to work in heterogeneous groups. Chalk and talk can explain that native language, math formulas, schematics or even algorithms can be used as interchangeable languages to represent STEM problems. To gain experience with the use of different languages, to act autonomously or work in heterogeneous groups cannot be practiced during such a teaching approach. To practice those skills in an Electrical Engineering 101 course, a different approach of teaching was used.

STARTING POINT

Teaching strategies of professors are often based on their previous learning experience as a student and their intuition. Professors know what worked for them, while they were studying. And they try to use those strategies for their teaching. They rarely ask themselves whether this learning and teaching approach is the one with best results and most efficient for learning on student side. As professors are scientists, they should rely on research results. But as those results on learning are acquired from cognitive scientists, this research results are not easy to read and understand for people of other disciplines. The essence of the research which activities have the highest outcome in learning can be named evidence-based learning. Those activities can be supported by the teaching personal to achieve a high learning outcome on student side.

Evidence based learning can be split into six categories (Yana Weinstein, 2019):

1. Spaced practice: two learning units are separated by a pause, and the learning process regarding one particular topic is stretched over a prolonged

period of time including repeated addressing of the subject later on

2. Retrieval practice: topics which have been covered are actively recalled from memory and as a consequence the synaptic connections in the brain are reinforced

3. Elaboration: understanding and consolidation of topics by using of Five Ws and How (e.g. What is happening here? Why does this work? …)

4. Interleaving: switching topics while learning and creating intersections and connections between the different topics

5. Concrete Examples: Examples and hands on experiments which can be carried out and used for practice and understanding

6. Dual Coding: Modelling of topics and questions as sketches, schemata or diagrams, combined with textual representations

MATERIALS AND METHODS

Eight years ago, I started my “Electrical Engineering 101“-course and it was from the very beginning designed to later be transferred to an “Inverted Classroom” concept. As early as six years ago, so-called bonus tests had been implemented in the learning management system (LMS) Moodle, which could be processed by students to gain additional (“bonus”) credits relevant for the finals results (Note: these bonus credits have to be explicitly allowed in the relevant exam regulations). Four years ago, the handout script for the course had been redesigned in the sense of an individual parametrization (target-oriented and designed for the specific purpose) via exploiting the automation possibilities of the document processing system LaTeX. The created documents have all the same basis but can be compiled into three separate specialized versions (1. lecturer script, 2. slides, 3. student handout). The creation of all versions is controlled by parametrization and conditional compiling of the LaTeX sources. The first version is meant for the lecturer (the “Master script”) and contains the whole syllabus, complete information plus additional material, solutions for the sample problems and stage directions. Along with this “complete” script, the slides for the lecture presentations have been created from the same sources, keeping the contents of the versions aligned. The presentation slides are prepared with fill-in blanks at suitable important locations, which are meant to be filled during the presentation by the lecturer. For example, diagrams are only given as empty coordinate axis, which the lecturer completes during the presentation by adding the respective data and curves using a digitizer pad. The third variant is the student handout script. It shows the same fill-in blanks as the slides, which are to be filled by the students during the course. Moreover, the student handout contains additional material like explanatory texts not included in the slides, but derived from the lecturer’s version.

Due to the restrictions in personal attendance imposed by the pandemic situation in the academic term of summer 2020, the idea of realising a full “Inverted Classroom” concept (Werner, Ebel, Spannagel, & Bayer, 2018) leapt into mind. Given the

already existing structure of the teaching material, the task was merely a matter of recording presentations of the slides as videos, hereby providing the actual knowledge transfer in an asynchronous online format, while using the actual synchronous online lectures mainly for answering questions of the students. One of the biggest disadvantages of the distance learning model, which had to be implemented in a hurry in Spring 2020 showed to be the lack of non-lecture-based personal interaction of the students with each other, such as private learning groups, spontaneous discussions about the lecture while sitting in the Mensa or just socializing (this was a freshmen lecture, the students did not have solidified social bounds with their peers yet). Hence, I concluded to focus the synchronous parts of the course, regardless if online or actually in presence, on interaction and social cooperation of the students on the course topics. Implementing the IC concept, I therefore realised the following methods and concepts.

The videos were created by recording my actual lectures while providing annotations using a digitizer pad, more or less identical to my usual routine in the lecture hall. These videos were stored on a video server and integrated in the LMS via H5P (HTML5 package) (Hillenbrand, 2022). By using H5P it is possible to enrich the video with interactive content on chosen time marks without editing the video by itself. On reaching such a time mark, the video is halted, and the execution of an action is required by the viewer to continue. Typically, such an action is realised by posing questions regarding the previous learning contents of the video, possibly as generalised understanding questions, or specific topics, as a form of self-reflection of the learner in the sense of self-assessment and efficiency check. Another possibility are introductory questions regarding the following topic to prepare the viewer for the next part of the video. These activities may be realized as multiple-choice queries, Drag-and-drop assertions, calculation examples or fill-ins, to be processed by the student. H5P and the LMS provide the technical possibilities for creation of the assignments and for feedback to the student after transmission of the results by automatically comparing the given answers with predefined sample answers.

The videos are permanently available to the students and are meant to be viewed in weekly chunks according to the schedule. The timing of viewing the single videos until the next lecture is on free choice by the student. Therefore, the question of how to make the most of the synchronous (online) lectures for all participants arises. In the pure IC concept, the plenary session should be used to ask questions about the prepared topic and answer those questions. But this approach was not as efficient for my students and me, as asking questions about a newly learned topic is pretty hard. So I tried to energize the auditorium by creating interactions. The methods identified and used by me are described in the following, and are linked to the different kinds of learning strategies.

Using the Peer Instruction technique (Mazur, 2017), the students are given comprehension questions during time of attendance, which everyone shall answer by his/her own beforehand, using in my case, a web-based voting system (PINGO[10]). After collecting the votes, the results are presented to the auditory, first without letting go the correct answer by the lecturer. The students then are encouraged to discuss their answers with their peers, if they find someone having a differing opinion, they shall defend their answer, hence trying to convince their peers.

[10] https://pingo.coactum.de/

In case of them failing to convince, or on encounter of contradictions or logical conflicts, erroneous assumptions or misunderstandings are detected and revised. In this interactive process, the learning models Retrieval Practice and Elaboration are triggered, which work towards a deeper understanding and reinforcement of the learning material. Moreover, by going into the heads-on discourse with one's peers, scientific argumentation skills are trained.

This kind of explanation and discussion may be greatly improved by drawing sketches and other means of written or drawn communication. This technique is known as "Dual Coding", meaning passing information on two different communication channels, basically triggering different areas of the brain to deal with the same problem. But students tend not to make use of this advantage. I will now describe how to push them towards using all available methods.

In my experience, students do not readily use a scribble pad or similar to enhance their argumentation by sketches and drawings. This may be due to assumptions of not wanting to clutter their own notes, fear of being ridiculed for their drawing skills or handwriting or even for reasons of not wanting to waste paper. If they do however, their sketches are legible only for the direct neighbours, using pen, fineliner, pencils or similar, and mostly very small. In order to circumvent these problems (shyness to use paper at all and teeny-tiny drawings), whiteboards in DIN A3 size (420 mm times 297 mm) along with whiteboard markers and erasers are given to the student groups (see Figure *1*). The whiteboards shall be used by the students for discussion and generally for solving the questions given. (Reinholz, 2018) Also from my subjective perspective: the students like writing on these boards, may be due to the fact that this is a rarely used medium for most students, hence interesting from the very beginning.

Figure 1: Students sketching and discussion a problem on a whiteboard

I have the habit of "looking over the shoulder" of students while they are working on questions, doing so by wandering from group to group and looking what the respective group is producing. Having the whiteboards as a centralised "workspace" for the individual groups, I can easily gain a quick overview about the actual topic by means of simply looking on the sketches and notes on the boards, identify possible problems and intervene accordingly if appropriate. Intervention here means to ask

questions like “ok, how do I read this drawing?” and follow the line of thought as the students explain, until the suspected problem can be identified, ideally by means of the aforementioned scientific discourse between the students (and moderated by the lecturer). Moreover, by comparing the solutions adopted by the different groups, mutual misassumptions and misunderstandings in the whole cohort can be easily recognized and brought to the attention of the whole group.

This method was initially used by me to pose assignments on specific problems of the subject, such as example problems to be solved using the techniques shown in the presentation. In this context, the use of the whiteboards became a true and instant game changer! Without having been told to do so, the students immediately used the whiteboards as described above, passing thoughts and concepts to their peers, opening a common communication media. On asking, the students described the use of the boards as intuitive and providing good legibility, due to the size of the writing as well as the inherent disciplining of the handwriting. The latter becomes clear, considered that the felt tips of whiteboard markers are rather thick, therefore governing a minimum letter size, and the “writing feeling” is completely different from normal pens and pencils, so everyone has to adapt his / her writing to the unaccustomed feeling. After finishing the problem, selected solutions (either in the sense of “how it is done”, but also interesting errors and misconceptions) may be presented to the plenum by placing the whiteboard beneath a document camera and projecting its content to the screen.

The same approach works in online teaching, although without the same social and haptic experience of the whiteboards, using an online meeting room or a suitable tool which provides a “common digital whiteboard”, such as Miro[11] which can be used analogously, and is accepted by the students as well. But is has to be pointed out that this is a mere surrogate for the actual social experience, as the interaction between the students and the lecturer is much more cumbersome.

Other important learning strategies are “Concrete Examples“, and “Elaboration“. These are addressed by showing actual real-world electrical circuits and physical experiments (see Figure *2*), as well as prior exam questions. These experiments, and readings from multimeters and similar, may also be projected by means of a document camera as described above and therefore be made visible to the whole group in the classroom as well as in an online meeting room. Ideally, the students are able to carry out these experiments by themselves in a hands-on setup, for which in selected sessions of the course the necessary materials (such as breadboards, electronic components and measurement devices) are provided. This approach in hands-on teaching follows the concept described by (Kautz, 2010). Students are led to work on explicitly described conceptually leading questions by deriving their own hypotheses, try to proof these with according experimental setups, and are able to detect flaws or errors in their model by means of real-world experience, thereby improving their working hypothesis incrementally and converging towards the actual correct interpretation.

[11] https://miro.com/de/

Figure 2: Experiment with to balloons on electrostatic force. Students had to gather all relevant data to calculate the electrical charge on the balloons (photo: K. Göne)

To spice up the plenum sessions several times the lecturer changes the location of teaching. For example, activities are pinned to the corridor walls in front of the lecture hall and students are asked to wander around from one activity to the next and solve the given tasks. Or chalk is given to the student teams and problems have to be solved on the pavement in front of the building (see. Figure *3*: Students working on problems during class time in front of the building to spice up the teaching and learning by variations of the location. Those are unexpected activities and release dopamine, which has a positive effect on learning (Oakley & Sejnowski, 2021).

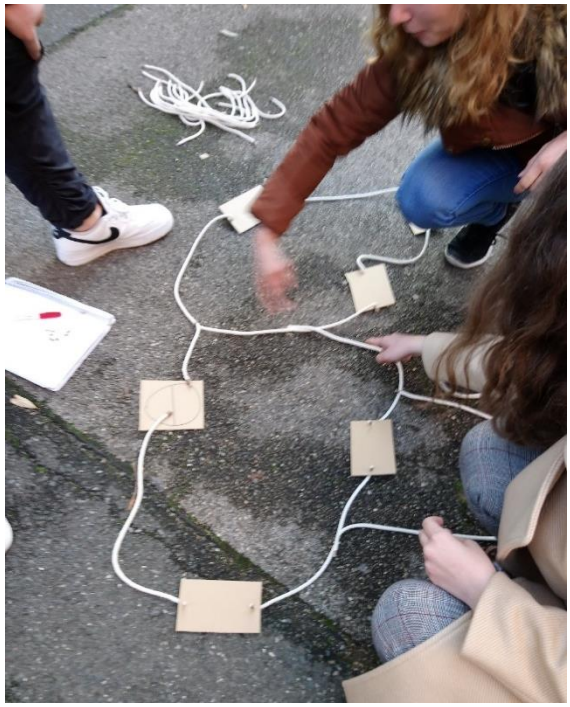

Figure 3: Students working on problems during class time in front of the building to spice up the teaching and learning by variations of the location

One final technical problem remained for the lecturer. Given a student cohort of 80 people participating in the introductory course “Electrical Engineering 101” – how shall all the material needed to realize all those bright concepts be brought to the classroom? 40 Whiteboards, markers, wipers, experiment material sets, breadboards, multimeters, document camera, laptop – including cabling and several power adaptors? This definitively does not fit into the standard professorial attaché case to be transported between classrooms in 15 minutes worth of time between lectures! The solution was to use a device known in German as a “Bollerwagen”, translating roughly as “handcart” and commonly used by kindergarten teachers for transporting toddlers to the playground (Figure *4*). Using this special model having air tires rather than the usual plastic ones, and very low friction bearings, in addition to be extraordinarily lightweight, it is possible to transport all the aforementioned material silently and without much physical effort by the (female) lecturer between the different locations on campus with a single trip. The handcart is placed next to the lecture halls entrance door. On the first session of the course, the students are instructed to take a set of materials consisting of a whiteboard and the associated markers and wipers for their team from the cart, and that they are expected to return the boards after the session again neatly into the cart. A “Bollerwagendienst” (handcart duty) at the end of class takes care that their fellow students put the stuff back into the cart following a scheme to fit everything back in order. So the housekeeping after the lecture is painless, and change of courses in the 15 minutes break is actually possible.

Figure 4: “Bollerwagen” - Soft wheel handcart for carrying the materials (whiteboards, whipes, marker pens, hands on material, microphone etc.) to the lecture hall.

RESULTS

The concept of the videos being disrupted by the H5P interactive questions, had been appreciated by the students. On the one hand, the need for taking notes and filling the gaps during the otherwise passive watching of the videos enhances attention of the viewers, similar to participating in an actual presence lecture, on the other side the H5P activities by themselves prompt the students to think and reflect about the subject of the lecture, which in turn helps in detecting and healing errors in understanding. Especially the possibility to rewind and repeat the video in case of uncertainties, slow writing (e.g. non-native speakers) has been considered as a big advantage by the students during the evaluation.

Following my concept, watching a 180 minute lecture (being 5 to 6 videos) and participating in the synchronous online events constitute the first step of “Spaced Practice” to be carried out by students. The contents of the lecture are processed by the students following their own schedule in advance to the respective presence appointments, therefore the common tendency of procrastination of involvement until immediately before finals is supressed. The engagement with the course syllabus in suitable structured order and pace is controlled by the lecturer by means of encouragement during the (online) appointments, e.g. by placing questions regarding (earlier) topics from the videos during presence time. This helps to overcome flaws of motivation to work on harder topics as the group dynamics encourage to work on such difficult tasks.

By creating an interactive situation, varying in structure and learning atmosphere, along with using the described methods for reinforcement of the course’s topics, the students could be successfully motivated even through the otherwise difficult time of complete Covid-19 lockdown. One particular aspect of the concept was highlighted to be the possibility to interact with one’s peers directly during the lecture and not only after the event, therefore providing direct peer feedback and increased collaboration.

Some quotes from the course evaluation (translated from German):

- “…(the provision of) a multitude of questions and problems, and the opportunity to interact with others to exchange views and discuss”
- “The whiteboards were a real good idea and really helped to communicate with others”
- “...due to the interactive learning concept, the syllabus is more easily accessible than in other modules. Always very good variation available.”
- “...individual help and support”
- “...when one had to solve an assignment in the video. Because one is brought back to track, if concentration failed.”
- “You are super nice and motivate me! This course was among the best I ever had!”

DISCUSSION

Recognising the evidence-based learning strategies standing behind the methods of the teaching concepts presented in seminars, brought me towards using these to fill the time slots freed in the presence schedule by the inverted classroom model. By

interleaving several methods, students profited from a variety of teaching setups, characterized by a high degree of social interaction, which in turn mimics the actual reality in their later professional careers.

As shown by the aforementioned quotes from the evaluation, a considerable part of students is fond of this kind of lectures, even if some had been unaccustomed to this type of education at first. Main critic points have been the prolonged time needed to comply with the requirements and the given problems. Additionally, the different states of progress of the individual students has been perceived as not been addressed properly by giving all students identical problems to solve. It was proposed to create several versions of the assignments to reflect different states of progress among the students, in order to account for neither over- nor underload of learners and to provide individually perceivable success moments for each student.

Verification of the success of the teaching strategy will be achieved by executing a "Concept Inventory Test" for Electrical Engineering, e.g. the DIRECT-Test (Engelhardt & Beichner, 2004). This test aims at detecting actual improvement of knowledge in relation to the status before the lecture as well as compared with other student cohorts. This test will be implemented in future courses.

If common mistakes, such as fundamental misunderstandings or mutual conceptional failures are detected by means of the methods described, these issues should be addressed by suitable changes in the presentation of the respective units by the lecturer. In collecting and evaluating the most common mistakes, it could be noticed, that concepts being recognized as particularly simple from the point of view of the lecturer proved often to be the most difficult ones for the students. Addressing this finding may be done by using the strategy described as "Decoding the Disciplines" (Pace, 2017). Using this strategy, so-called "expert knowledge" which is immanently supposed by the lecturer to be as clearly and readily available for the students as well as for himself and therefore being silently assumed to be not worthy mentioning, can be identified and made transparent. This in turn leads to possible approaches of better structuring of these key concepts for the learners. First outcomes of this process are already integrated in my teaching and will be used for further modifications.

Also, not to be underestimated is the influence of the learning environment, particularly the classroom itself. The big undergraduate lectures, mainly the freshmen primers, usually are held in classical lecture theatres, meaning having seats with folding tables arranged in descending slope towards a blackboard. This arrangement makes collaboration between the participants awkward and cumbersome and restricts the interaction on one's immediate seatmates. Personally, I would like to test the concept also in a big plenary session as typical for fundamental courses, i.e. with about 100 participants, using a (sufficiently big) plain seminar room, which shall be modelled following the "Scale Up Concept" (Beichner, et al., 2007), having "learning islands" to allow the students suitable collaboration or even change of groups to find suitable discussion peers more easily.

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Fostering a sense of belonging through academic-student collaboration to close the HEI awarding gap

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ABSTRACT

In May 2020, the department of Social Care and Social Work realised that, in efforts to meet the needs of black, Asian and minority ethnic students following a spike in global awareness of racial injustice, it did not fully grasp what these needs were. In acknowledgment, the department convened a 'Closing the Gap' conference for students to share university experiences. The outcome was the cocreation of the 'Black, Asian and ethnically diverse student network'. Commencing in November 2021, the network is emerging, shaped by coproduction between students and academics.

DESCRIPTION

This session will raise awareness of the HEI awarding gap, the students most likely to be affected, and how academics and students are collaborating to address it. We will report on the progress of the BA&ED (black, Asian and ethnically diverse) student network, sharing a timeline of events leading to its cocreation from both academic and student perspectives.

The origins of the network relate to the findings of a report which lists several factors, that if addressed may reduce the HEI awarding gap, including fostering a sense of belonging (UUK and NUS, 2019).

In the department of Social Care and Social Work, academics are aware that not all aspects of the programme foster a sense of belonging. The rationale for accessing student opinion is the awareness that a high number of black, male African students often encounter problems on social work placements where covert racism has been suspected, but difficult to prove due to its nature. Research confirms this to be a national occurrence for black students (Soper *et al*, 2016; Bartoli, Kennedy, & Tedam, 2008: 76), the impact of which can be far-reaching in relation to the whole academic experience. Whilst academics were aware of this issue, and motivated to address it, the opinion and input of students were lacking.

