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## Challenges and opportunities: Videoconferencing, innovation and development

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### Keywords

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### Abstract

In January 2020, in response to the emergence of Covid-19 in mainland China, the Hong Kong Polytechnic University (PolyU) suspended face-to-face classes and introduced online teaching and learning. This autoethnography explores how I, as an Educational Development Officer in the University's Educational Development Centre (EDC), supported teachers in implementing synchronous online teaching. Using Cultural Historical Activity Theory (CHAT), I analyse the multiple factors that influenced me in carrying out my role, and highlight the contradictions in my activity system. Drawing on personal memories, as well as online documents, emails, text messages and webinar recordings, the study reveals how an unprecedented crisis provided not only novel *challenges*, but also *opportunities*, both for innovation in educational development in my institution and for my own professional development. Its aim is to help me build on any institutional innovation and personal professional development that might have emerged from this period, and, through recommendations, aid other educational developers in implementing technological innovation in times of crisis or change.

## 1. Introduction

In January 2020, in response to the emergence of Covid-19 in mainland China, the Hong Kong Polytechnic University (PolyU), in common with all other higher education institutions in the region, elected to suspend face-to-face classes and introduce online teaching. This was to start on 10 February, the first day of teaching in Semester 2.

Together with two colleagues from my own department, the Educational Development Centre (EDC), and Information Technology Services (ITS), I was tasked with helping more than 1300 academics and several thousand more research and admin staff to deliver synchronous online teaching (SOT), something very few of them had any prior experience in. My immediate role was to create practice guidelines for teachers and students, outline recommendations for heads of department (HoDs) and learning and teaching committees (LTCs) on monitoring the quality of online lectures and tutorials, and develop and facilitate professional development webinars via the synchronous platform Blackboard Collaborate Ultra (BCU). The recommendations and guidelines were to go on a brand-new online teaching website, while the webinars would form part of a professional development programme for teachers coordinated by EDC. Later I would be asked to write additional documents and newsletters featuring activity exemplars and advice for teachers on SOT; facilitate sessions for teachers to share best practices and reflect on lessons learned; and design training and guidelines for using Zoom, adopted as an alternative platform by the University in Week 8.

From: [Senior Management Team (SMT)] Sent: Sunday, February 2, 2020 11:06 AM

Our work in the next few days [is] CRITICAL, as all the practice guidelines, briefing and training session launches, and all website communication will need to be in place between Monday [3rd] and Wednesday [5th February]. According to the President, we are at WAR now. You are all expected to work full gear both among ourselves and with the departments (HoDs, LTCs, etc). Welcome on board, TEAM! (2 February, capitals in original)

For the majority of teachers, who typically had harboured negative attitudes to online teaching and learning, this sudden and forced transition to virtual instruction would have caused alarm. While PolyU had experienced a suspension of in-person classes during the campus occupation of November 2019, this had happened near the end of the semester, allowing teachers to finish courses ahead

of schedule and turn their attention to organising online assessment, or, in some cases, award final grades based on coursework students had already completed. Beginning the new semester entirely online was unprecedented.

Like everybody at PolyU, I felt anxious about the wider situation in Hong Kong, especially so soon after the city-wide protests of late 2019. The deadlines for developing the guidelines and webinars placed me under a great deal of stress, which was then compounded by the prospect of working remotely with a colleague I had never met in person and being directly accountable to the SMT. Yet in my case the crisis also seemed like an exciting and welcome opportunity to try to bring about innovation within what is still a fairly traditional institution, implementing a programme of professional development which could transform teaching and learning. I would be able to harness some of my previous experience and skills in professional development and SOT to benefit the University and achieve personal growth.

I reflected on the President's choice of words. If we were 'at WAR', then amidst the profound hardships, might our University also experience meaningful and lasting transformation on the scale of, say, Britain during and after the Second World War? Could this new global crisis lead to positive changes that had previously been resisted?

### 1.1 Research topic, problem and purpose

In this autoethnography, I analyse how I supported colleagues in implementing SOT in 2020. I attempt to highlight how the unprecedented situation presented not only significant *challenges* but also *opportunities*, both for innovation in educational development within PolyU and with regard to my personal professional development. To do this, I explore the multiple factors that influenced my ability to carry out my role during this extraordinary time. My aim is to use the findings to consolidate any institutional innovation and personal development that might have emerged from this period, and, through a series of recommendations, assist fellow educational developers in implementing technological innovation in future episodes of crisis or change.

## 2. Literature review

In my review, I focus on the role of educational developers in implementing online teaching in universities in response to emergency situations that resulted in the suspension of face-to-face instruction. To achieve this, I searched JSTOR, Scopus and Google Scholar using a profile that combined different terms (crisis, closure, shutdown,

online teaching, educational development, higher education). I then used the ‘snowball’ method to search the limited number of relevant studies for references to other research, before selecting the five studies that I felt had most in common with my own context.

