Using a Change Laboratory Approach as a Change Tool for Academic Staff Development

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Abstract
Academic development (AD) generally involves attempts to improve and so change academic practices. Various authors have suggested that such improvement and change should also focus on the day-to-day issues and problems faced by staff in different departments. Furthermore, it should involve staff in open discussion while at the same time offering guidance from the AD practitioners. In this way it is likely to have greater potential for take-up and impact. A change laboratory approach to AD focuses in on problems in working life from the practitioners' perspective. Through mobilising an Activity Theory-based methodology, staff are assisted in confronting and understanding problems in working life and seeking possible changes. The authors thus suggest that such a methodological approach is a useful addition to the AD repertoire. As evidence for this suggestion we present a case study of academics' learning within a change laboratory initiative.

Keywords: Activity Theory, change laboratory, academic development, change.

Introduction
In academic development (AD) work, which involves changing and possibly improving the teaching and learning environment, there is growing interest in focussing in on the particularities of teaching in different disciplines (Gibbs 2013), rather than on one size fits all courses. In addition, rather than

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offering a prescribed 'bouquet' of offerings, AD staff should rather work with the interests and problems raised by academics themselves, and assist them in gaining enhanced understandings through providing theoretical and practical support (Roxå & Mårtensson 2017). Furthermore, AD needs to take into account the social and material conditions under which teaching occurs, and how this supports or inhibits staff's work (Boud & Brew 2013). Such concerns are particularly relevant to the increasingly diverse and complex demands made on the academic workforce staff (Zukas & Malcolm 2019), perhaps necessitating a rethink on how AD is conducted within universities (Felten & Linden 2017). It is against this backdrop of a renewed focus on more socio-material, localized approaches to AD that the authors propose the use of change laboratories in academic departments.

Change laboratory is a formative methodology which is initialised by participants' collective experiences of often seemingly insurmountable workplace problems (Engeström, Nuttall & Hopwood 2020). Through a series of 6-8 typically once- or twice-weekly successive workshops, participants are assisted in gaining a more systematic understanding of their problems and in so doing new possibilities for resolving these problems may be developed (Sannino & Engeström 2017; Virkkunen & Newnham 2013). The change laboratory is thus essentially a learning laboratory in which participants undergo a number of learning actions from raising initial problems through to seeking resolutions. The intervals between workshops have a twofold function. Firstly, they allow the facilitator to examine footage in detail and present key events to the participants at subsequent workshops in order to provide focus for the workshops. Secondly, intervals provide opportunity for the participants to gather additional data (e.g. from meeting minutes, strategic planning documents etc.) that can help the group to better understand the origins of the problems they encounter.

The change laboratory work reported on here falls within the ambit of curriculum change which broadly refers to developing and taking up different approaches to educational activities (Barnett & Coate 2005). For Trowler, Saunders and Knight (2003: 34) change works best at the level of department or team, involving those steeped in day-to-day practices and with issues 'that matter to them'. In support of this move academic developers have increasingly adopted a more sociocultural approach to curriculum change, rather than offering set short courses or individual consultations (McGrath 2021; Anakin *et al.* 2018). As Trowler, Saunders and Knight

(2003) highlight the direction academic change will take is often unpredictable, slow to take shape and embedded within the contextual affordances and limitations of the department and the university system as a whole. Thus the processes involved in change may be more important than achieving predetermined outcomes (Turner *et al.* 2021). Such processes could involve learning techniques to understand how change may happen, and to better understand one's own situation and how to work collaboratively for change (Healey *et al.* 2011). One methodology for change described by these authors, which has some similarities to the change laboratory, is the 'change academy'. Here a slice of staff at different operational levels within the faculty are brought together to work on curriculum change, rather than relying on a specific curriculum expert (students too are usually involved). However, unlike in the change laboratory, staff do not draw on specific Activity Theory learning tools in order to better understand their situation.

As Englund (2018) and Englund and Price (2018) suggest, the change laboratory can provide a collaborative methodology for departmental change and equip participants with transformatory tools to do this. In the light of this, in this article we use a case study of our experiences of implementing a change laboratory at our own university to illustrate how it may be used as a model for change in AD practices.