Anecdotally we are aware that the above issue occurs in other applied courses such as teaching and nursing, where field placements are a feature of the curriculum. It is intended that by presenting our work to address the inequalities and discrimination witnessed, reported and experienced by students, we will generate participation, interaction, and inspiration, as well as opportunities for us to learn from our cross-faculty counterparts to progress the network.

In a short time, students have attributed a sense of belonging, safety, empowerment, and motivation to being part of the network. This collaboration between students and academics from the department of Social Care and Social Work has made space for discussion, perspective, and growth, and put into action an ongoing plan to nurture, and address the concerns held by both groups for the progression and inclusivity of our academic community.

INTRODUCTION

The Manchester Metropolitan University's (MMU) department of Social Care and Social Work Black, Asian, and ethnically diverse (BA&ED) student network is continuously developing and adapting, whilst always hopeful and aspirational. To capture the inception and development of the network, this article has been structured around the reflective model of Rolfe et al (2001) where the questions '*what?*', '*so what?*' and '*now what?*' will be answered to explain the purpose, and intent of the network. In addition, the model has been developed by also asking the question '*what if?'*, to hopefully bring about a paradigm shift in our understanding of what the network may achieve for all students moving forward.

WHAT?

On 25th May 2020, Derek Chauvin, a white police officer killed George Floyd, a black male, during arrest in Minneapolis, United States (BBC, 2020). The ripple effect resulted in HEIs (Higher Education Institutions) publicly condemning racism and

claims of solidarity with black people. Among them was MMU, resulting in a drive to identify relevant materials relating to black lives for dissemination to students.

This led to a discussion within the department about resources. The dominant theme of most suggested resources featuring the historical and ongoing oppression of black people by white abusers. In response, other academics contended that these materials serve to perpetuate the myth of homogeny amongst BA&ED people and in no way celebrate the nuances between cultures. Moreover, they might only have been useful to white students as their BA&ED peers may be familiar with this aspect of history, as well as the associated distress. In addition to the offerings already made, academics advocated for the inclusion of contributions and achievements by BA&ED scholars and notable figures to balance the department's response and promote wider understanding of diversity.

The department views were a mix of unresponsive (reason unknown), apologetic, and in the main, positive in response. Most unanticipated was the allocation of additional hours for academics to support BA&ED students, with agreement to form a working group to consider student needs; membership of this group was agreed, and ongoing meetings were scheduled. Areas for consideration were amongst others, accessing BA&ED student experiences at MMU, and the concept of '*decolonising the curriculum'* as this was the newly mandated approach to academia.

The rationale for accessing student opinion is our awareness that a high number of black, male African students often do not attain the same, higher degree levels as their white counterparts, and encounter problems on social work placements where covert racism has been suspected, but difficult to prove due to its nature (Bartoli, Kennedy, & Tedam, 2008: 76). Whilst this issue was apparent to academics in the department, the viewpoint of BA&ED students was unknown in relation to the taught and applied elements of the program.

At the time, the term '*decolonising the curriculum'* was in frequent use and clarification of its meaning was necessary. What we had expected, in researching this term, was to bolster our argument for pursuing its application. In actuality, we have realised the process is more complex, and in our opinion the use of the strapline '*decolonising the curriculum'* in the context of improving the university experience of BA&ED students seemed superficial and distracting as Primrose, a founding member of the network, explains:

> *"I am incredibly grateful for the opportunity of being a Social Work student at MMU and being able to chase my passion. It is exciting and thought-provoking to learn about various aspects of society, although learning about social inequalities can be emotionally challenging, especially since I am not excluded from the social deprivations and discrimination as a Black African student. Manchester is a diverse city and I have met the most incredible people, and some who have become family. However, being a Black student can be quite challenging in a predominantly white society. One is faced with personal and structural barriers to learning, such as financial strains, poverty, language, lack of role models,* [not having] *a sense of belonging, and racism. I recognise*

that another barrier is a cultural difference, which leaves me often feeling homesick and, somehow isolated. From my observations and being an 'expert with lived experience' of racism in life, and as a Black Social Work student, I do recognise that my opinions may not depict the experiences of all BA&ED students as we are not a homogenous group."

The experiences described by Primrose led us to reconsider the seemingly altruistic intent of '*decolonising the curriculum'*; causing us to wonder if this latest trend in UK academia was a smokescreen, diverting attention from the real issues of racism and racial inequality within UK universities. Afterall, there are specific examples of exclusion that do not relate to the curriculum as explained by Primrose:

"Universities need not assume that every student understands every English accent, hence there is a need for educators to try and make their English more accessible, especially during lectures. I remember having challenges to understand certain lecturers when they were speaking, and I would not grasp anything to an extent that I failed to contribute to the class as they were too fast to understand. I think to benefit every learner, there is a need for lecturers to slow down when teaching avoiding the use of inside jokes and idioms".

Though the notion of *'decolonising the curriculum'* seems sound, the terminology is confusing and insensitive to students and academics alike. To speak of decolonising anything in 'Great Britain' without acknowledgement of colonialism and its legacy, is to sidestep significant factors in the fabric of HE and the current charge of racism in academia and wider society. Complaints of racism and factors resulting in the '*BAME attainment gap'*, henceforth referred to as the '*awarding gap'* (OfS, 2020a), were issues for HE long before George Floyd's murder. Whilst '*decolonising the curriculum'* is easy to say, we realised that implementation might be more difficult (Dhillon, 2020). As an institution MMU embraced the '*decolonising the curriculum'* agenda to address inequalities affecting BA&ED students however, conversations with some academics indicated not all were aware of how to action it. Given that a targeted outcome of decolonising curriculums is to create a sense of belonging amongst BA&ED students (University of Birmingham, 2021; Moncrieffe, 2019), this was not going to happen without student consultation, participation, and collaboration.

SO WHAT?

After analysing the HE experience of BA&ED students, it is evident that racism exists in UK academia in the form of offensive language including those racial slurs used in reference to black and brown skin, directed at students from peers, academics, and representatives of the Student's Union (NUS, 2011; Equality and Human Rights Commission, 2019). Certain academics have reportedly promoted white supremacy in their institutions (Baynes, 2018) and there are reports of research promoting racist '*pseudo-science*' (Scripps, 2019).

Juxtaposed against the above findings are the Conservative government's 2015-2017 targets for Widening Participation (WP), one of which included a twenty percent increase in the number of '*BME*' (Black and Minority Ethnic) students entering HE by 2020 (Connell-Smith & Hubble, 2018). WP relates to multi-agency initiatives to develop inclusive learning environments and encourage enrolment of students from diverse and / or disadvantage backgrounds, without which, they might not consider attending university (HE Academy, 2005).

Potential students from BA&ED communities are a target group of WP, and alongside the reported overt racism in HEIs is the awarding gap. This refers to '*BAME*' students being 13 percent less likely on average, to attain degrees with '*good honours'* than white students (UUK and NUS, 2019).

This matters because BA&ED students appear to be at a double risk of disadvantage because of their ethnicity once they enrol and we questioned whether it was even possible for HEIs to equip academics to provide and foster an environment in which BA&ED students feel they can belong and achieve. This is especially poignant in relation to applied courses where the occurrence and impact of structural and institutional racism persists in remote learning spaces, as Primrose explains:

> *"When experiencing racism, what crushes you down is the way society perceives and treats you. Racism does not have to be extreme; I mean, at universities, and on placements why should Black students work harder than their white counterparts? Why should they prove their existence and capability when other people need not? Whilst Baynes (2018) argues that certain scholars have been catalysts to perpetuating white supremacy in their institutions, agencies where students are placed for practice learning may also perpetuate the beliefs that underpin white supremacy, through belittling and devaluing BA&ED students. In my experience, this includes some On-Site Supervisors and Practice Educators favouring white students by availing greater learning opportunities for them and not supporting BA&ED students in the same way. BA&ED students are at risk of developing inferiority complexes and believing that they are less intelligent due to the stereotypes and assumptions made by the dominant discourse. What we need to understand is that the consequences suffered by BA&ED students are varied and detrimental to their wellbeing. These can include the development of mental health problems, low self-esteem, self-doubt, and deprivation in education. Regarding deprivation in education, Bunce, et al, (2019) assert that British university students from BA&ED backgrounds are less likely to achieve a 'good' degree compared to white students and also face being labelled as less honest, intellectual, and capable due to their accents, and the common biases constructed by those who deem themselves to be superior. I would like to believe that English as a universal language is another "machinery of white supremacy", perpetuating racism."*

Primrose's perspective, whilst not claiming to be representative of all BA&ED students, is not singular either, as evidenced by the feedback received during our '*Closing the gap'* student conference held in September 2021. The conference gave academics direct exposure to student perspectives, that is, not always feeling that they belonged whilst maintaining high aspirations and expectation of themselves. It became clear to academics, that any intentions to effect change in accordance with MMU's '*decolonising the curriculum*' agenda would be futile without collaboration with students. Additionally, if fostering a sense of belonging was our aim, it was essential to know what this would look like. According to Walker and Avant (2011), there are four key attributes of belonging 1. Positive emotions 2. Students maintaining positive relationships with each other and academics 3. Students demonstrating commitment, motivation, and enthusiasm within a group and 4. Accordance or congruence; alignment. The starting point, with student consultation, was the decision to create a network for Black, Asian, and ethnically diverse students.

NOW WHAT?

The first network meeting was in December 2021 during which ground rules and terms of reference were agreed. These included naming the network, an agreement of co-production, booking guest speakers, and periodic open sessions to avoid an echo chamber effect and to allow white students to attend in order to learn and benefit from our knowledge and experience. The network meets monthly online and is open to all BA&ED Social Care and Social Work students across all MMU courses and cohorts.

The network is in its early stages so is ever evolving but the principal justification of fostering a sense of belonging remains central. It is a channel for the voice of BA&ED students, an eloquent voice that is sometimes distorted or unheard amongst the mainstream noise of academia. We know that the network is serving its intended purpose, evidenced in Primrose's reflections:

> *"Racism needs to be tackled head-on, at all levels. This can be achieved by universities co-producing support networks for BA&ED students which will accord them a safe space to share their challenges, support each other and enhance a sense of belonging. Such spaces should foster empowerment, and confidence to challenge racism. For example, our BA&ED student network is where we share our experiences, challenges and offer each other emotional support. When others shared their experiences or challenges, I felt empowered to speak out about my struggles too. It also motivated me to be vocal about and challenge the injustices I faced during my early days on placement as well as the systems perpetuating discrimination".*

Primrose's words perfectly reflect the safe space afforded by the network and also the opportunity to discuss experiences of racism and to challenge discrimination. In addition, the network has also become a proactive and creative space. To relentlessly share negative experiences without redress would not be conducive to belonging or

inclusivity. We listen to each other and seek to address the issues collaboratively. One such example is our ongoing project to create an anti-racist electronic placement resource. The project commenced after listening to black African students share accounts of their placement, some of which included acts of racism, but also positive experiences of allyship, therefore the network has not only created a safe space to speak openly about negative experiences, but also about positive ones encountered with educators and peers, as recalled by Primrose:

> *It is important to acknowledge that BA&ED students have also had positive experiences with Practice Educators who have been proactive in supporting them and valuing diversity. It is also important to encourage white students to be 'white allies' with BA&ED students if they are deeply committed to equality, diversity, and anti-racist practice. I found having a white ally on placement beneficial as we supported each other throughout the placement*

As such, this project is an ongoing collaboration between academics and BA1, BA2 and BA3 social work students from black African and white British ethnicities. The white British student was invited to collaborate on the project because of her interest in the aim of the network and regular attendance at the open sessions. The intention is to co-create and share the resource with students and placement agencies before fieldwork begins in order to promote anti-racism and smooth the path for BA&ED students. The inception of the project stems from suggestions made by BA&ED students, as summarised by Primrose:

> *"Continuous conversations and training need to be held with white students, On-Site-Supervisors as well as Practice Educators about linguistic diversity, cultural competence, and anti-racist practice. Holding such conversations and training will educate about ethnicity related biases that affect BA&ED students emotionally, mentally, and academically."*

The network is fertile ground for new learning and a platform for BA&ED students to be confident that their own perspectives and experiences are a valid form of knowledge. This aligns with findings of university academics Soper *et al* (2016) who write '*we were discovering what our wider staff group needed to learn so that black students could trust their own perspectives and value their own experiences*'.

An unexpected occurrence as the months have passed is current members of the network, soon to be alumni, expressing their desire to remain involved following graduation. According to Tulankar *et al* (2020) universities are keen to maintain alumni networks for various reasons including financial, reputation and knowledge sharing. Seemingly through the network, we have strengthened links with our soon to be alumni, transcending a sense of belonging to a perception of collective ownership of something that students are unwilling to relinquish simply because they are graduating.

WHAT IF?

In asking '*what if?*' we are considering the student and academic HE experiences through a lens that up until now was obscured. What if initiatives like the BA&ED network developed sufficiently to foster a sense of belonging for all students? What if all our BA&ED students developed a justified sense of entitlement and expectation about their academic journey? What if our projects and resources reduced or even obliterated all forms of racism on-campus and in fieldwork? What if academics started listening to students with a commitment to adapt, change and improve in response? Primrose provides some possible answers:

> "*Assuming that equal opportunities are given to BA&ED students, a reduction in mental health challenges may be achieved, hence enhancing their wellbeing. Through fostering a sense of belonging by interacting in support networks,* [this] *may enhance individuals to be empowered to speak out and challenge oppressive systems as well as improve their self-worth and confidence. It is possible that if Institutions become inclusive and tackle racism, BA&ED students can reach their full potential. I believe it would be easy to identify talents and use their skills to better communities. Finally, if all challenges are addressed effectively, BA&ED students can enjoy placements and achieve better grades, hence a reduction in the awarding gap".*

Prior to the network, Primrose's observations might have been perceived as trite or rhetoric but now, not so. We know the network has positively influenced all attendees and we are committed to maintain and build on our achievements.

CONCLUSION

Evaluating the purpose of the BA&ED network against the four attributes that define a sense of belonging as posited by Walker and Avant (2011) above, it is evident that we have generated positive emotions, to quote Primrose, in the form of students 'feeling *empowered, motivated and confident*'. Regular meetings between students and academics have created a synergy and positive relationship dynamic distinct from what was before. Coproduction has resulted in us approaching each other more openly and honestly allowing for difficult topics to be discussed rather than difficult conversations to be had, and for celebration and creative collaboration. Students make time to regularly attend the network meetings even whilst on placement or studying for exams, and as mentioned, have stated their commitment to the network post-graduation, demonstrating their willingness to remain involved. We continually adapt and adjust as our collaboration continues. Our various ethnic backgrounds do not genetically predispose us as experts on our ancestry, and we continue to educate ourselves and learn from each other. From an academic perspective, we apply our learning from the students to our wider roles within academia for the benefit of all

students and staff. The sense of collective ownership, underpinned by community and belonging, comes with a need for regular maintenance and nurturing of the network to ensure the longevity of what we have created.

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Can the Covid-19 pandemic move mountains? An opportunity for redesigning learning assessment in higher education

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ABSTRACT

Learning assessment in higher education has always been an educational issue very resistant to change that concerns a large number of teachers. The COVID-19 pandemic and subsequent need to teach remotely created even more challenges for teachers (García-Peñalvo, 2020).

This communication shares the progress made in an ongoing investigation on "Teacher training for the assessment of learning in the context of remote education".

The project aims to characterise remote learning assessment activities designed by teachers of a health sciences University in the context of a teacher training programme on this topic.

It is a descriptive-interpretative study with a qualitative approach. A first phase analysed and systematised 51 assessments planned in a first training workshop. It resulted in the development of a guide that comprehensively structures different aspects that should be considered when designing a learning assessment activity (Schwartzman et al., 2021).

In a second phase, this teaching tool is being revised and adjusted through its iterative use in new teacher training workshops. 50 new assessment activities were designed in this context. Results show teachers mostly choose to carry out *assessment of learning* (Barbera, 2016) through written tasks where students are asked to analyse cases, solve exercises or questionnaires. These intend to assess students' competencies when analysing or developing professional practices. They specially value knowledge integration and solid conceptual foundations. In addition, they choose asynchronous assessments, developed through online collaborative documents. Teacher's interventions are planned for the beginning and end of the process with the purpose of explaining the task and giving feedback. Finally, an inclination to carry out such communications via forum or videoconference meetings was observed.

We consider this guide to be a tool that favours the transfer of what teachers learn during training (Feixas et al., 2013) to their remote teaching practice. We wish to offer this tool to the Sotl community and discuss ways in which *assessments for learning* and *as learning* experiences (Barbera, 2006) can be promoted to further academic perspective of teaching and learning. We are also interested in exploring its potential for the design of hybrid assessment activities post-pandemic.

COMPLETE TEXT

The assessment of learning in higher education is a matter of concern for a large number of faculties. The covid-19 pandemic and subsequent need to teach remotely created even more challenges for teachers (García-Peñalvo, 2020).

What do we know about learning assessments? What are the usual practices developed at university level and what has emerged in times of remote teaching? We understand that assessment is part of the didactic process, it involves teaching and learning (Camilloni, Litwin and Palou de Maté, 1998). It supposes that students become aware of their learning and that teachers interpret what these constructions imply for teaching. From a multidimensional perspective, we can identify four dimensions: assessment of learning that accredits to society the acquisition of competences by students; assessment for learning based on feedback and dialogue between students and teachers to allow for progress in the knowledge construction process; assessment as learning that considers learning as part of the same assessment dynamic; and assessment from learning where prior knowledge is diagnosed to anchor teaching (Barbera, 2006).

The study of background information on learning assessment in virtual environments shows that the main focuses of research (and publication) are on the instruments

developed (e-portfolio, questionnaires, etc.), the use of resource banks to make the administration of exams more efficient, and what happens with the information search processes. A vacancy is observed in key issues such as valuation for decision-making and communication with students in the assessment process. We also found that at university level, learning assessment is one of the most conservative processes, and even more so in online education. This is largely due to its strong association with one of its functions: the accreditation of learning. Also, fear of losing control over students' identity and actually measuring their knowledge (as opposed to their ability to copy paste) are common apprehensions amongst faculty (García-Peñalvo, 2020; Harper, Bretag and Rundle, 2020). During the pandemic context, this was reinforced by institutions concerned with ensuring control systems for test-taking and a growing market for proctoring-based assessment apps (Schwartzman and Tarasow, 2021). However, this context also generated new educational practices to respond to the emergency, as reported in various publications (Schwartzman et al 2021, García Peñalvo, 2020; Condori Gutiérrez, 2020; Fardoun, 2020).

In relation to the particularities of health professionals' education, it is worth mentioning a study carried out by Schwartzman et al (2019) where concerns about assessments carried out by professors in this field during a teacher training programme were surveyed. This study showed teachers' initial concerns on the topic were associated with test objectivity and marking and that the main instruments for recognising mastery of declarative knowledge were multiple-choice tests or oral exams. As training progresses, their questions and interests change, and four new issues emerge: 1- the reflection of teachers on appropriate assessment instruments to recognise and accredit learning; 2- the development of assessment programmes with multiple instruments consistent with the didactic planning; 3- a critical review of the functions and purposes of assessing together with the intention of providing constructive feedback in exams to create new learning instances for students; 4- reflection on feedback as a key process associated with performance assessment of professionals in the clinical-healthcare contexts.