## 2.1 Emergency implementation of online teaching and learning in higher education

Though the suspension of face-to-face classes due to Covid-19 was sudden, and presented challenges, this was not the first time university teaching in Hong Kong had been affected by a public health crisis which called for the rapid adoption of technology-enhanced learning. In early 2003, the outbreak of Severe Acute Respiratory Syndrome (SARS) in the region forced all Hong Kong schools and universities to close for a three-month period. In her study, based on accounts from nine teaching colleagues at the Chinese University of Hong Kong (CUHK), McNaught (2004) reflected that technology ‘was able to come naturally and appropriately to the fore’ (p. 183). Even in an institution where face-to-face teaching was the norm, and where technology was seen as a way of *supplementing* or, at best, *enhancing* traditional approaches, it offered a mainstream set of tools that could be rapidly mobilised (McNaught, 2004: p. 192). In a short time frame, teachers designed online resources to support independent learning and used emerging synchronous technologies, such as online chat, to facilitate teacher-student and student-student interaction. McNaught observed that colleagues were still using asynchronous tools, including forum discussions, six months after face-to-face teaching had resumed. While SOT had fallen off by that point, teachers maintained that ‘it can be done if we need it now. It won’t be a stress’ (McNaught, 2004: p. 192).

McNaught writes of a community of academics, coming together to overcome their fears and supporting their students through the use of novel technologies. While this paper is effective in drawing together individual colleagues’ reflections, it does not provide an account of her own experiences as an *educational developer*, facilitating the implementation of online teaching. It also does not identify any challenges or tensions within the institution that may have hindered McNaught or her colleagues in this period, or inhibited the more systematic implementation of online teaching in the long run.

Mackey et al. (2011, 2012) offer a powerful account of how purposeful blended learning and pedagogical innovation supported academic resilience in the aftermath of the earthquake that ravaged Christchurch, New Zealand and the University of Canterbury in February 2011. In this context,

the authors were aided by their positive prior experiences of online learning and their understanding of its potential benefits. Their ability to engage less experienced colleagues in ‘meaningful professional dialogue about the possibilities of online learning’ led to ‘important pedagogical shifts’ (2012: p. 130). These shifts included the use of a flipped classroom model, where students watched video lectures online, and contact time in virtual, synchronous classes was reserved for interaction and discussion. Rather than being faced with implementing online teaching for the first time, academics were required to rethink or adapt *existing* approaches to virtual instruction. Although innovation often presented challenges, as it ‘involves disturbing established routines through which individuals and groups perform and continuously reaffirm their identity’ (Somekh, cited in Mackey et al., 2012: p. 130), one year after the earthquake the authors found many of the crisis-induced changes had become embedded in regular practice.

For Tull et al. (2017), the University’s resilience in the face of adversity can also be attributed to ‘just-in-time, collegial professional development’, and an institutional culture characterised by ‘resourcefulness, adaptiveness, and flexibility in [teachers’] ability to adopt new e-learning practices and adapt existing ones’ (p. 66). Building both formal and informal support networks among staff also proved critical. Because it was not possible for e-learning advisors to provide one-to-one technical support or run face-to-face training, a communities-of-practice approach to professional development was adopted, enabling teachers to share and learn from examples of best practice. However, such communities collaborated via discussion forums; *synchronous* online tools are absent from Tull et al.’s account.

Between 2015 and 2017, student protests forced several South African universities to suspend face-to-face teaching and adopt blended or online approaches instead. In their study, based on interviews with academics at the University of Cape Town, Czerniewicz et al. (2019) analyse contradictions and tensions in the use of online teaching. Some teachers felt unhappy with the way this approach was imposed without consultation, while others feared it would exacerbate existing inequalities, fuelling further resentment. Another concern was that online learning, if not carefully implemented, would harm the university’s reputation, or at least attract negative comments from students who expected a ‘traditional’ learning experience (Czerniewicz et al., 2019: pp. 18-19). For many teachers, online delivery was ‘inappropriate’ and went against ‘the normal mode of instruction’ (Czerniewicz et al., 2019: p. 19). Even the minority who embraced online teaching were anxious that it might become tainted by its association with social unrest and then

not be seen as a viable approach in the short or long term (Czerniewicz et al., 2019).

Though these studies do acknowledge the roles played by educational developers, there are no accounts of the emergency implementation of online teaching from *educational development* perspectives, let alone research into the use of *synchronous technologies* for online teaching or development in times of crisis. There are also no *autoethnographies*. In this study, I attempt to address these gaps in the literature while addressing the uniqueness of the current situation.

## 2.2 Research questions

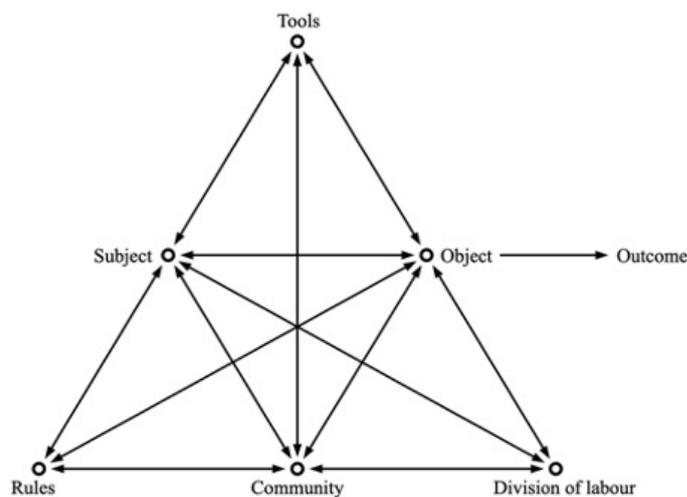
1. How did I respond to my role in helping to facilitate the emergency implementation of synchronous online teaching in Semester 2?
  - a. What factors influenced me in carrying out my role?
  - b. What contradictions were there?
2. How far did I succeed in overcoming challenges and maximising opportunities for both institutional innovation and personal development?