Change laboratories have recently been conducted in AD initiatives for example in attempting to resolve problems in language integration in Engineering (Guzman 2016), resistance to the introduction of service learning (Fang 2016) and in assisting staff to develop their agency to change working conditions (Englund & Price 2018). The impetus for the change laboratory intervention is typically where previous interventions to resolve tensions have failed and university departments have reached a deadlock (Englund 2018).

However, none of the authors make reference to problems with assembling the same group of academics in successive workshops over an extended time period. In practice, some of these workshops may stretch for up to seven months (e.g. Englund 2018), presumably owing to difficulties of getting academics together in one room on a regular basis. Such extended involvement, however, in our experience, proved to be a stumbling block to rolling out the formative methodology in our university, which was in turn possibly related to the nature of academic work.

Zukas and Malcolm (2019) suggest that academics tend to not be

spatially bound to an office or even a building, campuses are large and sprawling and often consist of multiple geographic sites academics must commute to teach or conduct research or liaise with students on workshop internships. Academics often work from home to mark scripts or write up research attend seminars and conferences and take sabbaticals for further study or research. As Back (2016) observes in his sometimes satirical 'Academic Diary', university departments are often sparsely populated, not because no work is being done, but that it is being done elsewhere.

To work around this problem of successively gathering staff in workshops focused on educational change, the authors experimented with a shorter, more intense version of the change laboratory, conducted over a 4-day period when all the academics involved were at their offices during the end of year planning week. As this short version of a change laboratory was a novel way of conducting change laboratories (change laboratories in the literature stretch over extended time periods), we were also interested in whether we were still able to develop productive outcomes with our staff, more specifically:

> Were departmental staff able to utilize the change laboratory methodology to better understand their current situation and so develop opportunities for change?

(Although a number of significant issues worthy of further exploration are raised in the laboratories, for example issues of care and gender, the focus of the article is rather on the usefulness of the methodology as an academic development change methodology).

Context of the Research

The change laboratory (CL) was conducted with staff in a Design programme at our university in South Africa, following on from a two workshops run with the programme staff during early 2019, conducted by one of the authors of this article. The early workshops were an initiative of the new HOD in which previously separate Design departments, for example Fashion, Jewellery, Interior, Surface and Product Design were amalgamated into a single Design Department. The workshops were intended to build internal bridges within the formerly autonomous Design programs through reflection on

current practices, leading to the development of vision and mission statements and departmental branding aligned to recent institutional strategic plan. The workshops began with a storytelling process, where developing a student/ client narrative would serve as a basis for branding. Secondly, staff considered strengths and weaknesses within their programs, to establish what they saw as unique and worth preserving, in relation to other similar programs nationally. However, the workshops, though engaging staff in reflection on their identity and practices, were unable to resolve staff's difficulties. One newsprint record of the workshops, currently on their staffroom wall, illustrates a sense of despair in staff's working lives, with comments such as 'our spirits have leaked' and the 'building has become sick' (Figure 1).