In other recent publications of the medical education field during isolation due to the COVID-19 pandemic, predictions on the challenges of remote assessment are made and concerns about fraud or low student motivation are pointed out as issues to be further investigated (ParkJiao and Lissitz, 2020). Also, the need to collect evidences of learning from the activities and interactions taking place in the digital learning environments is seen as a new potential (DiCerbo, 2020) and advice is shared on implementing open-book remote exams in order to ensure the validity, reliability and fairness of learning assessment of health professionals.

In response to faculty's needs in this context, universities displayed a range of pedagogical training courses to support teams which, in many cases, did not have training in online teaching. In this sense, the closure of university buildings due to social distancing created a favourable context for teachers to seek new solutions to academic problems and to resort to training programmes as a strategy to support this process. From the SOTL perspective, these programmes should transcend a decontextualised training in the use of technological tools (Rapanta et al, 2020) and prioritise a comprehensive approach that bolsters teachers to develop assessment practices using grounded theory.

This communication shares the progress made in an ongoing investigation on "Teacher training for the assessment of learning in the context of remote education". Its main objective is to characterise remote learning assessment activities designed by teachers of a health sciences university in the context of a teacher training programme on this topic. This descriptive-interpretative study analysed the designs that teachers published in a Moodle database during a one-week workshop on learning assessment. The data fields that organised the design and presentation of the assessment activities were: purpose of the assessment, nature of the knowledge to be assessed, assessment instrument(s), intended teacher interventions, and criteria for assessing student performance. As can be inferred, these proposals were supported, to some extent, by the didactic knowledge imparted throughout the workshop.

In order to analyse these productions, a matrix was constructed with the aim of identifying and categorising central features of the designs. In other words, teachers' responses were analysed as a whole and within each of the data fields. This analysis allowed us to identify the prevalence of some features of the activities planned. As a result of this first stage, a guide for designing remote learning assessment was produced. This guide comprehensively structures aspects to be considered by teachers when planning assessment activities (Schwartzman et al., 2021).

The guide is being revised and adjusted through its iterative use in new teacher training workshops. In this communication, we present a new advance of this research in which we analyse the use of this tool in 40 teacher productions.

The following table synthetically shows the decisions made by teachers using the guide in the context of training. The colours show the degree of use of each proposed dimension. The higher the frequency of the dimensions, the greater colour intensity.

Guide for descision making when designing a remote learning assessment activity in the field of health sciences							
Below you will find a series of dimensions to consider in the design of your remote learning assesment activity. For each of them, you will see items suggesting the main decisions to consider when planning. Please tick the box(es) that best reflect what you intend to promote with this activity. Please note that the fields are not exclusive and you may include other options not covered in this guide.							
On the purposes of evaluation							
☐	Assessment of learning			☐	Assessment as learning		
☐	Assessment for learning			☐	Assessment from learning		
On the assessment guidelines							
1. Type of activity:							
☐	Case study	☐	Problem solving	☐	Exercise solving		
☐	Questionnaire resolution	☐	Report elaboration	☐	Monograph		
☐	Oral presentation	☐	Skill demonstration	☐	Graphic or audiovisual production		
☐	Other: _____						
2. Practices involved:							
☐	Reading	☐	Speaking	☐	Writing	☐	Audiovisual demonstration
3. Knowledge involved:							
☐	Declarative Knowledge			☐	Analysis of an academic/professional practice		
☐	Production of an academic practice			☐	Production of a professional practice		
4. Assessment criteria (of students' productions):							
☐	Integration	☐	Synthesis of ideas	☐	Hierarchisation of ideas		
☐	Conceptual background	☐	Identification / Exemplification of concepts	☐	Situation analysis		
☐	Critical bibliographic search	☐	Conceptual problematisation	☐	Use of disciplinary language		
☐	Clear wording and presentation of ideas	☐	Expected format and submission deadline	☐	Other: _____		
On the evaluation procedure							
1. Time management:							
☐	Synchronous			☐	Asynchronous		
2. Grouping:							
☐	Individual	☐	Small group	☐	Whole-class		
3. Digital tool used:							
☐	Video conferencing system	☐	Online collaborative document	☐	Online form/ questionnaire	☐	Video
☐	Forum	☐	Virtual simulator	☐	Digital document	☐	Other: _____
On teacher intervention							
1. Moment:							
☐	Beginning of the process	☐	During the process	☐	End of the process		
2. Communication channels:							
☐	E-mail			☐	Forum		
☐	Videoconference meeting			☐	Comments in collaborative document		
3. Purpose:							
☐	Introduce / explain the activity and guidelines	☐	Moderate a group discussion	☐	Ask challenging questions		
☐	Clarify concepts	☐	Address doubts	☐	Give feedback		
☐	Scaffold the assessment process			☐	Suggest additional sources of information		
4. Addresses:							
☐	Each student	☐	Small group	☐	Whole-class		

Table 1. Graphical representation of the frequency of choice of each category

As can be seen, decisions within each dimension are not mutually exclusive. On the contrary, an assessment proposal can combine several possibilities that complement each other. Thus, we find that teachers mostly choose to carry out assessment of learning (Barbera, 2016) to accredit knowledge and determine if students pass (or fail) their subjects. Some activities that include feedback to promote the construction

of knowledge throughout the assessment process can also be observed. We also recognise that these activities involve written tasks and/or oral instances in which students must analyse cases, solve exercises or questionnaires. We mostly observed activities that place special value on students' ability to use a solid conceptual basis when producing professional practices or analysing these professional or academic practices. These are assessments that demonstrate learning linked to medical-healthcare and academic activity. We infer here that an effort to keep teaching and assessing the learning of contents closely linked to professional practice, through situated learning activities. Furthermore, they prioritise asynchronous assessment, developed through online collaborative documents, followed by synchronous proposals using videoconferencing tools for oral assessments. Although these are mostly individual assessments, it is interesting to note that, in second place, small group activities focused on asynchronous collaborative productions are designed.

As noted in a previous work (Schwartzman et al, 2021), the literature and research does not analyse what teachers do throughout the assessment process, except in articles that problematise the use (and abuse) of power in test-taking or publications that prescribe how to give feedback. In this study, the analysis of the productions allowed us to construct categories to reflect upon teacher intervention. As can be seen in Table 1, teachers plan to intervene at the "extremes" (Carlino, 2013), i.e. at the beginning (mainly to introduce the activity and give guidelines) and at the end of the process (with the aim of giving feedback). It is interesting to note that they also plan to intervene during the evaluation process, either to address doubts or to guide the resolution of the task. They are inclined to carry out such communications via forum or videoconference meetings, either to each student individually, to groups (when the assessment activity was designed in this way) and even to the whole class to give global feedback on frequent errors and collective achievements.

As can be seen, we find that the Guide is a fruitful resource for assessment planning. It offers diverse options, allows for the combination of alternatives and guides the decision-making process. For those of us supporting faculty through training workshops, the degree of use of the items in each dimension offers great insight and challenges us to continue training our academic community to consider aspects not initially foreseen that are valuable and constructive for student's learning.

We hope that the use of this Guide will favour the transfer of what has been learned in teacher training workshops (Feixas et al., 2013) to remote educational practice and promote assessment processes for and as learning (Barbera, 2006) that foster an academic perspective of students' education. We place this guide and the results of this research at the disposal of other universities and colleagues who intend to work on assessment processes from an academic perspective. Going forward, we are interested in exploring the extent to which it can transcend the current scenario to identify potentialities in post-pandemic hybrid education.

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Hybrid teaching: new challenges for university teachers

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ABSTRACT

University teachers' role has been profoundly challenged due to the forced virtualisation of academic activity during COVID-19 pandemic. Online education has specific characteristics and requires appropriate teacher training. It is important we explore what strategies and competences are required from teachers in remote or virtual academic programmes.

This communication presents the first results of an ongoing research project that seeks to identify and characterise the main spheres of action and teaching intervention strategies in virtualized higher education. It is a descriptive-interpretative qualitative study that analyses data produced in the context of a teacher training programme in a health sciences University. Six editions of a virtual workshop were held with the participation of 183 teachers. It promoted exchange and the strengthening of the academic community through group activities where teachers used conceptualisations from the pedagogical field to analyse problems related to everyday scenes of virtualized university life. As a result, 143 intervention strategies were designed. These were categorised in a data matrix which was then analysed using pedagogical theory on online teaching (García Aretio, 2020; Gros et al. 2011). The subsequent systematisation of the interventions designed resulted in the construction of three spheres of action in virtual teaching: 1- organising the course and tasks (for example, communicating timetables, activities and assessment; providing guidance on virtual work guidelines and digital tools used), 2- monitoring students progress (observing, supervising individual and group participation; carrying out administrative tasks, among others) and 3- guiding learning (preparing teaching materials, designing activities, moderating student exchange, systematising collective productions, answering queries, offering feedback, etc.).

The intervention strategies identified and the spheres of action that group them can contribute to the development of criteria, based on an academic perspective, that guides good virtual teaching practices in higher education, strengthens student learning and provides a key for teacher training programmes during forced virtualisation.

These spheres of action built within the academic community of our university can be enriched through dialogue with colleagues from the Sotl community who will surely have plenty to say regarding the teachers' role in their universities.

HYBRID TEACHING: NEW CHALLENGES FOR UNIVERSITY TEACHERS

The university teaching role has been profoundly challenged by the forced virtualisation resulting from the COVID-19 pandemic. Given that online education is a modality with specific characteristics and requires appropriate teacher training, it is worth reflecting on the teaching competences and strategies necesary for online education.

It is a widely recognised need to train faculty staff in the particularities of online teaching (Carrera and Coiduras, 2012; Hall, Atkins and Fraser, 2014; Krumsvik, 2012). The academic background on the topic mostly shows studies focused on describing and characterising digital teaching competences (Castañeda, L.; Esteve, F. and Adell, J. 2018) from different frameworks but with a common denominator, a focus on: action in the classroom, the use of digital technologies and the autonomous resolution of technical problems. Reflecting these types of approaches are the definitions of digital teaching competences (Castañeda, L.; Esteve, F. and Adell, J. 2018) or ICT skills in Higher Education (Gutiérrez Porlán, 2014) as abilities and attitudes requiered to adequately use technologies for building knowledge through the search, access, organisation and use of information.

However, this communication intends to address good university teaching (Fenstermacher, 1989) in broader terms, trying to go beyond the dimension of technical competences to focus on teaching commitments (García Aretio, 2020) and on the teaching practice as a complex and context-situated activity (Schwartzman, Berk & Reboiras, 2021; Schwartzman et al, 2019). García Aretio (2020) argues that commitments are obligations undertaken in teaching that result in knowledge, competences, tasks, etc., which can suggest action guidelines for good teachers. This perspective is necessary especially if we take into account that teaching with digital technologies confronts the faculty with new challenges that require less instrumental and more comprehensive approaches to collectively reconstruct the teaching role in online education (Schwartzman, Berk & Reboiras, 2021; Rapanta et al, 2020). In this sense, recognizing the importance of sustaining the pedagogical relationship with students and between students is essential. To this effect planning teaching intervention strategies was considered central, needing to review their purpose, moments and digital spaces in which to develop them, as well as monitoring the learning process and developing didactic designs and interventions that foster knowledge construction and peer learning (Sanchez et al, 2020; Schwartzman, 2009).

Taking this theoretical framework as a reference, we present the first results of ongoing research that seeks to identify and characterise the main spheres of action and teaching intervention strategies in virtualised university education. As a consequence of the covid-19 pandemic this has become increasingly relevant. It is no longer possible to recognise oneself exclusively as a teacher of face-to-face or online education, teaching is becoming a hybrid activity. Those of us who teach must alternate between modalities and combine them, understanding the specificity of teaching and learning in each one and, at the same time, upholding pedagogical principles when planning. Nevertheless, as will be explored in this communication, a large part of the characterisation of the teaching role is not exclusive to virtual or face-to-face education, but refers to both modalities.

This is a descriptive-interpretative qualitative study which is contextualised in a teacher training programme in a Health Sciences University. In this context, seven editions of a synchronous virtual workshop were held through a videoconference platform, with the participation of 212 teachers.

This workshop was structured in 4 segments:

1. Theoretical presentation and dialogue on the role of teaching in the virtual world.
2. Small group analysis of everyday scenes of virtualised university life during the pandemic. Each problematic scene is captured in a vignette written specifically for this workshop. They involved a training scenario (undergraduate, postgraduate, hospital residencies) and a specific teaching situation such as the start of a virtual course or difficulties concerning the learning activity planned. Each group had 20 minutes to analyse two problematic scenes based on the following guiding questions: How and for what purpose would they (as teachers) intervene? With whom would they communicate? By what means would they do it? Each group captured their interventions in a collaborative online slide presentation.
3. A plenary session to share the conclusions of the work in small groups. This moment allowed them to continue exchanging and adding strategies that had not been contemplated in order to enrich the possible interventions with the collective view of the teaching community. In this instance, 162 intervention strategies were designed.
4. Synthesis and recapitulation by the teachers in charge of the workshop.

This research team systematised the productions elaborated in the second moment of the workshop by building an integrated matrix and categorising the data. In line with pedagogical theories on online teaching (García Aretio, 2020; Gros et al. 2011), the analysis and systematisation of the interventions resulted in three spheres of virtual teaching actions: 1- organising the course and tasks, 2- monitoring students and 3- guiding learning.

Organising the course and the task

The first sphere refers to those teaching actions aimed at providing support for students enabling them to adequately traverse the experience of studying online. Here we find two types of interventions according to the moment of execution.

Firstly, we find the actions prior to the class, which involve communicating rules and work guidelines, the syllabus and agenda with important dates. They also identify the need to present how the platform works and the digital tools that will be used. They also recognise the need to set aside time and spaces for the presentation of teachers and students.

Secondly, we found teaching strategies related to offering help in organising tasks during the class: indicating deadlines and ways of handing in activities, reinforcing assessment criteria, communicating which activities are compulsory and optional or which digital resources or bibliography they have to use, etc. In regard to this, we can also highlight that participants recognise the need to plan the delivery of reminder messages, review the clarity of the communication and select the most appropriate channel depending on what they need to communicate and who the recipients are (private message, to all through a forum, mail, etc.). In some cases,

depending on how the learning process is progressing, teachers suggest that extending deadlines for activities and communicating them in a timely manner could be necessary.

Monitoring students

This second sphere of teaching action in virtual scenarios refers to those tasks linked to sustaining the pedagogical bond, supporting and understanding each student's process, anticipating difficulties and the need for guidance.

In this sphere we find interventions that recognise the importance of distinguishing between group and individual monitoring strategies. On the one hand, there are strategies that seek to anticipate possible problems. For this, participants propose to consider other activities regarding university life that students could be simultaneously immersed in; for example: proximity of exams or relevant deadlines in other subjects. It would be helpful in these cases to consider extra time and space for consultations. This last aspect is also considered an important teaching action in the third sphere linked to guiding learning. On the other hand, strategies linked to delays or lack of completion of activities by students were proposed. To this end, they suggest: inquiring about personal or group situations that could affect or condition the delay in delivering an activity, extending deadlines (and communicating them), reviewing the clarity of task instructions and the difficulties that may arise with the content.

Two aspects that appeared with less strength in the planned teaching interventions are: 1) regularly access the platform and digital resources used to check whether students are logging in and participating in forums or spaces for exchange; and 2) consider the most convenient moments and channels for intervention avoiding delays in responses to queries and providing timely guidance. Another action not considered by the teachers is related to reviewing the purpose of using forums: are they using this space to exchange ideas or is it just a bulletin board?

Guiding learning

The third sphere identifies actions aimed at guiding the learning process, recognising tasks linked to scaffolding the processes of knowledge construction which, online, takes on specific forms related to different ways of communicating in this environment. Teachers identify actions related to reviewing their practices. For example, evaluating the need to redesign a teaching strategy if low participation is detected. In this sense, they recognised that it is important to strengthen participation, whether in group discussions or in individual instances. This can be achieved by using students' contributions and asking challenging questions that allow them to dig deeper into the topic at hand and offer new aspects for reflection. They highlight the value of providing complementary resources and reading materials that allow students to delve deeper into what they are working on according to their interests.

Finally, an aspect not mentioned but which is important to highlight is the importance of coordinating actions with other teachers (either within the course or other related courses). In order to establish links and not overload the course, it is useful to

generate and maintain agreements regarding the content and learning objectives, as well as being aware of what is being taught simultaneously in other subjects.

Reflections based on the productions in the training workshop.

Many of the actions described are not limited exclusively to one of the three spheres presented, because in a particular intervention teachers may be attending to several of them. In the same way, some transversal aspects are observed throughout the spheres. These include:

- Anticipating, analysing and selecting both the channel and the moments of communication with their students. It is not a process that should be left to the incidental, but rather needs to consider beforehand and establish criteria related to the questions formulated in the workshop: when, how, for what purpose and with whom to establish this communication.
- Maintain a certain flexibility with regard to the decisions taken based on a continuous and careful analysis of students' participation, the task, the tool and the context (Rapanta, 2020). It is necessary both to maintain fluid communication and to make new decisions in order to adapt teaching to the needs that students may express at different moments of the process.
- Building an active role regarding communication. It is no longer a question of waiting for the student to contact the teacher or ask questions from any of the three spheres, but of teachers initiating and actively maintaining a constant exchange.
- Remote teaching requires us to navigate in an online environment which has its own logic and dynamics. It is part of the teacher's task to understand it in order to socialise and guide students along the way. This includes guiding on the use of digital tools, sharing guidelines for work and coexistence within the platform, as well as motivating the group so that they can explore and navigate this space in the best possible way.

As can be seen, the results concerning knowledge and competences can be useful for both face-to-face and online teachers. An example of this can be seen in regard to planning. As a central function of the teaching role in any modality, this action cuts across the three spheres mentioned above. It involves anticipating how to support and guide the course, how to carry out genuine monitoring to observe students' progress and thus be able to be strategic when it comes to making interventions to guide learning. However, those who teach in virtual environments and need to integrate digital technology into educational processes assume commitments and competences that are specific to this modality (García Aretio, 2020). This involves integrating what teachers know about the subject they wish to teach, the most appropriate pedagogical strategies for the institutional context and their students, the most appropriate digital technology for this purpose, as well as an interest in investigating and reflecting on their teaching practice and the inclusion of technologies with a pedagogical sense.

Thus far, we have analysed the productions made by the workshop participants. However, based on the research team's experience in the field of online education and the literature surveyed, we have identified certain gaps that either didn't appear

due to the workshop's strategy or the teachers did not consider them as part of their action repertoires.

The data shows the importance of planning how to establish and maintain bonds, especially when classes are suspended and the only contact with students is mediated by digital technologies. But they fail to envisage a wider range of necessary interventions. An example of this is teacher's posts in forums, which also need to be planned taking into account that this is a privileged space for online peer-to-peer exchange and learning (Schwartzman, 2009). This entails using the written word in a way that "communicates what we want to communicate", that enables construction, that does not involve piling up messages (one posted under the other with no dialogue or connections being made with each other). In this sense, it is important to develop a teaching strategy that promotes peer-to-peer learning and seeks to develop communication skills through writing. It is also central to ask ourselves about the value of the tasks and activities designed to take place in these spaces of exchange: how do we write clearly what we want to say? how do we pick up what others have said in order to build on it? how do we put into play sensations, feelings, values through this mode of communication? how do we consider the metacommunication aspects?