## 3. Theoretical framework

I use Engeström's (1987) Cultural Historical Activity Theory (CHAT) to identify and analyse the factors that influenced my role in implementing SOT. In the CHAT framework, an *activity system* represents how action taken by a *subject* working towards an *object* to achieve a given *outcome* is mediated by *tools* (both physical and symbolic), *rules* (both formal and informal), the *community* (participants and stakeholders), and the *division of labour*, which refers to the 'explicit and implicit' organisation of the community (Engeström, 1987). This is shown in the CHAT triangle below in Figure 1.

CHAT can help identify where *contradictions* occur both within and between activity systems (Engeström, 2001; Yamagata-Lynch & Haudenschild, 2008) so they can be 'analysed and over-come' (Czerniewicz et al., 2019: p. 9). Engeström (1987) defines four levels of contradictions: *primary* (located within one component of the activity system, e.g. *rules*), *secondary* (between two components, e.g. *tools* and *division of labour*), *tertiary* (between old and new versions of an activity system) and *quaternary* (between the central activity system and other neighbouring activities). I use CHAT to organise my findings into the different nodes of my activity system, before systematically analysing any

Figure 1. CHAT triangle representing an activity system



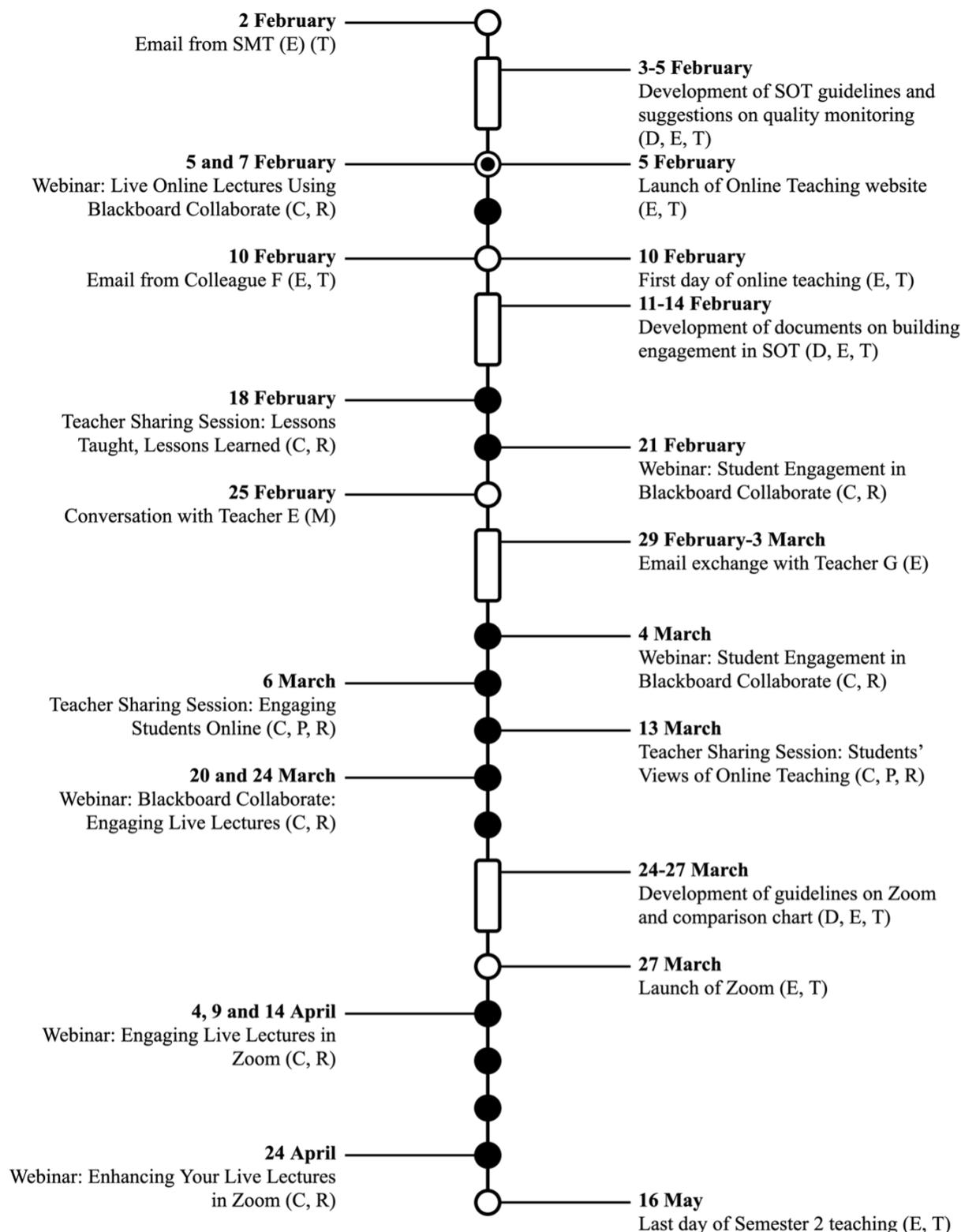
contradictions I identify within it, or between it and other activities, to determine whether these represent challenges or opportunities for innovation and development.