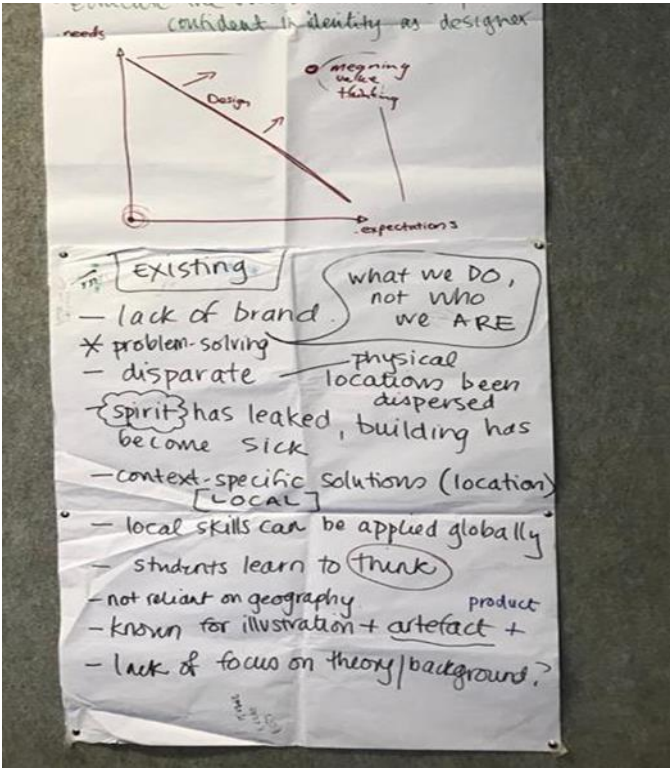

Figure 1: Manifestations of despair in working life – newsprint relic of prior discussions aimed at solving problems in the Design programme

In our view staff had reached an impasse and were experiencing what Engeström, Nuttall and Hopwood (2020) describe as a 'paralysing conflict of motives'. It was against this backdrop that the authors decided to engage the staff in a change laboratory (CL) in an attempt to break out of this gridlock. CL is typically used in response to such difficult situations, not just as a vehicle for implementing change as was done for the change academy (Turner *et al.* 2021) for example.

Issues related to departmental mergers were not, however, the only pressures on staff in the Design programme. The university had itself relatively recently changed status from a 'technikon' (similar to a polytechnic) to a university of technology and shortly before this had been merged with another technikon in the region. Staff in the technikon prided themselves on their knowledge of and closeness to Design industries, and teaching staff were often drawn from industry rather than from universities. As Kraak (2009) outlined the new status carried with it a number of pressures, for example attaining higher degrees, conducting research and teaching at a more theoretical level, that the current staff were not necessarily adequately prepared for. Though not widely reported on, similar difficulties may have emerged in the UK as polytechnics were reassigned as 'new' universities (Scott 1992; Sikes 2006), and in Australia. Additonally, the workshops took place against a background of macro and micro changes. For example, during national student protests 2015 - 2018, there were violent confrontations between the police and the university management and students demands for free, 'decolonised' education (see, for example the Centre for the Study of Violence and Reconciliation 2018), during which the Design building was firebombed. There were, in addition, significant institutional operational and capital budget cuts to programs. The Institutional Quality Review in 2018 reported Design staff as seeing themselves as 'changed out'.

Theory Behind the Change Laboratories

Activity Theory, which underpins the change laboratory methodology, is primarily a theory of organisational learning and change developed from Vygotsky's original thesis of mediated learning. In Activity, the unit of analysis is an activity system which is a partially bounded community of actors with some form of common purpose and history (Russel 1997). In the work reported on here, the activity system is a university Design department. An

activity system is shown in Figure 3. According to Engeström (2001), the subjects in an activity system (those from whose perspective we are examining the system) are orientated towards working on an 'object'. The object in turn gives sense and meaning to the work of the actors, thus energising them. The object in Activity can be characterised as a problem space (Engeström & Sannino 2010), or a rough idea or what the actors are working against in their daily lives (Virkkunen & Newnham 2013: 35). The object though broadly shared may be understood differently by different actors, sometimes because of their different positions and interests within the system, thus leading to the activity system characteristic of multivoicedness. Actors do not work directly on the object but their work is always mediated, either assisted or constrained, by those cultural and material and resources which are available to them and the prevailing norms, rules and divisions of labour within the system.

The system itself is not static but in a state of dynamic tension within and between elements, which are often underlain by contradictions (Bligh & Flood 2015). Activity Theory thus incorporates a dialectical approach, that things and processes in the world are not necessarily unitary but are rather combinations of polarities that have accumulated over time (Glassman 2000; Ilyenkov 1977). The role of activity system analysis is then to help actors to confront and understand these deep-rooted contradictions and through so doing to resolve them into new possibilities for future ways of working.