These gaps identified here lead us to think about whether it is necessary to improve the teacher training device designed, or to offer a second, more in-depth workshop so that teachers can also recognise and value these questions.

With the systematisation presented, we hope to make a contribution to the construction of the teaching role in the online world beyond the context of isolation. In this sense, we hope that the intervention strategies identified and the spheres of action that group them together can contribute to the development of criteria, based on an academic community perspective, to guide good university teaching practices in online scenarios in order to strengthen student learning. We also believe that sharing the workshop design can inspire and guide the decision-making process of colleagues in the SoTL community who are interested in training their faculty on these issues.

Finally, we believe that these strategies will also generate a commitment from teachers (García Aretio, 2020) to the professionalisation of their role, the need for continuous training in teaching and the value of sharing their thoughts and teaching actions with the academic community to build networks of collaboration and peer learning.

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It's in the Genes: Harnessing Employability DNA as the Unit Building Blocks of Sustainable Curricula.

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ABSTRACT

There is a well-documented UK digital skills gap that has deepened due to Covid-19 with digital marketing employers seeking graduates with specific tangible digital marketing knowledge and skills, in addition to relevant soft skills. The IAB'S 2020 Digital Skills Gap Report explains 88% of employers struggle to find qualified individuals with up-to-date digital marketing skills; 65% of those surveyed explained that most new graduates are not ready to take up careers in the digital marketing sector. Moreover, the CIM's latest Digital Marketing Skills Benchmark report (2022) indicates that digital marketing skills have declined since their previous benchmark in 2020. This paper reflects on the creation of a DNA tool which aims to enable educators in HE to audit their units in light of best practice, knowledge, skills and pedagogical approaches needed to nurture work-ready graduates. Key reflections highlight current gaps at varying levels and action planning to address sustainable curricula for employability.

INTRODUCTION

This paper presents a success profile for marketing graduates in the United Kingdom and discusses the implications that an understanding of this profile might have for the design of undergraduate marketing programmes. Although the acquisition of an undergraduate marketing degree does not necessarily lead to employment into a graduate digital marketing position, students who opt for these programmes need to have confidence that their choice is one that will best equip them with the knowledge, skills and behaviours employers require, from the first year of study. Indeed, prospective students are increasingly prioritising courses and institutions that will most help their employability (Slade, 2017).

Therefore, in order to nurture work-ready gradates, HEI's must ensure that the curriculum design and pedagogical approaches of undergraduate marketing courses are closely aligned with the profile of success in the digital marketing sector. This needs to incorporate technical subject knowledge, application of this knowledge and intrapersonal and competences. Employers need to work more closely with HEI's to articulate this need, as they do with the shaping of apprenticeship standards, including those of the Institute for Apprenticeships & Technical Education's (IATE's) Digital Marketer Integrated Degree. In the undergraduate degree context, this official co-creation does not exist, so it is necessary to provide guidance for educators designing standard full-time courses in higher education in order that they may meet the employability requirements in their chosen subject area.

Moreover, employability is key at a macro level due to the post-1992 university fixation with graduate outcomes, thanks to the mass consumerisation of contemporary UK HE (Sliverio et.al., 2021). Certainly, HEI strategy must work towards the attainment of often challenging graduate outcomes targets and Teaching Excellence and Student Outcomes Framework benchmarks, crucial for funding, student recruitment and accreditations.

Accordingly, the paper's objectives are to ascertain a success profile of digital marketing as perceived by the academic literature and industry reports, and subsequently to discuss the implications of this for curriculum design, although a comprehensive translation of this to pedagogic methods is beyond this paper's remit. The present study provides insight for academics in UK HEI's looking to review or develop digital marketing courses to best safeguard employability by focusing on industry requirements.

At this point, it should be acknowledged that this paper is based on a reflective submission as part of the requirements of a completed Postgraduate Certificate in Learning and Teaching in Higher Education (PGCLTHE). As such, it is intentionally critically reflective in nature and also in the initial stages of development.

LITERATURE REVIEW AND REFLECTIVE DISCUSSION

Through a review of the literature, industry reports and internal documents, the following aspects were considered as part of the PGCLTHE reflective submission: defining employability in a digital marketing context, the status of employability at an institutional, faculty and departmental level, evaluating how learning, teaching and assessment can enhance employability and what role individual academics play. The output was the creation of a holistic employability framework that summarises an ideal marketing graduate. This was then applied to a specific undergraduate unit to highlight gaps and suggest improvements through an action plan.

Though an ambitious undertaking due to its multidimensional nature, early soul-searching and research lead to the discovery that there are many areas of employability to consider including: careers services (Terzaroli and Oyekunle, 2019), placements (Bonnard, 2020; Morley, 2018; Fowlie and Forder, 2018), interview skills (Guachalla and Gledhill, 2019; Dinning, T.; 2017), psychometrics (Bradley et.al., 2020), industry certifications (Laverie et.al.,2020; Cowley et.al; 2020; Kim et.al, 2019) and lifelong learning (Boffo and Melcarne, 2019; Nimmi, et.al., 2021), amongst others.

Manchester Metropolitan University, like many post-1992 HEI's, boasts a range of employability initiatives to respond to this behemoth of a subject, for example, the *RISE* employability skills project, the new *My Five-Year Plan* for personal tutors and its own set of Graduate Attributes. However, to give the submission the specificity it required, embedding employability in the curriculum via digital marketing-specific knowledge and skills, relevant soft skills and employability-focused pedagogy was chosen as the focus. Though an extensive discussion of relevant pedagogy is beyond the remit of this paper.

The reflection was framed around Gibbs' model (1988) because it allows for depth of reflection and feelings and a single incident focus (Middleton, 2017) – a requirement

of the submission. Whilst criticised for not exploring values or linking to future action and change (Finlay, 2008) - something levelled at other models such as Schön's (1987) reflection-on-action and reflection-in-action (Wilson, 2008) - Gibbs' model offers a clear structure (Middleton, 2017) that also suits the required format. Lack of commitment to future action was tackled by the focus given to impact in an Action Plan.

The starting point for the submission involved a critical self-reflection of the author's own student experience through the crafting of a personal teaching philosophy in an earlier PGCLTHE unit. Reflecting on my own experiences as an MA Marketing student at a Redbrick University, as Brookfield's (1995) "autobiographical lens" encourages, I realised my learning had been almost entirely theoretical, with limited application of it in class, on assignments or to case studies. Outside the classroom, employability support was limited – few opportunities for placements, "meet the employers" events or careers guidance. I had learned the "why" and "how" of marketing but not necessarily the "doing".

Digital marketing "pracademics" (Volpe and Chandler, 2001; Posner, 2009) are well-placed to enhance employability thanks to connecting practical experience to the requirements of academia. Whilst pracademics can experience tensions between academia and practice (Dickinson et.al., 2020), we can ensure students become "knowledge-able" as opposed to merely "knowledgeable" (Wilson, 2015, 29) and help them enhance their learning via application of knowledge. Ensuring graduates are armed both with digital marketing knowledge and the ability to apply it has its roots in the Knowledge, Skills and Behaviours of UK apprenticeships, where Behaviours draw parallels to "soft skills" and help to create fully rounded apprentices at the point of End Point Assessment (EPA). This holistic approach to employability provides ample opportunity to enhance the employability of full-time undergraduate programmes.

Reviewing the literature, industry sources on the digital marketing skills gap, and employer requirements, a shortlist of priority digital marketing-specific knowledge/ skills and relevant soft skills was compiled. This is underpinned by active blended learning/marketing-focused pedagogical approaches to enhance employability. Together, these three elements form a graduate employability framework, entitled *Digital Marketing Graduate DNA (see Figure 4)***,** used to evaluate the current employability of units and to highlight improvements.

De Cupyer et.al. (2011) explain 'employability' is derived from the words 'employment' and 'ability'. University educators can influence the ability element, which refers to knowledge and skills but cannot control the employmen*t* elements as they depend on variable issues, including market demand. Whilst the CareerEDGE Model, (Dacre-Pool and Sewell, 2020) based on Yorke's (2006) perspective, describes employability as a multi-faceted characteristic of the individual, we must remember that successfully developing employability does not guarantee graduates satisfying jobs (Clarke, 2008). The scarcity of consensus on what employability means has also been discussed as key challenge preventing the integration of HE research across the intertwined disciplines of graduate employability and career development (Healy, Hammer and McIlveen, 2020).

Through consolidating the literature on the employability curriculum, general themes emerge including discipline-specific knowledge and skills, “soft skills” and employability-focused approaches to pedagogy. In addition, there are several different groups of stakeholders to consider when thinking about these areas: primarily academics, employers and the students themselves (Batra, 2021; Pereira et.al., 2020; Small et.al., 2018). Though challenging, all areas and interests are valid and the discussion of digital marketing employability that follows attempts to consider this plethora of themes and viewpoints.

Digital Marketing Skills Gap

There is a well-documented UK digital skills gap that has deepened since Covid-19 (CIM 2022, CIM, 2021; Eliot, 2021; IAB, 2020), with digital marketing employers seeking graduates with specific tangible digital marketing knowledge/skills in addition to relevant soft skills. As technology continues to evolve at breakneck speed, we may have to accept there will always be a digital skills gap, but also that there is perhaps an opportunity for our graduates to help companies reduce skills gaps by keeping pace with technological developments through employability-focused digital marketing units/courses.

There is a noticeable gap in the academic literature on the specific digital marketing knowledge / skills required of graduates, with the focus historically on more generic marketing employability. A notable exception is Key et.al. (2019). Therefore, this framework has been led by the digital needs of employers. Though order of priority varies by industry, sector and company size, there is a consensus that the digital marketing knowledge and skills that are most needed and therefore included in the framework are: Data/ Analytics (CIM, 2020; IAB, 2020; Flight,2021; Mintu-Wimsatt and Lozada, 2018; Michael Page Recruitment, 2019; ClickThrough, 2020; Key et.al, 2019), Search Engine Optimisation (SEO) (CIM, 2020; IAB, 2020; Michael Page Recruitment, 2019; ClickThrough, 2020; McCoy, 2020), Paid Advertising (CIM, 2020; IAB, 2020; Michael Page Recruitment, 2019; Key et.al., 2019), Social Media (CIM, 2020; IAB, 2020; ClickThrough, 2020; Key et.al, 2019), Email Marketing (CIM, 2020; IAB, 2020; Clickthrough, 2020; Michael Page Recruitment, 2019), and User Experience (UX) (CIM, 2020; IAB, 2020; ClickThrough, 2020; Michael Page Recruitment, 2019). An analysis of this list in relation to the level 4 undergraduate Digital Marketing Essentials unit can be found in Figure 1.

Figure 1

	Status / Priority	Explanation
Data / Analytics	1	Area not currently covered in lecture or tutorial content. Knowledge content for lectures and skills application for tutorials needs actioning ASAP
Search Engine Optimisation	2	Knowledge covered in lecture content but outdated due to industry updates, needs updating. Skills covered in tutorial / assessment tasks
Paid Advertising	3	Knowledge covered in lecture content. Skills covered in tutorial / assessment tasks. Up to date - no current action required
Social Media	3	Knowledge covered in lecture content. Skills covered in tutorial / assessment tasks. Up to date - no current action required

Soft Skills

There is much written about the "soft skills" graduates of all disciplines require. As with the digital skills, employers also report they struggle to find marketing graduates with these required soft skills. In a survey by the DMA (2019), over 50% of employers found it difficult to find at least one of the social/personal skills they deem important in graduates when recruiting. The WonkHE (2021) *Skills to Thrive* report explained that the most required skills of Arts, Humanities and Social Sciences graduates are: communication, critical thinking, problem-solving, collaboration/ teamwork and independent working – a list largely shared with the respondents of the IAB's (2020) Barometer report. In a post-Covid-19 world, new soft skills are rising in importance to employers such as adaptability and resilience (McKinsey, 2020) and we may see this category top lists in future.

There is another gap in the academic literature with regards to digital-marketing specific soft skills, but the wealth of articles on generic marketing soft skills agrees largely with the industry reports, stating that the following are most in need: communication skills (Dusek et.al., 2021; Yeoh, 2019; McCarthur et.al., 2017), critical thinking (Dusek et.al, 2021; Yeoh, 2019, Schlee and Karns, 2017), creativity (Dusek et.al, 2021, McCoy, 2020, Pollicott, 2019), teamwork / collaboration (Dusek et.al, 2021; Schlee and Karns, 2017, M, 2021; Pollicott, 2019) and working independently / time management (Dusek et.al; 2021; Yeoh, 2019; Schlee and Karns, 2017, McCarthur, et.al., 2017; Pollicott, 2019).

Manchester Metropolitan University's own Graduate Attributes is an institutional-wide set of shared soft skills, that directly map to the marketing-specific soft skills discussed above (see Appendix 1). Indeed, this approach is becoming more commonplace - WonkHE (2021) reports that 36% of institutions have universal graduate attributes and 66% of them report that these attributes are used as a reference point in curriculum design. Due to Manchester Metropolitan University's graduate attributes having such an overlap with the literature's prioritised skills and them also being a marker of institutional best practice, these attributes inform the soft skills of the Digital Marketing Graduate DNA. They are: Collaboration, Creativity Self-motivation, Professionalism, and Social Awareness. An analysis of these skills as applied to this paper's selected case study unit can be found in Figure 2.

Figure 2

MMU Graduate Attributes	Status / Priority	Explanation
Collaboration	2	Some team tasks take place in tutorials, but this is unstructured. Need to introduce more collaborative formative tasks for early experience of teamwork
Creativity	3	Tutorial and assessment tasks encourage creative thinking and skills at appropriate level, no current action required
Self-motivation	3	Level-appropriate individual formative and summative tasks such as quizzes, essential asynchronous reading and assignment tasks allow for development of independent, self-directed learning skills, no current action required
Social Awareness	1	Limited coverage of inclusion / diversity consideration in lecture or tutorial content. Urgently needs actioning to ensure a more inclusive and diverse curriculum
Professionalism	3	Digital connectivity is covered by the use of Moodle and Teams for lecture, asynchronous and synchronous activities - professional digital tools / technologies used for level appropriate assignment tasks, no current action required.

Employability-focused pedagogy

It is crucial to utilise appropriate pedagogical approaches to learning, teaching and assessment to ensure holistic constructive alignment (Biggs and Tang, 2011) within the Digital Marketing Graduate DNA model. Admittedly, my panicked pandemic planning did not allow this focus, but next year offers huge opportunities to enhance employability via pedagogy. Reviewing the marketing-focused pedagogy literature on enhancing employability, active learning seems to be the preferred approach.

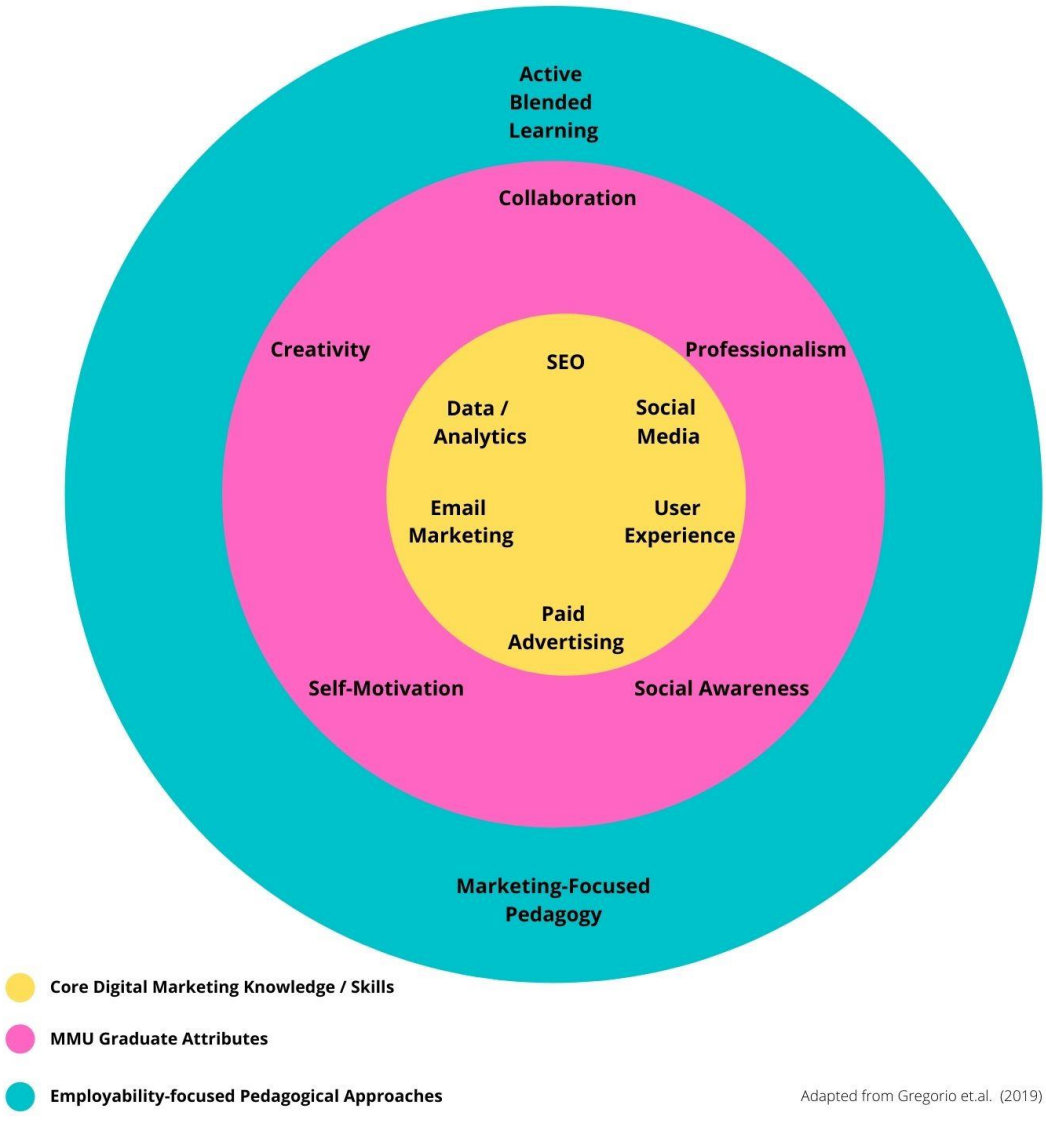
With students in charge of their own learning, supported by appropriate ‘scaffolding’ (Bruner, 2002) in the ‘zone of proximal development’ (Vgotsky, 1978), they are best able to think about and apply what they are learning – a good fit for my pracademic, employability-focused model. Moreover, incorporating active learning activities such as case studies and problem-based learning into lessons enables students to practise skills that are essential for future workplaces (University of Leicester, n.d.) In the marketing pedagogy context, the most cited examples of active learning activities include case studies, live client briefs, pitches / presentations and group work (Cowley, 2020; Cowley, 2017; Corrigan et.al. 2014).