## 4. Method

I believe autoethnography has enabled me to create a 'nuanced, complex and specific' account (Adams et al., 2015: p. 25) of my personal and cultural experiences as an educational developer during a uniquely challenging period. It has also helped me connect my experiences to 'larger conversations' (Adams et al., 2015: p. 25) about the use of technology and role of educational developers in times of crisis, using the insights I can provide as 'a full member in the research setting' (Anderson, 2006: p. 375). Through combining this methodology with CHAT, I situate my autoethnographic study within the 'analytical' tradition, focused on 'improving theoretical understandings of broader social phenomena' (Anderson, 2006: p. 375).

In writing my autoethnography I have relied to a large extent on personal memory, a 'building block' of the method (Chang, 2008: p. 71), collating recollections from the three-month period under the nodes of the CHAT framework. However, in recognition of the fact that memory 'is sometimes a foe' to the autoethnographer, since it 'selects, shapes, limits, and distorts the past' (Chang, 2008: p. 72), I have triangulated data from personal memory by analysing documents, emails, text messages, and webinar chat transcripts and recordings, and have used the dates of these to construct a timeline, shown below in Figure 2. I have also drawn on teacher feedback on my webinars to support my findings. Lastly, for the purposes of 'member checking',

**Figure 2. Timeline summarising main events and the actions I took to achieve the implementation of SOT during the study period, and data sources used from each event or action (C = chat transcript, D = online document, E = email, M = personal memory, P = PowerPoint, R = webinar recording, T = text message)**



I have shared my findings with close EDC colleagues. Teachers and colleagues are anonymised in the section below using letters of the alphabet.

## 5. Findings: My activity system

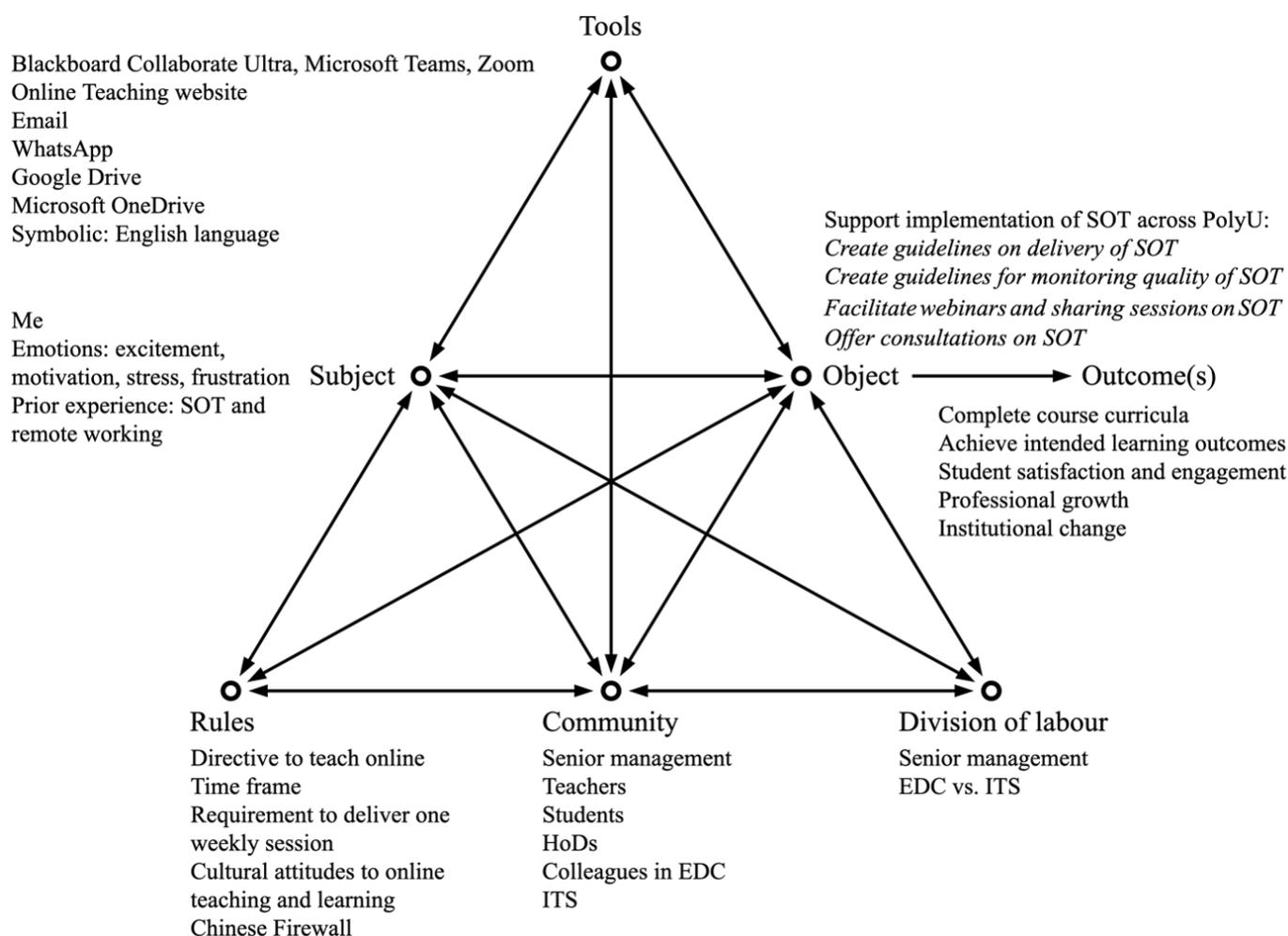
In this section, I use the six nodes of the activity system triangle to organise my analysis of the factors that mediated my role in implementing SOT. My activity system is shown in the CHAT triangle in Figure 3.