Active blended learning makes classrooms resemble real-world work more closely. The substantial literature review of the area revealed one of the most neglected areas regarding active learning is traditional lectures, as listening to a lecturer is still the primary learning “activity” (Armellini, 2020) - something I can relate to in my own unit analysis below. The University of Birmingham (n.d.) also provides a rich list of practical active learning activities that can be adapted for use in lectures including polls, “fishbowls”, think-pair-share and one-minute papers. An analysis of active learning approaches in relation to this paper’s focus unit can be found in Figure 3.

Figure 3

Teaching / Learning Activities	Status / Priority	Explanation
Synchronous Lectures	1	No current active learning in synchronous lectures, needs actioning ASAP
Tutorials	2	Active learning is a key focus of current tutorials with applied work on case studies, use of industry standard technology, tools and presentations. More team-based active learning could be facilitated
Assessment	3	Students think and apply their knowledge in both formative and summative assessment, no current action required.

Figure 4: Digital Marketing Graduate DNA



Adapted from Gregorio et.al. (2019)

Whilst the analysis of the unit in line with the DNA framework has shown that there is scope for several changes, we must remember that the framework is an ideal view of a digital marketing graduate. As this paper deals with a 15 credit Level 4 unit only, that is being taught within the constraints of 6-week block teaching, it is necessary to prioritise elements of each part of the model for action. Further development towards the complete DNA can be facilitated across other units and levels of the programme. The following discussion is based on the Action Plan of the critical reflective submission and covers recommendations for priority areas of action.

Data and Analytics

Academics should research new analytics technology/regulations and create relevant content. Marketing analytics has become increasingly important due to Data Protection legislation such as GDPR. Over 98% of marketers use data during their decision-making processes while 80% of marketing-related problems use data to aid solving them (Flight, 2021). By using data to make marketing decisions students will become better data-driven decision makers (Flight, 2021) and will stay ahead of gradates on other courses who cannot evaluate marketing results (Mintu-Wimsatt and Lozada, 2018).

SEO

SEO is a constantly changing area (Niñofranco, 2018) and teaching content requires frequent updating. The area needs an employability focus, (Cowley, 2020) - with over 90% of online experiences starting with a search engine (WebFx, 2021), and by understanding SEO, students will become customer-centric marketers (Cowley, 2017).

Social Awareness

Academics should Research equality and diversity best practice including diverse professional inclusion, authorship, and case studies. There is a 13.3% awards gap between white and BME UK domiciled first degree undergraduates (Advance HE, 2020) which then affects the employability of these students in addition to other factors. Through nurturing a safe, inclusive environment that promotes a diversity of skills, knowledge and backgrounds as strengths, all students are more likely to thrive (Thomas and May, 2010) and be socially aware upon entering the workplace. By understanding employability through the lens of the BME awards gap and graduate outcomes, academics can become more aware of inclusivity and diversity issues and more confident in providing a supportive environment for learning for all students.

Collaboration

Best practice on team-based formative tasks (e.g.) live client briefs and incorporate in tutorials should be a priority area of focus for academics - digital marketers will work in teams on projects. Through social constructivist (Dewey,1938; Vgotsky,1978) formative team tasks in tutorials, construction of knowledge through social activities on real- world case studies can enhance learning and employability skills. Soft skills cannot be forced upon students, nor can they exist independently of a subject – they must have a professional context (Wonk HE, 2021). As a result, students will be armed with teamwork skills and evidence of work-based application of learning for interviews.

Blended Active Learning

Academics should incorporate active learning into lectures - research suggests attention in lectures starts to waiver after 10-20 minutes (Gifkins, 2018). As they remain a key leaning activity, it is crucial to increase active learning in this format with activities such as polls to vote on 'best answers' to scenarios and minute papers where students consider what the most important thing they learnt is, and also the least clear (Uni. Of Leicester, n.d.) Technology easily facilitates this and students can think deeply about what they have learned and provide feedback on what needs covering again (Uni. Of Birmingham, n.d.), whilst gaining a better understanding of the value of self-determined learning.

CONCLUSION AND KEY RECOMMENDATIONS

To tackle the burgeoning challenge of the digital marketing skills gap, graduates today must evidence a complex set of subject-specific knowledge, demonstrate the ability to apply it in a working environment and showcase more general soft skills that are also a growing priority for employers. Academics can play their part by supporting this approach with appropriate pedagogical approaches. The proposed Digital Marketing Graduate DNA framework, combined with a reflective evaluation, is recommended as a starting point that academics across disciplines can use and adapt to suit the nuances of their subjects. It is not intended as a stand-alone tool but can play a useful role in early discussions of the programme and unit planning processes.

Moreover, the proposed framework is iterative – its constituent parts should be reviewed on an annual basis in line with evolving literature and industry need. To truly be holistic, it should be implemented at a programme level and reviewed in line with current Programme Learning Outcomes. Further research should focus on appropriate pedagogical approaches and tracking its success more long-term, over a minimum of 3-4 years, in line with actual graduate outcomes and frequent dialogue with
employers.

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Building sustainable and accessible environments for learning and health

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ABSTRACT

Many students in higher education experience different forms of psychological symptoms and stress. Although such experiences could be considered normal human reactions, they might lead to more severe mental health problems, and they might impact learning negatively. This presentation describes an initiative at the University of Gothenburg, Sweden, with the aim to help build and promote sustainable and accessible environments for student that promote not only learning but also mental health.

INTRODUCTION

Many students in higher education experience psychological symptoms (e.g., depressive symptoms and anxiety) and stress (e.g., Larcombe et al., 2016). It has been found that students have higher levels of psychological symptoms than same-age peers and that their symptoms are higher during than before entering studies (Rotenstein et al., 2016). Experiences such as stress and anxiety could be considered normal human reactions and responses to challenging situations. In higher education, students are faced with many stressful situations which could include moving to a new town, taking exams, and writing papers. In acute situations, stress helps people to focus and perform. But, if stressors persist over time, and if people are unable to adequately cope with the stressors, it might lead to more mental health problems. There is also a well-established association between aspects of mental health and well-being on the one hand and learning on the other (e.g., Gilar-Corbi et al., 2020). Consequently, there are good reasons to think that mental health symptoms might impact individual and communal learning negatively. Moreover, it is assumed that higher education in itself may contribute to compromised health among students (Nissen et al., 2019).

Many universities offer students individual counselling for students who experience different forms of psychological symptoms. Research has found such intervention to be effective (Regher et al., 2013). What is lacking in the field is environmental (structural or organizational) efforts aimed not at treating individuals or symptoms, but at promoting and building healthy, sustainable learning environments for all students (Fernandez et al., 2016; Winzer et al., 2018).

Currently, there is growing recognition of universities as not only research and education institutions but also potential health promoting arenas (Dooris et al., 2014). The main aspects of the concept “Healthy universities” are (Holt & Powell, 2017):

- Creating healthy, supportive, and sustainable learning, working, and living environments for students, staff, and visitors; and
- Increasing the profile of health and sustainability in the university’s core business – its learning, research, and knowledge exchange.

Thus, rather than being a threat to health, higher education institutions have the potential to promote health. Importantly, such institutions can also help protect students from the negative impact of other threats to their health (e.g., the Covid-19 pandemic and ensuing restrictions, Sarasjärvi et al., 2022)

This presentation describes an ongoing initiative at the University of Gothenburg, Sweden, Sustainable and accessible learning environments (SALE). Although our initiative does not explicitly build on the idea of “Healthy universities”, there are many similarities and a shared goal. SALE aims to help build sustainable and accessible environments for students that promote not only learning but also mental health. In other words, it focuses on proactive communal efforts and solutions rather than individual treatment after-the-fact. The initiative is a broad collaboration between faculty, the faculty leadership, students, and professional support staff.

CONTEXT

The University of Gothenburg is one of Sweden’s largest comprehensive universities. The SALE initiative was implemented at the Faculty of Social Sciences, which includes seven departments: Global Studies, Journalism, Media and Communication, Social Work, Sociology and Work Science, Political Science, Psychology and Public Administration. These departments provide around 11000 students with programs and free-standing courses each year.

From 2011 to 2021, the number of students with documented disabilities in need of study support at the University of Gothenburg grew from 260 to 1757 individuals. In 2021, 49% of the students in need of study support reported documented mental health problems or neuro-psychiatric disorders as the main reason for study support, compared to 30% in 2011. This is a trend that is likely to continue and is cause for concern among teaching and supporting staff at the Faculty of Social Sciences.

As a response to the Covid-19 pandemic, the university made a transition to remote, online teaching on March 17, 2020. Two surveys, one in May and one in November 2020, were sent out to all students at the Faculty of Social Sciences with questions about their well-being and their experiences of remote, online teaching. The results showed that while most respondents suffered from isolation and lack of motivation as a result of remote teaching and other restrictions related to the pandemic, there were also positive experiences as a result of the flexibility that studying online offered. Students who would normally have to spend long hours commuting to participate in a two-hour lecture found that they could spend more time on their studies. Mature

students with families and established social networks were more positive to online teaching than those in their early twenties.

The survey results, together with the statistics on study support related to mental health problems and neuro-psychiatric disorders, raise the question for whom the learning environments at the Faculty of Social Sciences are designed? How can the environments be more inclusive and supportive for all students? What are the common obstacles that students experience when they embark on their studies in higher education? Is there a way to design a course that offers all students, not just some students, the possibility to participate on their own terms, at the same time as it provides students with equal conditions for learning? These are some of the questions that the SALE initiative addresses.

THE PROJECT

The SALE initiative runs during 2021 and 2022 and has three core activities:

1) *Student life*

This activity is about monitoring, documenting, and drawing conclusions from how students experience their first weeks as students. Students are invited to keep diaries for the first five weeks of the semester and to participate in two successive workshops. In the first workshop, the students read and analyze their diaries together with staff. In the second workshop, the students use their analysis to suggest solutions for how to develop the learning environments to better accommodate students' learning, as well as their social and health needs. So far, students have identified the need for a better integrated flow of information in the period between registration and the course introduction, the need for early group strengthening activities, and improvements in the physical infrastructure such as the need for lockers. An important question in Student life is how students' sense of belonging (to the institution) can be promoted.

2) *Student-centered flexibility*

The second activity aims to investigate the possibility of giving students the opportunity to choose their own pathway of learning through courses and to build more inclusive courses. For this purpose, Beatty's (2014) HyFlex approach to course design is used as inspiration. The HyFlex course design combines a hybrid approach to teaching (synchronous and asynchronous) with flexibility for students to choose, throughout the course, the modality of their participation. A teacher in public administration has been granted time to develop an existing course using the HyFlex approach. The teacher is expected to include students in the project and to pay particular attention to what the HyFlex course design requires in terms of technical equipment and course hours when fully implemented. The course design was developed in the autumn of 2021 and will be implemented in 2022.

3) *Toolbox for sustainable studies*

The third activity has resulted in an open, web-based resource. The resource is open to all staff and teachers and others who want to work with student mental health and sustainability, focusing particularly on the study environment and inclusion in the classroom. Recourses include, among other things, an introduction to the field of knowledge concerning students' experiences of relatedness as well as academic and psychological outcomes, in combination with concrete examples and exercises for creating relatedness between students in the classroom provided by teaching staff.

CONCLUSIONS

Higher education encompasses significant transitions and challenges in the lives of students. This has implications for students' health and learning. The Swedish SALE project was designed against the background. Our hope is that the SALE goals to identify the role of learning environments for students' health and learning experiences and to identify ways to develop health supporting learning environments for all will contribute to a more sustainable tertiary educational system that will play a major role in the future development of sustainable societies.

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Support and inclusion in post-covid higher education – student perception on support and learning during digital teaching.

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ABSTRACT
The presentation aims to discuss students' perceptions of support from peers and teachers, organising and planning studies in distance learning, perceptions of students' own learning, and perceptions of inclusion in digital teaching. The discussion will be grounded in survey results from a pilot project and in relation to Universal Design for Learning, where inclusion is a key element.

INTRODUCTION
In recent years, research has shown that students are at greater risk of developing mental health issues than the general population (Evans et al. 2018). One of the great challenges for young students is to create and maintain a congruent sense of identity. This process might involve various crises that can result in vulnerability to mental disorders (Auerbach et al., 2016), and affect their academic achievements (Alonso et al., 2018). Mental health problems are therefore highly prevalent among university students leading to higher risk of dropout (Ishii et al., 2018). Students at Swedish universities are no exception (SLF student, 2018). In the wake of the Covid pandemic, there were fears that students' mental health could deteriorate. Initial data from the start of the Covid-19 pandemic showed mixed results in this regard. Some studies found no significant changes in student mental health (Johansson et al., 2021), while e.g., Allen et al. (2022) reported an increase in anxiety, depression, and suicidal thoughts within the student cohort. Student well-being has been investigated by Lister et al. (2019) who found that students identified a wide range of barriers and enablers in the university and/or study experience. The key findings in Lister et al. (2019) were links between students´ well-being, confidence in their study skills in higher education and managing their mental health. Jones et al. (2021) further investigated students' well-being through teaching staff and students alike. Jones et al. (2021) found that balancing assessment aims and learning objectives with student well-being posed a challenge.

Schwinger et al. (2014) point to the problem of negative academic emotions such as fear of failure. Students with a fear of failure tend to procrastinate, avoid assignments, and/or withdraw from courses and fellow students altogether. Perander et al. (2020) found in their study that students described a fear of feeling stressed although dealing with both success and failure as a student is a learning experience that students must learn to master as well. The study points out that it is important for teachers to support students in recognizing when stress might be harmful and when it might help them to finish their assignments.

Social contact is essential for student's well-being (Hanson et al. 2016). A framework emphasizing collaborative learning is the Community of Inquiry (CoI). The importance of social interaction for learning is central within the CoI framework (Garrison et al., 2000). Hilli and Åkerfeldt (2020) found that teachers in higher education adapted to distance teaching by organising quicker ways to interact with

students using both asynchronous and synchronous communication. Teachers established social relations by using open communication, such as chatting or assignment feedback, in the course design within a CoI framework. By incorporating and using several communication mediums in the educational design, a more open communication climate was promoted. A meta-analysis by Gillies (2016) found that both academic and social benefits emerged when students cooperated as opposed to competed or worked individually. Peer collaboration and group work can be used to facilitate achievement and greater production, and successful cooperation may result in students excelling in problem-solving and maintaining effective group work relationships (Gillies, 2016). Further positive outcomes of successful group work can be positive interdependence, meaning that the fellowship experienced between group members, and the psychological realization linked to a sense of common goals and shared rewards maximize a groups' cooperative potential (Hammar Chiriac et al. 2019). Hanson et al. (2019) investigated peer-learning experiences and psychological well-being in students. Their results suggested that peer-learning had a significant effect on the student's psychological well-being. Moreover, the results showed that the results were general, rather than specific, meaning that positive peer-learning was shown regardless of sex, race, or academic ability. Hanson et al. (2016) suggest that peer-learning may be one way to improve students' overall psychological well-being.

However, for a well-functioning social interaction, students must feel safe and engaged in the group and course alike. To feel safe both within the group and the course, Universal Design for Learning (UDL) focuses on designing teaching and learnings activities in an inclusive and accessible way to eliminate barriers to learning and create a more diverse delivery to support the student experience (Meyer & Rose, 2000). Cumming and Rose (2021) conducted a review of articles including theory and implementation of UDL in higher education. They found that UDL is well supported by students and teachers alike, and that UDL is well grounded in theory.

The Covid-19-pandemic forced higher education into an abrupt switch to online teaching and learning, referred to as emergency remote teaching in studies (e.g Bond et al 2021). The sudden change highlighted the continuous importance of social and collaborative aspects of higher education environments, and it was verified by several reports (e.g., Bolander Laksov et al. 2021). As well-being is a vital aspect to avert vulnerability to mental health issues and also a core condition for the ability to engage and participate in learning (e.g. Hanson et al. 2016) we need to better understand how it relates to the educational designs used in higher education.

The present pilot study investigated how students experienced teaching, inclusion, and support in online settings two years after the onset of the pandemic.

PURPOSE AND RESEARCH QUESTIONS

The aim of the pilot study was to investigate how students in single-subject courses and programmes in higher education involving group intensive learning perceived support, inclusion and learning outcomes in digital learning environments.

The specific questions of interest were:

- How have students perceived support from teachers and peers in online digital settings?
- How have students perceived online teaching and support depending on studying a single-subject course or a programme?

METHOD AND MATERIAL

Participants

Students enrolled in programmes or courses where collaborative learning was included were asked to fill out a short survey created in Microsoft Forms. A total of n=116 students completed the survey.

Survey

A survey with a Likert scale, ranging from 1= I don´t agree – 5= I fully agree, was used for each statement. The survey included three demographic questions regarding sex/gender identity, if they studied programme or single-subject course, and which semester they studied. Eight statements followed the demographic questions where the students were asked about how they perceived peer support, teacher support, planning and organising of studies, teaching and learning activities in the courses/programmes, how they perceived inclusion in education, and how they perceived reaching the learning goals.

Data analysis

The data was analysed using IBM SPSS 28. To investigate the first research question, a Wilcoxon Signed Rank Test to test if each statement differed from the Likert scale Median (Median = 3) was conducted. To investigate the second research question, a Chi-square test on a cross tabulation between type of course and each statement was used. An alpha level of 0.05 was used to determine statistical significance.

Ethical considerations

The survey was distributed to students via an online link and all responses were anonymous. The students were informed about the purpose of the survey, that the survey was completely anonymous, and that participation was voluntary.

RESULTS

Demographics

A total of n=116 participants answered the survey. Ninety of the respondents identified as “female”, n=22 identified as “male”, n=2 as “non-binary", n=1 as “other”, and n=1 did not wish to answer. Of the respondents, n=84 studied a programme, and n=32 studied a single-subject course.

Survey results

The one-sample Wilcoxon Signed Rank showed that all statements significantly differed from the Median (Median = 3), all p’s<.01, where the Median for all ratings were significantly higher than the scale Median (Table 1).

Table 1. Shows the result from the one-sample Wilcoxon signed rank t-test.

Survey statement	Statistic	*p-value*	Mean difference
1. I experience good relationships with my class mates	3279.00	<.001	1.00

2. I experience support from my teachers	3453.00	<.001	1.50
3. I find it easy to plan my distance studies	4947.50	<.001	1.50
4. Distance learning has worked well for me	5209.50	<.001	1.50
5. I feel that different learning activities have been used	3416.00	<.001	1.50
6. I experience a sense of belonging in the course	2102.50	0.004	0.50
7. The courses have lived up to my expectations	4186.50	<.001	1.50
8. I learned what I expected in the courses	4488.00	<.001	1.50

The results from the Chi-square test on course type (programme or single-subject course) showed that there was a significant difference regarding perceived relation to peers (statement 1) (p=.007), support from teachers (statement 2) (p=.007), easy planning of studies (statement 3) (p=.010), distance education works well (statement 4) (p=0.027), sense of belonging to the course (statement 6) (p=.018). For all these statements programme students rated higher than single-subject course students. No significant difference was found for statements about different learning activities, fulfilment of expectations on the course and expected student learning in courses.

DISCUSSION

The results from the study revealed that students rated high overall on all statements involving inclusion, support from teachers and good relationships with course mates, managing and organising their distance studies, and meeting course expectations and learning goals. Further results showed that students enrolled in programmes rated higher than students enrolled in single-subject courses regarding good relationships with their course mates, experienced support from teachers, a sense of belonging in the courses, successful planning of distance studies, and that distance studies had worked well for them.

Hanson et al. (2016) found that successful peer collaboration facilitated psychological well-being in students. Based on the present study, we argue that students enrolled in programmes using group intensive learning, where peer collaboration is a key component for success, may have been positive for the experience of good relationships with course mates and a sense of belonging in the course. As Hammar Chiriac et al. (2019) discuss, the students may well have experienced positive interdependence. We further argue, in line with Bolander Laksov et al. (2021), that the change into distance teaching and learning brought on by the pandemic, put further emphasis on the importance of social and collaborative aspects of higher education environments. The students enrolled in programmes may experience this continuation differently than students enrolled in single-subject courses, as the continuity of the programme may have facilitated collaboration and peer support in a way not experienced by students enrolled in a single-subject course.

A CoI (Garrison et al. 2000) approach in programmes and single-subject courses alike may be beneficial for student well-being and successful peer collaboration. The

experience of teacher support may also be beneficial for student well-being. As stated by Hilli and Åkerfeldt (2020), establishing relations with students through the course design, focusing on social and teaching presence, may help support students' study strategies and feelings of comfort and security in the course. As Perander et al. (2020) pointed out in their study, teacher support is of importance for students to learn to deal with stress, successes and failures. We agree with Perander et al. (2020) that it is important for teachers to support students in distinguishing harmful stress from stress which may help complete assignments. By incorporating social and teacher presence from a CoI framework in the course design, student well-being may be promoted, and inclusive and accessible teaching put to practise.

Lister et al. (2019) found a range of barriers and enablers in the university of study experience for students. Many of the barriers identified were also identified as enablers, depending on how they were experienced, and by whom. In line with Lister et al. (2019) we argue that it is of importance to take into consideration inclusive design of courses, within programmes and as single-subject courses. A UDL framework may offer a way to design courses to be inclusive and accessible, thereby increasing the sense of safety within the group and the course (Meyer & Rose, 2000). Students learn in different ways, and various strengths and weaknesses should be taken into consideration when designing courses. What may be considered beneficial course design for 'special needs students' may very well be beneficial for the vast majority of students (Meyer & Rose, 2000).

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Facilitating Integration during the Interdisciplinary Research Process

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ABSTRACT

The aim of this study is to see how tools can facilitate the complex process of interdisciplinary integration. More specifically, we investigated how sharing disciplinary insights can be facilitated by CoNavigator (Lindvig, Hillersdal and Earle, 2018), a physical interactive visual tool that encourages shared understanding. We compared sessions using CoNavigator with online sessions with use of a mind-map tool. We found that both CoNavigator and online mind-maps facilitated in-depth shared understanding, but students communicated more and showed more enthusiasm when working with CoNavigator. In addition, our research shows that it is important for teachers to act as a moderator to have students understand the connection between the session and their interdisciplinary integration.

INTRODUCTION

In this paper we present our research on facilitating interdisciplinary integration during the interdisciplinary capstone at Liberal Arts and Sciences (LAS), Utrecht University (UU). At LAS, UU students all choose a disciplinary specialization in addition to a core program where they learn how to integrate different disciplinary perspectives. The final course of this interdisciplinary core is the LAS capstone (interdisciplinary thesis, 10 weeks), in which three to four students collaborate in multidisciplinary groups to answer an interdisciplinary research question by going through an adaptation of the Interdisciplinary Research Process (IRP; Repko and Szostak, 2020). This process consists of three phases: students set up the interdisciplinary research question and provide context for this question in phase A. In phase B students all provide separate disciplinary insights to (part of) this question and in phase C students integrate their disciplinary insights to create a common ground and provide a more comprehensive understanding of the interdisciplinary research question. We often see that students struggle at the beginning of this phase because they are insecure how they should integrate their disciplinary insights, also because the integration phase is a creative process. During this phase, it is important that groups get together, have discussions and write down their findings (van Lambalgen, 2020).

The aim of this SOTL research is to investigate how to facilitate the integration of insights in multidisciplinary groups of students at LAS UU using two different tools: CoNavigator (Lindvig, Hillersdal and Earle, 2018) and Miro. CoNavigator is a hands-on tool specifically designed for interdisciplinary collaboration to increase shared understanding by making insights explicit and visual. Miro is an online mind-map tool, which encourages visualization and mapping of insights (Canas and Novak, 2014). In this research we included eight student groups for whom we facilitated a session with one of the tools at the beginning of the integration phase. During this phase students have to identify differences and similarities between disciplinary

insights to create common ground (Repko and Szostak, 2020). We interviewed the groups after finishing their interdisciplinary capstone, which allowed them to reflect on the tool itself, but also on the impact thereof on their interdisciplinary integration.

METHODS

Participants

Eight groups of 3-4 LAS bachelor students were included, for whom we organized either a face-to-face CoNavigator session or an online Miro session of 1.5 hours. The first two groups were pilot CoNavigator sessions: The purpose of these sessions was to test and adjust our moderation of a CoNavigator session. The Miro sessions were not part of the original research set up, but because of COVID-19 circumstances, some of the sessions had to be held online. This did give us the opportunity to look at the difference between face-to-face and online sessions. Table 1 specifies which tool the groups have used and the disciplinary specializations of each student in the group.

Table 1. Details of participating groups

Group	**Student's Disciplinary Specializations**
CoNav-1 (Pilot)	Economics, Anthropology, Conflict Studies, Philosophy
CoNav-2 (Pilot)	Dutch, Philosophy, Anthropology, Social psychology
CoNav-3	Organizational science, Economics, Cognitive Neuropsychology
CoNav-4	Social science, Philosophy, Cognitive Neuropsychology
Miro-1	Philosophy, Cognitive Neuropsychology, Cognitive and Digital Humanities
Miro-2	International Relations, Organizational Sciences, Social Sciences
Miro-3	Organizational Sciences, Sociology, Social Sciences, Cognitive Neuropsychology
Miro-4	Social Sciences, Art and Cultural History, Biology

Moderation

All sessions were moderated by one of us as researchers. Here, we took the students through a selection of the steps of a Short Exploratory CoNavigator session following Lindvig et.al. (2018) and Lindvig, Hillersdal and Earle (2018, YouTube). These steps are set up as follows:

- Identifying the field – individually write down disciplinary insights or concepts on tiles
- Create a shared topography – Positioning the insights and concepts to create a shared map
- Flag the topography - Individually flag what tiles are most important in context of the research question

- Zoom in – Zoom in on one of the flagged tiles
- Zoom out – Look at the shared map again

The online sessions through Miro replicated these steps using digital post-its. Figure 1 and figure 2 show a session with CoNavigator and a session with Miro respectively.

We adapted the moderation after the pilot sessions to fit the IRP more specifically, because we found that, although students were enthusiastic on the use of CoNavigator it was difficult for them to use the insights into their integration. We added explicit prompts where we asked them about similarities or conflicts between disciplinary insights and asked them to write down how they would use their findings for their common ground. Regarding timing, we aimed to organize the session with each group at the beginning of the integration phase. In practice, in three groups students were further into the process before the session.

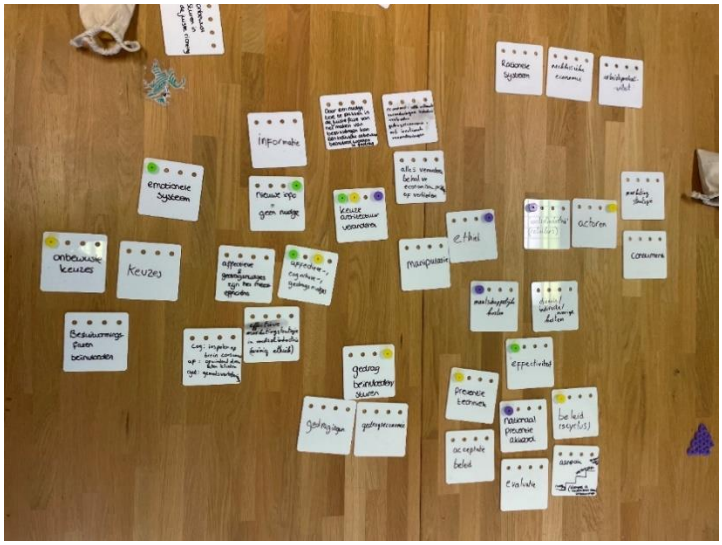

Figure 1. Example of a CoNavigator session

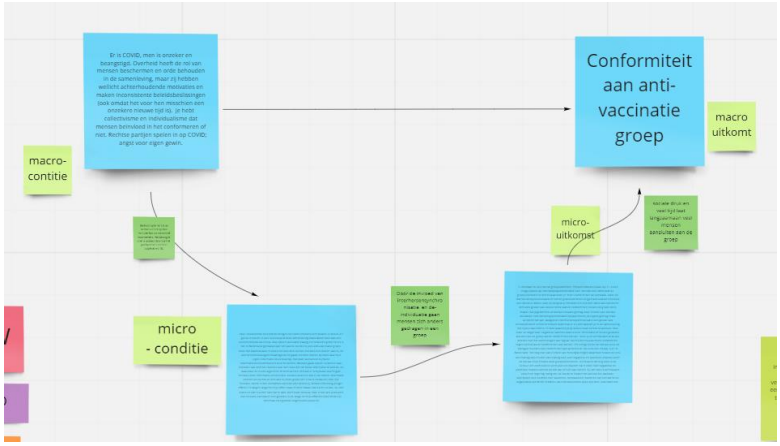

Figure 2. Example of a Miro online mind-map

Data analysis
We recorded the sessions to investigate how the team communicated on their disciplinary insights. Immediately after use of the tool we asked them to evaluate tool use and preferences. In addition, we interviewed all groups after they finished their research, to see how they reflected on the relevance of the tool for their interdisciplinary research process. In this paper we will focus on results obtained through the final interviews. The interviews were analysed through thematic analysis (Braun and Clarke, 2012).

RESULTS

The different themes we have extracted from the thematic analysis are: Tool characteristics, Motivation, Communication, Moderation and the Interdisciplinary Research Process. In this section we will present each of these themes, using quotes from the interviews to explain how the themes contribute to the facilitation of interdisciplinary integration.

Tool attributes

In all interviews groups were positive on the tool they used, mentioning specific aspects of the tools. Here, we will discuss for both tools how students reflected on specific attributes of the tool, such as visualisation, adaptation and tangibility.

CoNavigator
Visualization helped the students in different ways. In one way visually mapping the insights helped the students to make sense of the different pieces of information, which can be supported from the interview with CoNav-3:

> *"I think because you literally see it. I think, you know, you grab it and you write it down instead of it being some kind of big cloud in your brain (..). And now you really write it down and see it laying on the table and I think that makes it very tangible." (CoNav-3)*

The visualisation also helped students to get in depth knowledge of the disciplinary conflicts in the group. Two groups explicitly mentioned that seeing how different tiles were flagged highlighted the conflicts between disciplinary angles, supported by this quote:

> *"It also was the pegs that you could insert to the tiles that marked the things you found important, which makes you see what the others found important as well. Because usually when you think of a conflict, one person thinks of the conflict (…). Now you really saw what everyone thinks was important (..)."* (CoNav-3)

Next to the visualisation, CoNavigator also allows for students to physically move around the table. Both group CoNav-3 and CoNav-4 told us that this helped them in their research.

> *"Because you are also physically acting, you are really connected with the problem, with how you look at the problem. And that was very nice. That was better than talking about it. (…) you are physically moving the tiles and place things together, so that was very nice." (CoNav-4)*

Miro:
Most students who used Miro were positive on the tool, specifically through the dynamic nature of the tool. Three of the groups stated that they valued the possibility to add arrows, to have post-its with different colours and to be able to move post-its around. In addition, two groups stated that they used the online mind-map after the session. One group said:

> *"We used the tool more often, to create new overviews. We moved all the post-its again and then created new maps. This was actually very useful for the process."* (Miro-3).

There were two groups who specifically mentioned that visualization could also been done through regular post-its or online documents. One student said:

> *"If you can write it down on paper in an organized way then you have the same result. Or, in a word-document. It just depends on how someone likes to visualize something."* (Miro-2)

This confirms that for a tool to be of added value, offering ways to visualise is not enough, there need to be additional relevant attributes.

Motivation
Through the interviews we found that a session with either Miro or CoNavigator increased students' motivation for doing their interdisciplinary research in two different ways: by offering them a structure to start with the integration phase, and by inspiring them. Almost all groups reflected upon how they valued the structure the session offered them, because they were insecure on how to start the integration process themselves. This can be illustrated by the following quote.

> *"I was looking up to it (the integration phase), because I did not know where to start and how. So doing this, well just starting with the tool, that kept you going at once"* (Miro-3)

Thus, such sessions have the potential to offer the students a structured way to share their insights, while still allowing for creativity and students' own input. This relates to the second aspect of their motivation: doing this session on their research topic gave them the opportunity to think about the topic in a different way, which inspired students.

> *"It was very inspiring. Because, at least that was my feeling, you were not obliged to do something. There was a tool and we could work with our own insights. At that moment there was no required common ground as output, so I think we took that with us in how we worked from there". (CoNav-2)*

Finally, the following quote shows that it is important to remember that learning can sometimes be daunting and then having something which offers both structure and fun, can be very motivating.

> *"That sometimes the university, and the LAS-courses especially can sometimes feel so vague that you think: what am I doing exactly? And that this session became quite personal and that it is also involved our dynamics, but also just about: what are we doing here and what are we talking about? So I think that it also would increase the fun during the course." (CoNav-1)*

Communication

One thing that we observed during the sessions was that groups using Miro seemed to be more quiet as compared to groups using CoNavigator. This was confirmed by two groups who worked with Miro who said that they did not communicate much during their sessions, which they said effected their shared understanding.

> *Well yes you are like, actually very focused on the online platform and really thinking about how the connections are between the concepts that you forget, or do not think to say something to someone else. (Miro-4)*

In addition, most groups mentioned how online communication works less well, because of practical issues such as a slow internet connection and less inclination to contribute and actively participate in a conversation. On this, one of the groups says:

> "When you are together in a physical space you have a better understanding of each other. Then you can also connect to someone with your own idea or approach or give a different idea. In addition, online there are many things that make you less motivated to actively take part in a conversation." (Miro-3)

There were also benefits mentioned of online communication, such as not to spend too much time discussing and the practical issues of not having to travel.

Moderation

In the interviews we asked the groups explicitly on how they perceived us as moderators and whether they would see a role for their research supervisor here. Although there were differences between the groups on how they would include their supervisor, they did like the role of a moderator as someone who is not too involved and does not direct the session too much. Differences between the groups show a trade-off between a moderator as an outsider and a moderator who has more knowledge on the project (i.e. a supervisor).

> *"I think this way we were really forced to create our own thoughts, so that way we really did it ourself. Otherwise (…) you are trying to do what you think your supervisor is saying instead of trying to understand what you mean yourself." (CoNav-3)*

One of the groups that wanted the supervisor to be the moderator had concerns regarding time limitations of their supervisor. There, students said that they did not want it to conflict with the extensive feedback they otherwise got, illustrating their priority of getting feedback over having a CoNavigator session.

The Interdisciplinary Research Process

Students felt they obtained more in depth understanding after a session regardless of the tool, but in this theme we have looked at how they have actually used this understanding in their interdisciplinary integration. Most groups said that the session brought them specific conflicts and concepts they could use for their interdisciplinary integration. There were two groups from after the pilot that said they did not use the Miro or CoNavigator for their integration. For CoNav-3 this was because they already

had identified conflicting insights to use in their common ground. For Miro-2 this seemed to be because at that time they were not very motivated and also did not have enough knowledge on their own disciplinary insights. Both examples show that timing of the session is important.

Two quotes show here how students talk about using the output from the session in their IRP.

> "Because we analysed the different conflicts, we knew like: ok so these concepts answer our research question. So because we knew how to approach and solve the conflicting insights, we knew the answer to our interdisciplinary research question. So the tool helped us see the bigger picture (CoNav-3).

> "I think we really took elements from the session, because during the session we already had divided insights in a micro- and a macrolevel and organized all our insights. And then we could also see how they interact and that became the base of our More Comprehensive Understanding (MCU, Repko and Szostak, 2021). (Miro-4).

DISCUSSION

The results show that both CoNavigator and an online mindmap tool such as Miro are of added value. This added value is found through the specific attributes of both tools, as well as having a session that is moderated. What can be seen is that having a structured session to start their integration phase is really valuable for students, especially because they are often unsure on how to start. In addition, the sessions encourage students to think about their research in a different way, to be more open to new findings in comparison to a regular collaborative session. This may facilitate a more creative integration process.

When looking at both tools specifically, we should be cautious to compare both tools, as differences between groups in composition and communication might have influenced group collaboration as well. However, we found that CoNavigator has a clear added value over Miro for facilitating conversation on individual insights as well as discussing conflicting insights. Since using Miro did elicit positive feedback and students indicated that they valued the flexibility of the tool, it would be worth exploring if a combination of both tools would be desirable. In addition, Miro could be really helpful for interdisciplinary collaboration in a fully online course.

Finally, we found that in order to be of most value the session should be timed at the end of phase B: each students have disciplinary insights, but they have not shared them yet. As each students' process can be different, students should have agency over when to use the tool. Besides timing, the role of the moderator should be taken into consideration. We have found that it is valuable for a moderator to offer both structure and be open to students' own input during the session to increase creativity. In addition, it is important that the moderator refers to the steps of integration to align the outcomes with the IRP. Including the research supervisor as a moderator has the benefit of having someone who is knowledgeable on interdisciplinarity as well as the research topic. In addition, involving the supervisor in the shared understanding may also create a positive collaborative setting between students and teachers. More research is needed on role of the moderator, also to look at what is feasible for both students and teachers.

CONCLUSION

Through our SoTL research we found that students would benefit from having CoNavigator implemented as a tool during the LAS-Capstone (and Miro as a good online alternative). A session with CoNavigator increases motivation through offering structure and allowing for creativity. Elements to take into account here are the timing and assigning a moderator that is both knowledgeable but also open to students' input. Finally, for the tool to be of most value it is important that throughout a session students are encouraged to write down their conflicts and ideas for common ground for later use, to allow for an optimal alignment with the Interdisciplinary Research Process.

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Building Learning Communities

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ABSTRACT

A longitudinal study of students across seven different disciplines was undertaken to understand how students transition to university and engage with their learning community. This has given a voice to students in diverse situations and from different prior university experiences, revealing feelings of impostorism by students admitted via contextual offer, more positive sense of belonging by international students and those from Access to HE courses, and the importance of setting out the expected etiquette of university learning activities. Suggestions are given for building strong learning communities to support all students.

INTRODUCTION

When students come to university, they enter a learning community of peers and academics with a common interest in their chosen discipline. This community should be vibrant, interactive and supportive, a place where students feel comfortable to acknowledge their misunderstandings to enable them to learn and develop. But for this to happen students need to feel they belong in this learning community. Belonging can be defined as:

> "*students' sense of being accepted, valued, included, and encouraged by others (teachers and peers) in the academic classroom setting and of feeling oneself to be an important part of the life and activity of the class*" (Goodenow, 1992, p. 25).

Thomas et al. (2017) in their work on student retention and success emphasize this further:

> "*It is the human side of education that comes first – finding friends, feeling confident and above all, feeling a part of your course of study and the institution – that is the necessary starting point for academic success*" (Thomas et al., 2017, p. 8).