### 5.1 Subject, object and outcome

I accepted my role with excitement and enthusiasm. I had worked in online teacher education for six years before joining the University, making regular use of synchronous online tools to deliver training to English teachers, as well

as leading professional development programmes for online educators in the use of SOT. Since becoming a member of EDC in late 2018, these skills had lain dormant. I saw the new situation as an opportunity to revive them and put them into practice. This previous experience in online teaching, together with my experiences as an online *learner* on my master's degree and professional development programmes, meant that I approached the role convinced of the potential benefits of SOT, with clear ideas about how they could be realised across PolyU. Confident and motivated, I threw myself into the task of creating the documents and designing the initial online training sessions which would support SOT: the *object* of this activity system. I perceived there to be multiple *outcomes*: completion of course curricula, achievement of intended learning outcomes and student engagement and satisfaction, all of which were aligned with the goals of the institution. However, I could also identify other, more

Figure 3. CHAT triangle representing my activity system in supporting SOT implementation



personal, outcomes: increased job satisfaction, professional growth, and a more prominent role for my department in leading the longer-term transformation of teaching and learning. The object and potential outcomes were therefore both highly motivating.

Despite the motivating nature of the work I was doing, I also experienced intense emotions of stress, anxiety and fatigue, as I put in extra hours, often working long into the night, to ensure the guidelines and training materials were completed before the 5 February deadline. Whilst I had enjoyed being able to work remotely for my previous organisation, because it allowed me to set my own hours, I had subsequently grown used to the routine of commuting to my office at PolyU each morning, and had learned to appreciate being able to leave work behind when I returned home each evening. Now I had no option but to work towards my object from within my small apartment, and it had become much more difficult to disconnect from it at night.

I also experienced frustration in the days leading up to the start of online teaching, which I can attribute to a loss of control over aspects of the process. Though I had been given considerable autonomy over the design and delivery of the professional development webinars in SOT, the documents I created were each subject to a lengthy review process involving senior managers, which took critical decisions out of my hands and slowed my activity down.

### 5.2 Tools: technological and symbolic

The most obvious *tools* that mediated my role in implementing SOT were the platforms I used to communicate with colleagues, create and share documents, and design and facilitate webinars. These included email, phone, and WhatsApp; Microsoft OneDrive and Google Drive; and BCU and Zoom. Although I did not use Microsoft Teams for delivering training, this platform was available for teachers to use in their SOT, so as such it featured alongside BCU and Zoom in the documents I wrote. Absent were the familiar physical spaces associated with educational development: the campus, my office, the training room.

Though BCU and its predecessor, Collaborate, had been available to all staff for six years prior to the 2019 campus occupation and the outbreak of Covid-19, teachers had had little reason to use it, as all classes had taken place in person, and therefore scant incentive to attend training. While BCU was perceived to meet the needs of undergraduate teaching, several students in the Chinese mainland had reported issues accessing it, so Teams was recommended to teachers as an alternative, just days before the start of

Semester 2. When Teams was later found to be less effective for undergraduate SOT due to the lack of control it offered teachers over the learning environment, Zoom was adopted. Whereas Teams and BCU each required specific procedural guidelines, the guidelines for Zoom sessions were more complicated still. For security reasons the sessions needed to be hosted within a course in Teams or Blackboard, depending on which platform teachers were using for their subject.

Besides these myriad *technological* tools, a key *symbolic* one was English: the sole medium of instruction, and the language used for all documents and webinars on SOT.

### 5.3 Rules: formal, informal, cultural, economic and political

The overarching *rule*, which stemmed from the wider societal rule of social distancing, was the formal directive from senior managers that all teaching and learning take place online. Whilst the initial email from SMT stated that online teaching would continue until the end of Week 3 (14 February), subsequent announcements extended this to Week 5 (28 February) and, finally, the end of Semester 2.

It was less clear how much flexibility teachers had with regard to the length or format of their synchronous sessions. The directive specified that online lectures should take place weekly, at the same time as scheduled in-person lectures, and last *up to* three hours. However, it was not explicitly stated if teachers were required to deliver their weekly learning content via a single lecture-based session, or if they had the option of *replacing* traditional lectures with activities that students could complete asynchronously, before and after a shorter and, potentially, more interactive and student-centred synchronous session. This ambiguity is likely to have resulted from fears that the University could be perceived to be reducing contact hours, failing to meet students' expectations or otherwise 'doing less than' other Hong Kong universities (Colleague A). Unless their HoD had explicitly granted them permission to offer shorter sessions, teachers were reluctant to do this, either for cultural reasons (pioneering different approaches could be seen as defying the wishes of authority figures) or economic concerns (it could lead to student complaints or even calls for refunds). This informal rule or, more accurately, lack of guidance, limited my ability to promote the use of shorter synchronous sessions which could complement asynchronous instruction, and therefore undermined the effectiveness of my role.