It is thus crucial to find ways to develop a strong sense of belonging for all students right from the start. Nunn (2021) aids us by explaining that "*belonging is something that must be given, like a gift".* So we need to find ways to encourage students to welcome and value each other.

There are many reasons why students may feel that they don't belong to their learning community. Being in the first generation of their family to attend university can bring daily fluctuations in sense of belonging (Gillen-O'Neel, 2021) due to the unfamiliar environment they have entered. Students' class can impact on their belonging, with working-class students particularly struggling (Crozier, 2019). While Erb and Drysdale (2017) report that although mature students may fare better with self- efficacy they often have lower sense of belonging. O'Sullivan et al. (2019) raise the different experiences of students entering from a foundation year or from a

contextual admissions offer. Peacock et al. (2020) discuss the needs of online learners for meaningful peer interactions in developing a sense of belonging.

This study seeks to investigate the impact of different student demographics and background on their sense of belonging and to propose ways in which strong learning communities can be built. This is part of a wider study looking at the impact of sense of belonging on engagement and academic success (to be published separately).

METHODOLOGY

First year students in seven different disciplines were surveyed electronically in 2020-21 at three key points in the year. The first survey was in September as they started their course, the second in December, at the end of semester 1, and the third in April, after the first set of exam results had been released. Questions were both quantitative and qualitative, to gain both measure and understanding of students' feelings of belonging, engagement and success within their learning community. All responses were anonymous, but a unique code was used to allow longitudinal analysis of each student's responses. All students on the selected degree programmes were invited to participate in all three surveys. Interviews with staff from each discipline were conducted in April 2022 to provide contextual information about adaptations made for remote teaching during the COVID pandemic. This study was undertaken with ethical approval from the University of Leeds MEEC 17-001. Quantitative analysis of survey data was undertaken using IBM SPSS 26.

RESULTS AND DISCUSSION

Table 1 shows the number of respondents from each discipline in each of the three surveys. Where possible, surveys were advertised to students in a teaching or introductory session by their school staff to demonstrate the importance and value of the results. But typical survey fatigue is seen in the later surveys which often had much lower response rates. Overall response rates, comparing the total number of students reached in each discipline with the size of the cohort, typically exceeded 50% (varying between 45% and 90% across the disciplines). However, the total number of students who added their voice to this survey is 750, which allows for good statistical analysis.

Table 1: Numbers of respondents.

Discipline	Survey 1	Survey 2	Survey 3	Total students reached
Physics	141	50	103	198
Biosciences	79	46	30	111
Design	123	7	15	134
Law	62	20	19	87
Economics	73	24	11	104
Accounting & Finance	84	11	9	91
German	16	12	13	25
TOTALS	**578**	**170**	**200**	**750**

Sense of Belonging

A set of statements was used to determine a student's sense of belonging, see Table 2, and the distribution of responses to the first of those statements is shown in figure 1. This shows a largely positive response with the majority of students strongly agreeing / agreeing that they belong, with about 20% neutral. This distribution is almost identical for all disciplines. However, a handful of students disagreed or strongly disagreed that they belong, and these cases have been investigated in more detail, with Table 3 showing the demographics of these students compared to the overall sample of students taking survey 1. From this it can be seen that students who declare themselves as First Generation or LGBTQ+ are represented in the negative belonging set at twice the rate of the whole sample. Further analysis shows 67% of this 'negative belonging set' feel less/lot less confident about making friends (compared to 31% of whole sample) and 39% feel less/lot less clued up about university than peers (whole sample 16%). When considering their ability to engage in remote study 44% of this negative belonging set feel that technology will be a problem (whole sample 20%). This analysis thus reveals a picture of students who feel their background or personal characteristics make them different from the majority of students, and they are worried they may not fit in, or be able to participate as fully as required.

Table 2: Statements used to measure sense of belonging.

Measures of Belonging	Likert scale
I feel I belong on this course	Strongly agree / agree / neutral / disagree / strongly disagree
I feel valued by staff	Strongly agree / agree / neutral / disagree / strongly disagree
I have met other students with whom I feel comfortable to be myself	Strongly agree / agree / neutral / disagree / strongly disagree
My background (social, academic etc) makes me feel different to many of my peers	Strongly agree / agree / neutral / disagree / strongly disagree
Compared to peers on my course, I feel confident about making friends	Lot more / little more / same / little less / lot less

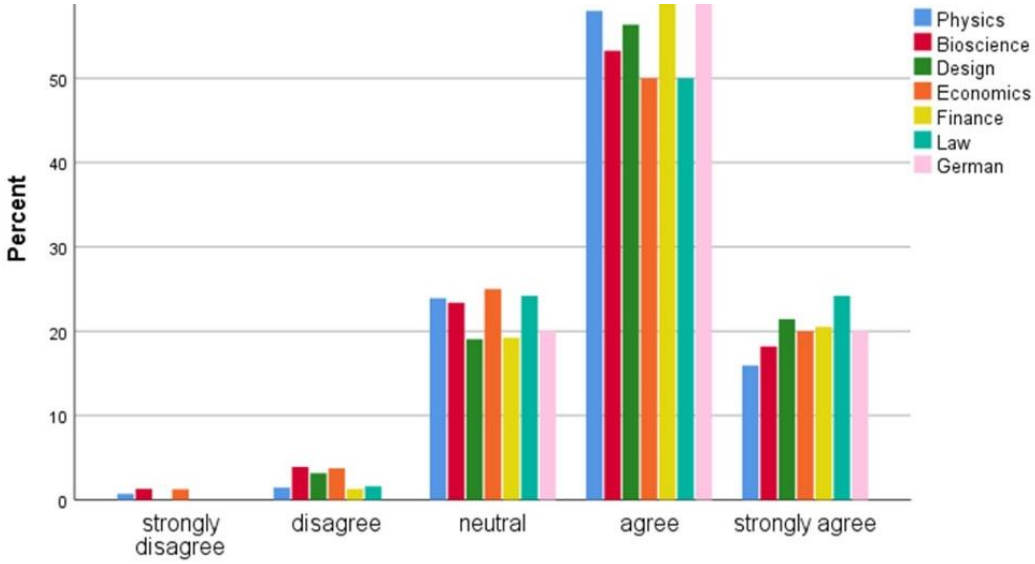

Figure 1: Responses to “I feel I belong on this course” from each discipline, in survey 1 (September).

Table 3: Demographics of students who have negative sense of belonging at the start of their course, compared to the whole sample taking survey 1.

Demographic	Percentage of students who disagreed/strongly disagreed they belong on their course in survey 1.	Percentage of whole sample in survey 1
Non-white	17%	25%
LGBTQ+	17%	9%
From overseas	22%	23%
First generation	56%	28%
Female	69%	59%

Survey 2 reveals the responses at the end of semester 1 (December). The first stark observation is that of all the students in the negative belonging set in September, only one of them took a subsequent survey (survey 3). Whilst any student can decline to take any survey, this strongly suggests that students who start their course feeling like an outsider, do not integrate themselves during the year, or at least not in a pandemic when all teaching is remote. Figure 2 shows the distribution of sense of belonging in December. The broad pattern that most students are positive about their sense of belonging remains the same as in September. But now there is slightly more variation between the disciplines. Some schools now have all respondents reporting positive belonging, whereas other schools still have some students reporting negative belonging. As mentioned above, the distributions are only for those students who chose to take the survey and little can be inferred about those

who either elected not to take it, or who were not even engaged enough to know there was a survey to be taken.

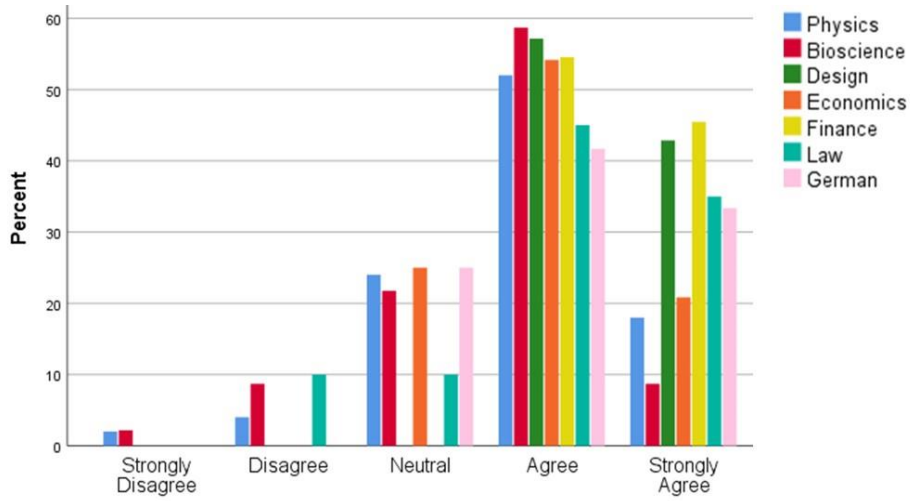

Figure 2: Responses to “I feel I belong on this course” from each discipline, in survey 2 (December).

The text responses of those reporting negative belonging at the end of semester 1 provide useful insight. Comments such as “*barely met with anyone who isn’t in my flat this semester*” and “*online seminars are awful … no one talks and as a result I feel I gain nothing from them*”. 2020-21 was clearly a unique year in terms of the rapid pivot to remote teaching, but such comments reveal how isolating this was for students.

Effect of students’ background

The set of belonging measures in table 2 (with the exception of the first one, which violated the homogeneity assumption) were analysed using MANOVA against factors characterising students’ experience prior to entering university, see Table 4. This revealed that Entry Route had a significant effect ($p=0.007$) and that the combination of First Generation with International approached significance ($p=0.060$). Subsequent ANOVAs, with Dunnett’s test as post hoc test, were used to compare the three entry routes listed in Table 4, using Standard Entry (normal offer for A Levels or equivalent qualifications) as the control. This revealed students from Access to HE courses felt significantly ($p=0.034$) more valued by staff, and that students admitted via a contextual offer felt significantly ($p<0.001$) different from their peers. Text responses reveal the insecurities of these students with contextual offers: “*I only got onto the course because of … lowering my grade so I feel like an imposter*” and “*I don't think my abilities are as good as others, so I feel like I won't make an impact on the community*”. There were no significant ANOVAs for First Generation International students. However, discriminant analysis revealed two distinct functions of belonging (Social/Friends and Valued by Staff/Not feeling Different), and the first-generation international students were significantly ($p=0.010$) less confident on the social functions.

Table 4: Prior Experience Factors

Prior Experience Factors	**Notes**
International	Students from anywhere overseas
Mature	Entering the course aged 21 years or over
First Generation	Parents did not participate in higher education
Entry Route	Separated into: (1) from Foundation year, (2) from Access to HE course, (3) via a contextual (reduced grade) offer

The statement 'I feel I belong on this course' was analysed separately revealing that International students had significantly (p=0.045) more positive feelings of belonging than Home students, and that Access to HE students had significantly (p=0.004) more positive feelings of belonging than standard entry students. The other entry routes were not significantly different from standard entry, see Figure 3.

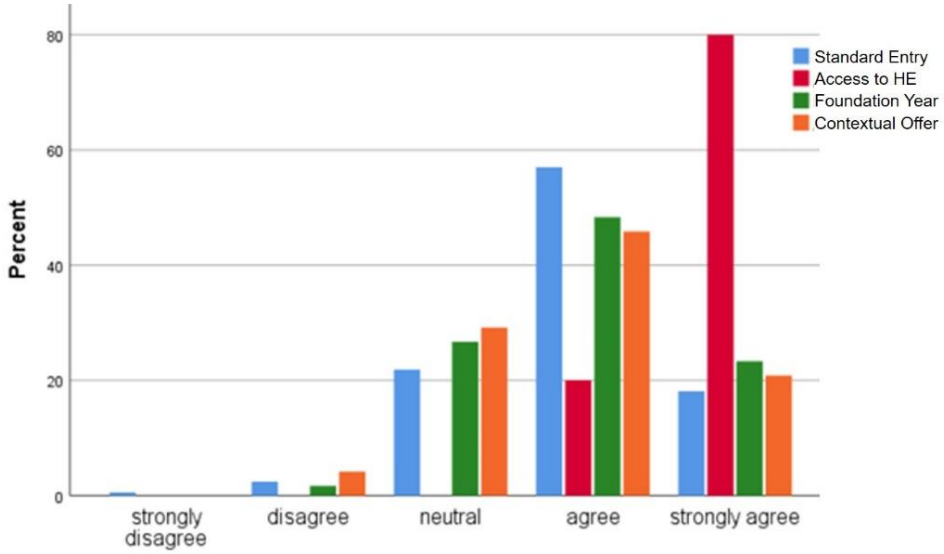

Figure 3: Responses to "I feel I belong on this course" in survey 1 (September) with entry route.

Reflecting on the different feelings of belonging from students with different prior experiences suggests that students from Access to HE courses might feel more positive since they have already spent a year at university/college and have 'proved themselves'. This resonates with O'Sullivan et al. (2019) who report on students entering university from a foundation year having a strong sense of belonging due to the shared experiences and peer relationships that they had built during the foundation year. This is in contrast to students entering on a contextual offer, who by the very nature of their admission route, are singled out as coming from an environment that has not prepared them as well, and they seem to take this to heart and feel like an imposter. International students are welcomed to the university with many specifically arranged events and this may be the reason for their stronger feelings of belonging. First Generation students are likely to have the least familiarity

with university practices. As highlighted by Gable (2020), they may be unsure about even elementary academic practices such as how to speak up in class, or approach academic staff in office hours. For First Generation Internationals this lack of knowing what to expect may override the positive effect of any welcome programmes.

With this appreciation of how different students are trying to navigate the start of their university course, how can we build strong learning communities that support all students? Firstly, it is important to have the mindset that 'we would not have admitted you if we did not think you could succeed'. And it is not just students who entered from non-standard routes that need to hear this, but all students in the cohort. Following Nunn's (2021) example, belonging is something we offer to each other; thus, all members of the cohort should value and celebrate each other's prior experiences as enriching the collective learning. In practice this can be embedded and amplified by facilitating students working together at frequent opportunities, with groups formed to ensure all minorities have at least one similar person in their group if possible. And we should never assume that everyone knows the rules/etiquette of university. For each activity, learning experience or assessment the expected learning behaviours and methods of support should be clearly set out for all students. And in line with good pedagogy, we should repeat and revisit these messages at regular intervals throughout the year to ensure all students hear the message when it is most pertinent for them.

CONCLUSIONS

From a longitudinal study of first year students across seven different disciplines their sense of belonging has been evaluated against their experience prior to university. International students were found to have more positive sense of belonging than home students, likely due to the welcome events provided for international students by the university. On the other hand, first generation international students, who are less likely to know how to behave at university, reported lower sense of belonging, with concerns about making friends. Students from Access to HE courses revealed a strong sense of belonging, likely due to the fact that they had surmounted the hurdles to progress to university, whilst students admitted on a contextual (reduced grades) offer reported feelings of impostorism. These differences make for a diverse learning community and it is vital that schools/departments find ways to collectively welcome all students whatever their previous experience, so all feel they belong and can thrive.

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Does a brief mindfulness in a Principles of Teaching & Learning course affect the experience of flow?

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ABSTRACT

Higher education has seen a growing interest in the integration of mindfulness. The project introduced a mindfulness practice to postgraduate students (and lecturer) at the beginning of lectures as an intervention into the learning and (teaching) experience in a Principles of Teaching & Learning course at a university in the UK. At the start of a block of 4 lectures, a brief (1 min) mindfulness practice was given by a trained mindfulness teacher, followed by an invite for students to set an 'intention' for the learning for that lecture. 'Flow' understood as a focussed engagement with the learning process was expected to increase. After the 1st lecture (pre-intervention), and after the final 4th lecture (post-intervention), evidence of student experiences of flow was analysed from filled Flow Short Scale questionnaires at different times. Additionally, after the final lecture, students gave open-ended, written feedback. Data analysis showed both, an increase, as well as a decrease, in the reported flow experience from doing the mindfulness and 'intention setting' practice. In the feedback interesting comments were found.

1 INTRODUCTION

A growing body of literature has reported methods, and the effects, of mindfulness in higher education. Alongside the incorporation of mindfulness in higher education goes the attention, and critique, of the application and issues of mindfulness in education (McCaw, 2020; Ergas & Hadar, 2019; 2021). McCaw (2020), for example, has pointed out the ambivalence of mindfulness in education, outlining the complex context of the achievement of mainstreaming mindfulness, whereby leaving the possibility of personal and social transformation muddled and misunderstood. On one hand, mindfulness has been praised as a useful instrument to improve students' wellbeing, mental health, and learning outcomes, on the other hand critique has suggested that mindfulness-based interventions are a quick fix for, for example, neoliberal developments in education (Primdahl, 2022; Sellman & Buttarazzi, 2020).

Ergas & Hardar (2019) argued, that the range of implementations and aims of mindfulness practices in education are diverse and complex, and described mindfulness interventions mostly aimed at improving individual mental–physical health, social–emotional learning and cognitive functions as a model of mindfulness *in* education. Whereas mindfulness integrated into teaching & learning in order to support contemplative pedagogy and enhance transformative learning processes are referred to as mindfulness *as* education (Ergas & Hadar, 2019; Sellman & Buttarazzi, 2020).

Alongside disciplinary knowledge or skill development, learning might include the cultivation of intention and attitudes that connect to learning (Wehmeier & Beck, 2019) showed how creating a space to connect intentionally to the learning experience in a

chemistry lecture at a university in the UK, by introducing a brief mindfulness (1 minute) and 'intention setting' practice, indicated an enhanced flow experience associated with attention and learning motivation for some chemistry students. Though, the intervention was not welcomed by all students. The affect, of introducing such intervention into the teaching at the beginning of lectures, was further explored with a cohort of postgraduate students in a Principles of Teaching & Learning course at a university in the UK. In this project, mindfulness is defined as 'deliberately focussing attention in the present moment'. While the instructions, and the intention of the project to make a brief mindfulness practice available to students at the start of the lecture, as well as inviting the setting of an 'intention' for their learning, were given to the lecture room, students were informed that participation was fully voluntary. Like in the previously mentioned study (Wehmeier & Beck, 2019), the effect on the students learning experience was followed using the existing Flow Short Scale questionnaire. The choice was based on the exploration to trace effects in externally recordable ways, because the effects of mindfulness are difficult to demonstrate as such. Although, it has been reported that the feeling of being carried away by activity did not associate positively with mindfulness, but this negative association did not apply to the sense of control aspect of flow (Sheldon, 2014). Based on flow theory, student learning engagement encompasses concentration, enjoyment, and interest; when focusing on individual learning experiences, flow can be understood as a combination of challenge and environmental support (Shernoff, 2014) The hypothesis for the quantitative part of the study was an enhanced measure of flow experience, due to the intervention, as flow and mindfulness are associated with present-moment focus of attention. Additionally, qualitative data were collected using open-ended questions to learn more about students' experiences.