My activity was also impaired by formal political rules. In January, several thousand mainland Chinese students had returned home, and were now unable to re-enter Hong

Kong. As Google is blocked in mainland China, we could not advocate the use of Google Docs in webinars, and whilst BCU is not officially banned there, access problems meant that an alternative had to be found, in Zoom, that mainland-based students could use.

#### 5.4 Community: institutional stakeholders

The *community* that mediated my activity was broad and diverse. It involved the two EDC and ITS colleagues I was asked to work with on documents and training; colleagues from the wider EDC and ITS teams; senior managers; HoDs; academics, researchers and admin staff engaged in delivering SOT; and, indirectly, more than 26,000 students, whose levels of satisfaction and engagement would be used to assess the effectiveness of SOT.

The academic community at PolyU was characterised by an overall lack of experience in SOT and unpreparedness to teach online, combined with a general sense that online teaching could never match the experience of in-person instruction because it was intrinsically less satisfying and engaging. Yet there were notable exceptions. The minority of teachers with more positive attitudes to online teaching were typically those who had attended earlier EDC workshops and embraced SOT in the November 2019 campus occupation. I was able to call on them to present in my first sharing session and could rely on them to respond enthusiastically in discussions in other webinars, improving perceptions of SOT. For instance, B outlined his use of a ‘flipped’ approach, where students accessed video lectures before class and spent synchronous sessions interacting with each other and engaging with content via quizzes, polls, collaborative files and breakouts, where the use of webcams and microphones was strongly encouraged, to maximise social presence. Though it was ‘exhausting... much more so than face-to-face teaching’ (B, 18 February), SOT was effective. Later, Teacher C expressed similar sentiments:

‘I find students are actually more engaged in my online classes. I have a cohort of 350 and we use polls, we use chat, we create documents, we even do breakouts in groups of ten. You can’t do that as easily in a traditional lecture.’ (C, 9 April)

In their feedback on my webinars, this subset of teachers valued the opportunities I gave them to experience and reflect on SOT from a learner perspective and exchange ideas with peers in breakout groups. It was as if their expectations of professional development sessions mirrored their beliefs about teaching: both should be collaborative, reflective and learner-centred.

Some colleagues who were less well disposed to SOT seemed to view it as a stopgap measure that would end with the resumption of in-person classes. For them, the focus was on ‘learning the new platforms’ so that they could ‘put their lectures online’; in other words, continue with the same lecture-based approach to teaching as before, which many teachers maintained PolyU students expected (Teacher D, 4 March). These beliefs were reflected in their attitudes to staff development: they felt webinars should prioritise the ‘hands-on’ learning of functions on BCU and Zoom, rather than discussions about SOT or reflections on their teaching practice.

Others, such as E, were at first openly hostile towards SOT:

‘I’ve got to be honest with you, Dave, I hate online teaching. I hate Blackboard Collaborate! I hate not being able to see anyone, getting nothing back from them. I just watch the clock and wait for it to end.’ (E, 25 February)

Paradoxically, this final group of teachers came to accept that they had no choice but to adapt their teaching approaches in order to make SOT a more rewarding experience, and this meant exploring strategies to boost engagement. There were also concerns among colleagues in EDC that teachers required more support in raising attendance and participation:

‘If today’s attendance is a guide, attendance by students in online classes is generally not high (half the class at best; worse than average attendance F2F). Could you recommend some ways to increase participation?’ (Colleague F, 10 February)

This led me to create two additional documents outlining sample SOT activities and strategies for building engagement. I then used these as the basis of new webinars, where teachers tried out and analysed activities, evaluated strategies, and worked in groups to brainstorm solutions to challenges they had experienced. These were followed with a second sharing session, where presenters and participants reflected on their SOT practice by sharing answers to pedagogical questions they had faced. In email exchanges leading up to her presentation in this session, JN discussed her frustrations when using breakout rooms:

G: Not only did students not turn on their microphones, but I did not make the documents editable, so students were sitting there, unable to do anything. It took 20 minutes to set up. Once it was working, all the groups completed the activity, but the discussion was rushed.

So, I am happy to share what NOT to do, but I have no answers. Ugh.

Me: It sounds like some of the problems you've experienced are technical ones, but maybe using breakouts or shared documents in the first place is your answer to more critical *pedagogical* questions: How can I maximise participation and interaction in an online synchronous environment? How can I collect evidence that learning is taking place?

G: I like how you put a positive spin on things. When you say it that way, I guess I have had some success. I have found answers to some questions! (29 February)

G: I had grand hopes for today's tutorial. I was so positive and encouraging about turning on microphones. Guess how many did? Zero. It was disheartening. I'm looking forward to our sharing session to see if other teachers can help.

Me: Don't give up on the breakouts – even if students are editing their shared document in silence, this is evidence of interaction. Maybe speak to some of them privately and find out why they don't want to speak? (3 March)

Intriguingly, it was Teacher E who shared her advice on students not using their microphones: nominate individual students to speak, and allocate roles for breakouts to ensure students each contribute to tasks and are ready to present their findings orally (6 March).

### 5.5 Division of labour: explicit and implicit

In common with many other universities, PolyU is a fairly hierarchical organisation. From the outset, all directives on online teaching were issued by the President, then implemented by the SMT via five working groups, composed of professional staff from EDC and ITS, assigned in consultation with the directors of each unit. *Division of labour* in our working group reflected the organisation of work at institution level: ITS is responsible for selecting and implementing technologies, and providing *technical* guidelines, training and support, whereas EDC explores uses of these technologies in teaching and learning and provides *pedagogical* guidelines, staff development workshops and consultations. In our group, then, I concentrated on authoring the best practices and activity documents and on planning and facilitating webinars, with valuable input from my EDC colleague on suggestions for quality monitoring and collecting attendance data. Our ITS colleague, meanwhile, provided content for our technical guidelines on creating

and facilitating sessions in Teams, BCU and Zoom, recognising that in places the existing ITS guidelines needed revising to fulfil new requirements such as obtaining an accurate attendance list from each online session and sharing the recording.

In writing suggestions for quality monitoring, I found it enervating to have spent time agreeing the exact detail of each suggestion with my director, only to have our ideas rejected at the final stage by SMT. It had been my hope that our published recommendations could include the use of teacher-led reflection, peer review and formative feedback, all of which I saw as integral to raising online teaching quality, yet the final document focused solely on top-down monitoring carried out by LTC chairs and HoDs. While the guidelines on SOT were more straightforward to write, these depended on prompt feedback from ITS, which was not always forthcoming.

## 6. Discussion

In this section, I focus on the *contradictions* I experienced *within* my activity system, working towards the *object* of implementing SOT, and *between* this and other activity systems. I discuss how these have presented both challenges and opportunities in achieving my desired *outcomes*: institutional innovation and personal development. I then move on to outline recommendations that might assist educational developers in times of crisis or change.

### 6.1 Contradictions

6.2.1 Contradiction 1 (primary and secondary): tension within the division of labour impacted the use of tools, slowing down the activity system

The division of labour within our SOT working group enabled me to draw on my EDC and ITS colleagues' specialist knowledge in data analysis and IT systems, which was invaluable when writing procedural guidelines. However, at institution level the departments did not collaborate as effectively, and the division of labour between EDC, ITS and the SMT negatively impacted my activity. In selecting SOT tools ITS opted for BCU and Teams, neither of which was quite suited to larger groups of undergraduate students, some of whom were in mainland China, and EDC was not involved in the decision-making process. Zoom, a more appropriate tool for this context, was adopted only midway through Semester 2. This sowed confusion, as teachers had three platforms to choose from and different procedural guidelines for each.

Whilst our guidelines and webinars were intended to be a collaborative endeavour, harnessing the resources of each department, ITS continued to promote their own training materials. This not only reduced our ITS group member's capacity to provide support, but also created further confusion among teachers, since the older ITS guides contradicted our published guidelines on obtaining attendance data and sharing the lesson recording.

By allowing the implementation of SOT to be driven by technicians and technology rather than by teachers' and students' needs, as articulated by EDC, it often felt as if PolyU was 'flapping, not flying' (Salmon, 2005), making it harder to achieve change.

#### 6.2.2 Contradiction 2 (tertiary): the extended time frame positively affected the activity system

If the initial directive from management had led some teachers to view SOT as an exceptional or temporary measure, successive extensions to the suspension of face-to-face teaching meant that everyone had no choice but to engage with this novel approach over a longer period. This may well have radically altered attitudes within the *community*. As Diana Laurillard observed during the first months of the pandemic, experiences of online teaching might have convinced managers, teachers and students that SOT could be more engaging than once imagined:

'Every student has the chance to ask questions in a webinar. That's not the case in a traditional lecture. The online space can be less of a challenge than face-to-face' (Laurillard, cited in Lau and Ross, 2020: n/p).

The *object* of my role also evolved. It expanded from writing guidelines and delivering training that addressed technical or procedural knowledge to creating content with a focus on building engagement, and facilitating webinars where teachers developed their own SOT activities and shared solutions to challenges they faced. The 'online space' had, arguably, expanded teacher conceptions of professional development, encouraging them to view it as not simply receiving 'training', but as an opportunity to exchange ideas, create, ask questions, and reflect. Working with teachers more regularly, over an extended time frame, enabled me to be more responsive to their needs and concerns, which enhanced the quality of my work. In some cases I felt as if we had succeeded in forging what Logan and Stone refer to as a 'collaborative partnership' in 'enabling and facilitating student engagement and learning' (2016: n/p). The late introduction of Zoom, while challenging in many respects, provided an opportunity for me to develop new materials

and webinars which reached new audiences of teachers. Before the crisis I had been expected to offer one workshop per month, but I was now facilitating multiple online sessions a *week*. This, coupled with the ability to review and reflect on the webinar recordings, allowed me to gain in confidence and achieve a sense of professional growth.