2 METHOD

The study was integrated into a 4-lecture series in a Principles of Teaching & Learning course at a university in the UK. The 1st lecture was used as a control point (no intervention). In the 2nd, 3rd and 4th lecture, a brief (1 min) mindfulness practice was guided by a trained mindfulness teacher at the beginning of each lecture. This was followed by an invite for students to write down an intention for their learning during the lecture. Further, the students' experience of flow was measured using a Flow Short Scale (Rheinberg, 2003). These were coded and filled in at the end of the 1st lecture (pre-intervention, n = 21) and final 4th lecture (post-intervention, n = 9). The items of the Flow Short Scale measure components of flow experience with a Likert-type scale (from 'not at all' = 1 to 'very much' = 7). Collected Flow Short Scale data from 9 students returning both, pre- and post-intervention, were analysed using IBM Statistical Package for the Social Sciences (SPSS) Version 25. The median value of the flow and frequency distribution was calculated. Written feedback with open-ended questions was collected after the final 4th lecture (completion 12/21 (57%)). The study followed the ethical research framework and was approved by the Universities Ethics Committee.

3 OUTCOMES

3.1 Quantitative findings

The median flow rating was 4 for the pre-intervention (n = 21 students on the course). 9 (out of 21) students returned both Flow Short Scale questionnaires, and the median flow rating was 4 respectively for pre- and post-intervention (figure 1).

Nonetheless, the introduction of the brief intervention in the lectures did increase the median flow rating at least 1 point for 4 students. At the same time, the flow rating decreased 1 point for 3 students, and stayed constant for 2 students.

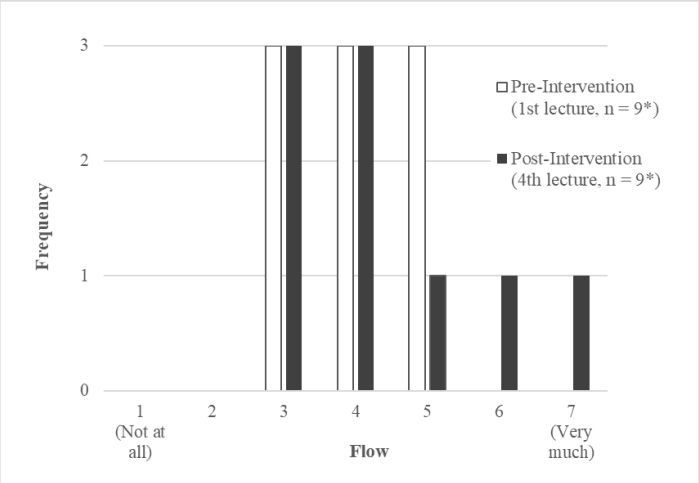

*Fig. 1: Frequency of Flow median values from Flow Short Scale pre- and post-intervention. *9 out of 21 Students returned both, pre- and post-intervention Flow Short Scale questionnaire.*

Discussion: The state of flow in the individual learning experiences and the association to mindfulness was not measured in this study. Similar to the findings in our previous study (Wehmeier & Beck, 2019), the brief intervention, capturing the flow experience might be too complex and larger numbers of participants would be required to elucidate an effect of the intervention.

3.2 Qualitative findings

The student feedback to the question 'Please describe how this activity has influenced your learning' indicated that for some, the 'intention setting' supported a transformation in the approach to learning.

> *"In a positive way by realising and reflecting the acquisition of knowledge."*
>
> *"Having the presence of mind."*

An enhanced flow experience associated with a presence of mind due to the mindfulness and 'intention setting' practice was indicated by these student voices. However, one student found the mindfulness intervention too short to be supportive:

> *"I don't think it has contributed in any way. For 5 min in the course doesn't mean anything. The practice should be tested every day to see if it has influence on the learning."*

Thus, the intervention was perceived with a substantial distance on the students learning experience.

4 CONCLUSIONS

The intention of the author was to allow students to engage with a brief mindfulness practice and 'intention setting' for their learning. Ergas & Hadar (2021) have shown, that alongside common effects of mindfulness in higher education, like stress-reduction, many students recognise a transformed view of the nature of education. The project also allowed the author to become aware of the centrality of the question of different purposes of mindfulness in higher education, and how mindfulness is

conceptualised, positioned and embedded in education. Sellman & Buttarazzi (2020) proposed, that it was necessary to deepen the definition of mindfulness used within education in order to realise the use of mindfulness as an initiative to support human flourishing.

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Is it possible to identify student bottlenecks using quality management tools?

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Abstract
In an interdisciplinary collaboration of people from different parts of Germany working with and researching on the method "Decoding the Disciplines" (DtD), the topic "Finding Student Bottlenecks" has been investigated. In the process, the use of quality management methods from the engineering field has been evaluated in order to achieve an improved structuring of the bottleneck search not only for engineering bottlenecks but also for bottlenecks from other disciplines.

1 Introduction
An interdisciplinary collaboration of people from various universities and different parts of Germany has developed over the last four years with their “home base” in Ingolstadt at the DiZ – Zentrum für Hochschuldidaktik (now part of BayZIeL- Bayerisches Zentrum für Innovative Lehre). This group of people from diverse fields like STEM, language studies, coaching, higher education didactics and other disciplines is working with and researching on the method "Decoding the Disciplines" to improve their teaching and thus the learning environments for their students.
This paper deals with one of the research topics of the group, the evaluation of quality management tools like e.g. an Ishikawa or fishbone diagram for helping principally during a more structured identification process of student bottlenecks. This identification is quite important as it’s the first step and thus starting point of the Decoding process - “Identify a bottleneck” - as described by Pace (2017). The quality management tools originating from engineering are used to evaluate causes for specific problems or defects (symptoms) in technical systems in a structured and graphical way.

2 Quality management tools: use in engineering
Quality management tools are widely used in engineering for different purposes. An overview of quality management tools can be found in e.g. Tague (2005) or Brüggemann and Bremer (2020).
One group of tools is used to check for the quality of machined products and the production process, e.g. by a statistical analysis of measured diameters or lengths. These tools are not considered for the bottleneck search as we have no big amount of numerical data available at this step of the decoding process.
A second group of tools is used for process or product improvement, not only during the production phase but also to lower failure rates of the product during their use phase. This second group of tools contains a subgroup of tools used for cause-effect-analysis of e.g. bad results of production processes or premature failures of products during their use phase. This subgroup could contain tools that are possible helpful for finding bottlenecks by looking for possible causes of students' difficulties in understanding. In this subgroup you will find e.g. the Ishikawa (fishbone) diagram, the “5 Why”-method, the “Is – Is not”-Method or the Failure Mode and Effects Analysis (FMEA).

3 Research questions concerning use of the tools for the “Decoding the Disciplines” method

The subject of our investigation is, whether these tools can be used to structure the identification of bottlenecks considering the following aspects:
a) Being able to search for bottlenecks in one’s own subject in a targeted, structured way and in advance of courses, i.e. not having to wait for the feeling that something doesn't fit in the learning process of the students. For engineers a more graphic sketching technique, more along the lines of an Ishikawa diagram or mind map, is much more familiar than e.g. a structured writing technique like the one proposed by Kaduk and Lahm (2018).
b) Decomposing bottlenecks (which are “too big” to be decoded efficiently in an interview) into elementary bottlenecks which are manageable and better decodable.
c) Helping formulate a first version of a bottleneck out of only vague feelings during the lecture as a symptom that something in the teaching and learning process has not worked now, or the look of questioning faces of the students or questions from the students that trigger "question marks" in the lecturer trying to find a suitable answer.
d) Are these tools usable by one teaching person alone with helpful results? Or is a teaching community needed to use them and discuss intensively during the searching process for bottlenecks?

4 Investigation of the Ishikawa diagram as a tool finding bottlenecks in a structured way

The Ishikawa or Fishbone diagram has been chosen as the first method due to the following reasons:
1) It is a tool for a cause-and-effect-analysis. The “effect” could be a bottleneck (research questions a and b) or a symptom (research question c).
2) Many possible causes for a problem can be identified in a graphical way which helps structuring the thinking process, e.g., during a brainstorming session.
3) The ideas for possible causes can be grouped into possible useful categories.
4) The method is not too formalised and thus does not distract too much from finding ideas about the causes of the difficulties in understanding.
The basic structure of an Ishikawa diagram can be seen in figure 1 for one example: bad quality of photocopies. The possible causes for the effect or problem are grouped into main categories.

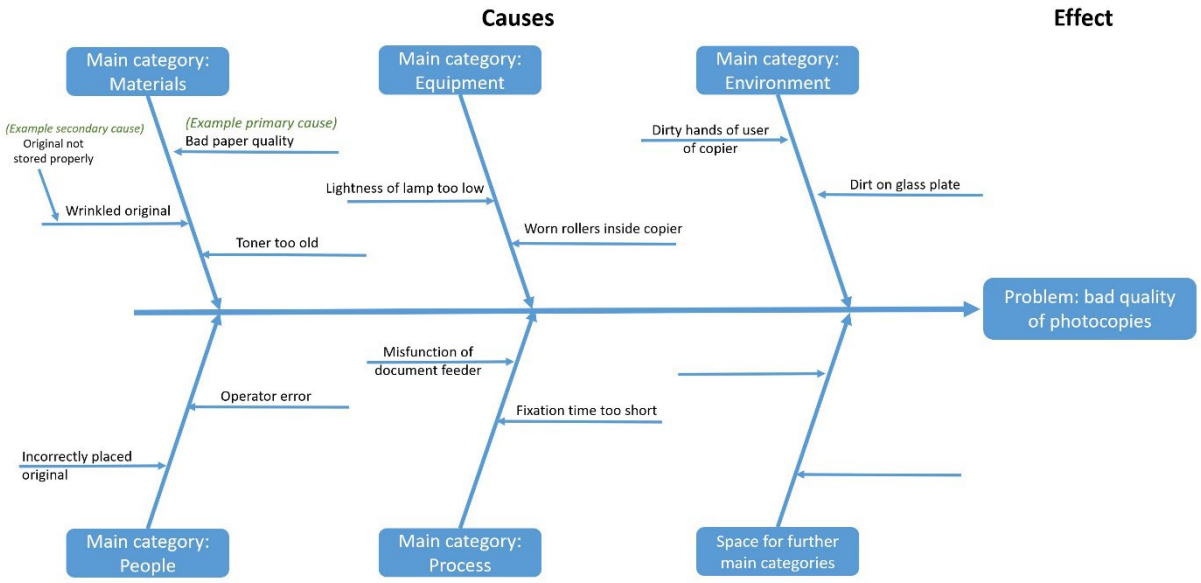

Figure 1: Basic structure of an Ishikawa diagram (based on Brüggemann and Bremer (2020), translated by authors of this paper)

Let's start with focusing on the possible use of an Ishikawa diagram for the bottleneck search, i.e. mainly research questions a, b and d as mentioned in paragraph 3. Research question c will be dealed with later in this paper.

During the meetings of our Decoding community in the last four years, we have done a lot of Decoding interviews for different bottlenecks and disciplines and have also analysed these interviews thoroughly using videos and transcripts. We were able to compare different bottlenecks across the disciplines and came out with a tentative summary of generic bottleneck causes, see figure 2. On the upper side we have identified main categories related rather to the processing of information and on the lower side main categories related rather to action part (we are aware that the two are interconnected).

Let us start by explaining the main category "image" resp. "image processing". People looking at the same picture see different things, so it is worth to analyse where exactly do your students look to and how (which level of details, which perspective). Palfreyman (2020) describes an example of difficulties with a force diagram for an aeroplane flying with a constant speed in a circle. For an expert it is clear, that one must look from behind the aeroplane, seeing the tilt angle of the wings. While student look from above, seeing all the circle trajectory and getting confused how to introduce the centripetal force and not to use a centrifugal force.
Another example is described in Riegler (2016). Beginner slides his gaze over the difficult text or formula from left to right in a continues sequential manner, while an expert often skips the details and first jumps to the end in order to understand the goal, then comes back to understand the details and repeat it. Sometimes it can be even better to read the formula from right to left. Focus of attention, associations, gaze pattern are only few aspects of image processing, and you may find some more important and suitable causes for your bottleneck. We just want to summarize possible directions for search of causes without pretending to get a full description of all possibilities.

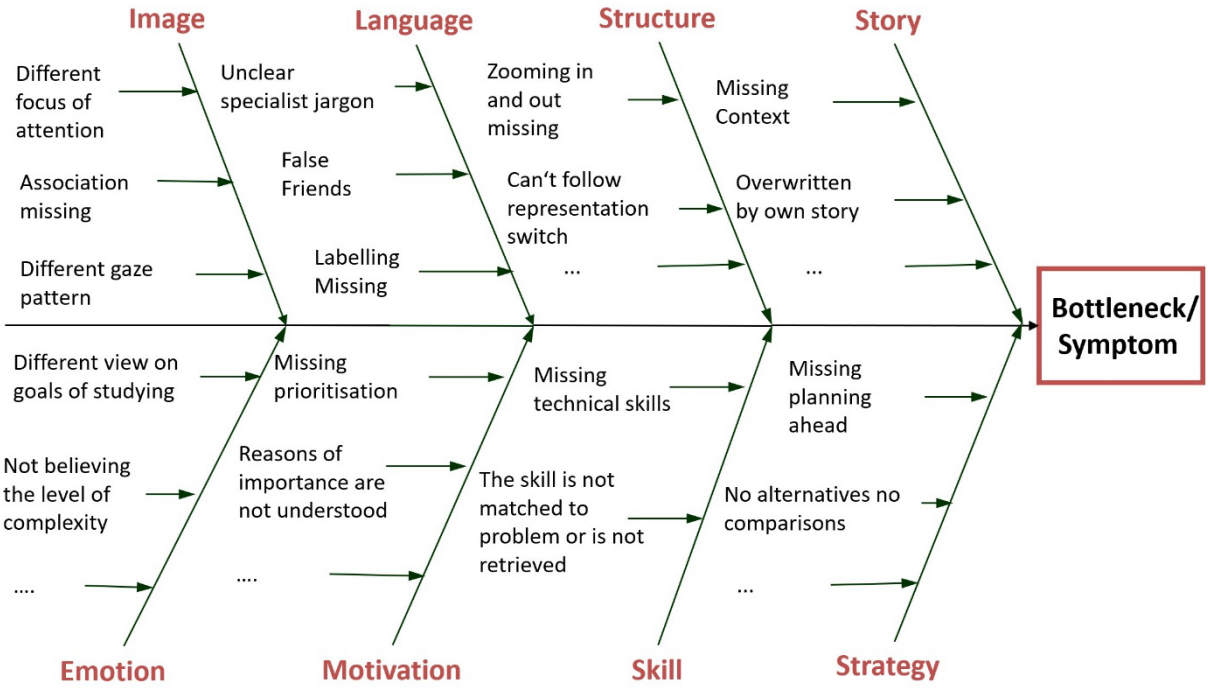

Figure 2: Ishikawa diagram for Bottleneck Search

The second main category of causes is “Language”, with such well-known sources of difficulties as special vocabulary and false friends. For example, notions energy, heat, force and work are used in daily life in a different way than in Physics. By “missing labelling” we mean a situation where students can’t name the phenomena they would like to speak about. This could be an indicator of missing of whole corresponding object/concept/internal representation.

Closely related to image and language processing is the question of structuring. There can be a lot of invisible expert knowledge hidden here. For example, “representation switch” in mathematics: while an expert sees a linear equation with three unknowns, he automatically thinks of a plane in 3D space. The same applies to complex numbers: we switch from algebraic to geometrical representation depending on the task. But such a switch can be a big hurdle for a beginner.

Finally, a biggest source for hidden expertise is a “story” behind the knowledge or calculation: something, which gives your results or your statements a sense. Your “story” stems from your experience and application of your knowledge, see Palfreyman (2020). A beginner is naturally missing it and in worst case his experience is contradictory to what teacher says. In such a case, a story may “overwrite” theoretical knowledge, leading to misconceptions such as “heavy objects fall faster”.

We do not go into details of the lower part of diagram in figure 2 because we expect that it is self-explaining. This doesn’t mean that this part is less important. On the contrary, emotional and motivational aspects are crucial and corresponding bottlenecks prove to be most difficult for decoding as we have experienced during the work in our Decoding community.

Our summary of possible causes in figure 2 doesn't pretend to be full. We hope that it can support and inspire your own search for causes and that you can extend the diagram for your purpose.

What are our results concerning the use of the Ishikawa diagram in the search for bottlenecks and in the interview? First, the Ishikawa diagram can help to sharp a bottleneck before the interview. We take as an example following bottleneck: "I wish my students would see fast ways of transforming mathematical formulas". If we take a closer look, we see that it is a huge bottleneck which encompasses many different aspects:

- Image:
  - Focusing at relevant places to cut into parts;
  - Recognizing repeated patterns in a formula;
- Structure:
  - Recognising structure by zooming details in and out;
- Strategy:
  - Using alternatives;
- Story
  - Understanding that Mathematics is not about making difficult calculation, but about finding simplest way of calculation.

You can now either focus on one of this aspect in a Decoding Interview, or you can first think of diagnostic tasks for your students in order to find out which of these aspects are the most difficult. Our experience is that it is possible to use the Ishikawa diagram by one person for this sharpening process of the bottleneck, but it is much easier to do this in a group of people from different disciplines. In this group with different expertise, some are professionally very close to the bottleneck topic, others are professionally far away, you will find many more possible causes and also causes from several main categories.

Second, the Ishikawa Fishbone Diagram can guide the questions during the interview. For example, the "Image" Axis results in such questions as

- "Where are you exactly looking at?" (Focus of Attention)
- "Why you got such an association" (Association),
- "Where do your look first?" (Gaze pattern), and so on.

Now let's focus on research question c in paragraph 3: the start point for the use of the Ishikawa diagram would be e.g. the only vague feeling during the lecture that something in the teaching and learning process has not worked now at a specific topic, explanation or student activity. This would be the "symptom" as the effect in the diagram (as seen at the right end in figure 2).
As an example, this symptom could be the use of the terms "heat" and "temperature" in discussions with students during a lecture in engineering thermodynamics. The lecturer gets the impression that these two terms got mixed up and are not correctly used by the students. By using the diagram, the lecturer can investigate this impression to find possible causes for this misuse, e.g., in the main category "Language" due to the different meaning of "heat" in daily life (meaning as high temperature) and in thermodynamics (form of energy). Another possible cause in the main category "story" can be a missing context for the students as you must include the term "internal energy" into the context, together with "heat" and "temperature". Temperature is an indicator value for the internal energy of a thermodynamic system and heat can be

used to change the internal energy. These identified causes can be bottlenecks which may be examined further in a Decoding interview.

5 Further research questions

In our opinion especially the Ishikawa diagram can help find and formulate student bottlenecks. But up to now we have tried to use the Ishikawa diagram mainly in search or formulation of bottlenecks in mathematics, physics, or engineering lectures. Therefore, we see the following open research questions:

Are these methods or approaches, elaborated for technical systems based on physical principles of action, also applicable to social systems in the teaching and learning context?

Can one also find emotional bottlenecks ("students feeling disconnected from or lost in the teaching and learning process")? Or can one find only those on the logical-rational level that can be described qualitatively by means of a cause-effect chain?

Does the discipline and discipline-dependant culture play a role in which quality-management methods might be helpful for the search or formulation of bottlenecks?

Which other tools out of e.g. project management or other planning or problem solving procedures can be used to facilitate the process of finding and formulating bottlenecks and fitting learning outcomes? Khomokhoana (2022) has investigated the use of the SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis and was able to identify possible bottlenecks for novice programmers in advance of courses. These research questions will be topics of our Decoding community in the future. A cooperation with other colleagues with respect to the identification of bottlenecks, especially colleagues from non-STEM disciplines, would be highly appreciated.

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