#### 6.2.3 Contradiction 3 (quaternary): the crisis allowed me to work towards personal outcomes and these differed from those of the institution

Unlike many other members of the PolyU community, I responded positively to the challenge of implementing SOT. I was able to draw on my familiarity with the *rules* of remote working and the *tools* of online teaching and professional development. I felt motivated to work on the *objects*, the documents and webinars, which could achieve positive *outcomes* for the institution during the crisis. Yet this motivation came from my desire to realise other, personal outcomes that went beyond the immediate crisis: enhanced job satisfaction, professional growth, and the transformation of teaching and learning through the use of synchronous technologies and new approaches to professional development. I experienced conflicting, *contradictory* emotions: it had taken an unprecedented health emergency with potentially grave consequences for PolyU for me to have this opportunity to achieve these outcomes. However, these personal outcomes were not necessarily incompatible with the immediate institutional outcomes and, over time, I felt that the outcomes became more aligned. In other words, by achieving personal growth and gaining in confidence, I became more able to achieve what I had identified as the University's outcomes: ensuring the completion of course curricula and maximising student satisfaction and engagement. This then led to shifts in attitudes to online teaching, which may have contributed to long-term institutional change.

### 6.3 Recommendations based on subsequent experience

More than 18 months after the outbreak of Covid and the implementation of online teaching in Hong Kong, I am in a position to outline recommendations that might aid other educational developers in other geographical contexts in times of crisis or change.

#### 6.3.1 Promote dialogue and collaboration with the IT department

My inability to resolve the contradiction *within* the division of labour (between EDC and ITS) and the contradiction *between* the division of labour and the use of tools

affected my ability to achieve my immediate objectives. Yet the relationship between our departments has long been fraught with tensions. To address this, EDC colleagues are now leading an institutional project which seeks to promote interdepartmental collaboration and dialogue, increasing readiness for any future crisis situation. This ‘alliance’ must be in place within institutions, if not before the outbreak of ‘war’, then as soon afterwards as possible.

### 6.3.2 Identify opportunities to align institutional and personal outcomes

The sudden requirement to develop guidelines and workshops on synchronous online teaching placed unprecedented demands on my energy and time. However, I succeeded in matching the required *institutional* objectives with my *personal* goals for professional development. For me this involved designing staff development sessions with a far greater emphasis on experiential learning, activity design, discussion, ideas-sharing and reflection, and less focus on procedural skills. It also involved building a community of dedicated academic colleagues whose interest in online learning extended beyond emergency online teaching. This has in turn enabled me to achieve career objectives: leading PolyU’s online teacher development programme in blended and online teaching, and leading two institutional research projects on online learning. Even if the outcome of this ‘war’ is by no means certain, I have not, to quote Britain’s Prime Minister in the Second World War, ‘let a good crisis go to waste’. No educational developer should.

### 6.3.3 Enlist and involve advocates for change

It is not sufficient for sceptical teachers to experience, discuss, or reflect on a new approach in training workshops; most will only be convinced of its value by colleagues’ accounts of actual classroom practice. Although many members of our academic community seemed unprepared for, or even expressed open hostility to, the idea of synchronous online teaching, my role as an educational developer enabled me to identify teaching colleagues with a passion for this mode of instruction. By involving my small group of advocates in discussions and sharing sessions, I was able to gain greater teacher buy-in. These teachers have gone on to support me in creating online courses and becoming part of the projects I have initiated: a successful ‘alliance’.

## 7. Conclusion

One strength of this autoethnography is that because I began collecting and organising my data during the initial

months of the pandemic, I was able to capture the immediacy of my response and draw attention to what I perceived as the most significant factors and contradictions in my activity system (RQ1a and b). However, it is only in retrospect that I can attempt to answer the second RQ: How far did I succeed in overcoming challenges and maximising opportunities for both institutional innovation and personal development?

The prolonged length of this pandemic, which, at the time of writing, is still affecting learning and teaching at PolyU, has continued to positively influence academics’ attitudes to SOT. It is highly probable that this mode of instruction will feature in any post-Covid landscape, either combined with the more purposeful use of *asynchronous* online learning (referred to at PolyU as *blended learning*) or as part of *hybrid teaching*, a more recent innovation, in which students can decide whether to attend class via videoconference or in person. Through my involvement in the SOT working group in January 2020, I have had further opportunities not only to design workshops and guidelines on these emerging pedagogies, but also to lead institutional research projects and create massive open online courses on the use of online synchronous and blended learning. I have helped foster a community of teachers who have a passion for online teaching and an expanded conceptualisation of professional development: a ‘*collaborative partnership*’ which would not have been possible for me before Covid. These developments have formed the basis of further doctoral research. I believe, then, that in taking advantage of opportunities for institutional innovation (which has not been without challenges), I have achieved personal professional growth since January 2020.

Reflecting on case studies of technology use in higher education contexts, Issroff and Scanlon conclude that though CHAT cannot *predict* all the outcomes of a particular implementation of technology, or the contradictions that can arise, the theory is useful in forcing ‘a consideration of the range of factors which impact the use of technology’ (2002: p. 83). I believe CHAT has been effective in identifying and analysing the myriad forces which influenced me as I worked to implement SOT, so it may be useful to apply it to future qualitative studies of technological innovation and professional development during this unique period. However, this would need to involve far more rigorous analysis of *multiple* activity systems, representing ‘organisational, technological, and pedagogical perspectives’ (Robertson, 2008: p. 821), and relations between them.

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