The activity system itself is one of the conceptual tools actors use in the change laboratory to envisage fresh approaches to often nagging but as of yet unresolved problems in a cyclical manner of learning which Engeström and Sannino (2010) refer to as 'expansive learning'. The cycle (Figure 2) begins with change laboratory (CL) participants individually voicing difficulties experienced in working life (learning action 1, 'questioning'). Through mobilising the activity system (in learning action 2, 'analysis') and additional conceptual tools the participants progressively develop an initially poorly developed resolutionary concept into one which is more fully developed and useful (learning actions 1 - 6 on Figure 2). This relates to what Vygotsky originally referred to as learning development ascending from the 'abstract to the concrete' (Engeström 2007). In so doing an additional Vygotskian concept of 'double stimulation' is invoked; the problem itself acts as the first stimulus to action and the conceptual tools act as secondary stimuli to achieve learning and change.

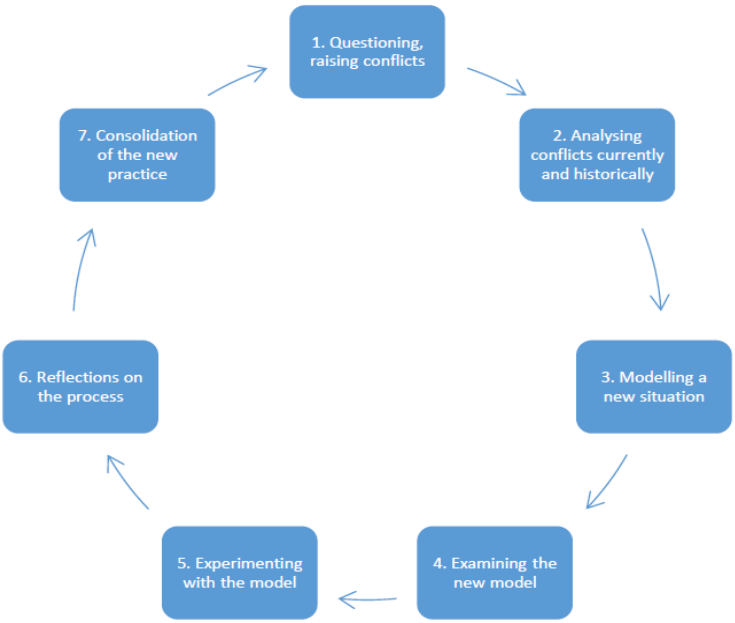

Figure 2: Expansive learning cycle (adapted from Virkkunen and Newnham 2013)

As Vygotsky (1962: 56) states on concept formation in children:

> Two sets of stimuli are presented to the subject, one set as objects of his activity, the other as signs which can serve to organize that activity.

Engeström (2007) further elucidates the secondary stimulus or sign as something which is both pre-structured and also sufficiently flexible so as to represent particular contexts. Through the analysis of their own, often personally experienced, difficulties the participants identify contradictions within the activity system and attempt to develop new concepts or models to resolve these contradictions. These new possibilities for working life are then experimented with firstly as thought experiments in the form of activity systems of the future and secondly through testing in the real world (Virkkunen & Newnham 2013).

Method

A typical CL in the university broadly follows the expansive learning cycle in Figure 2. For example, in Englund's (2018) series of workshops the first 2-hour workshop introduced the methodology and engaged participants in questioning and discussing current difficulties in developing an integrated curriculum. In workshops two and three participants populated the activity system of an integrated Pharmacy programme, and analysed the system to expose the main contradictions. In session four the history of the integrated programme was examined to further expose historical contradictions and a new model was developed in workshop 5. In subsequent workshops the new integrated model was evaluated and tested out within the university more broadly. Over a lengthy period of approximately seven months, additional stimulatory material was presented at the workshops by the participants and facilitators, for example interviews with students studying the programme and information on the structure and development of the programme.

In our shortened version of the CL we followed the learning actions in the expansive learning cycle in Figure 2. A total of eight Design staff were involved in the CL; each staff member was assigned an identifying letter (D, C etc.) to anonymise reporting. As the workshop facilitators, the authors were aware of the potential ethical issues that may arise as staff recount difficulties in their working lives, which may involve their interactions with their peers. However, we believed that this ethical dilemma was somewhat moderated through the move in CL work from individual interpersonal difficulty to systematic understanding which the whole group can work with.

The first two-hour session took place on the morning of the first day and focussed on questioning the current situation. As facilitators we attempted to ensure that all participants engaged in discussion, and questioned and probed points raised by the staff, thus acting as 'researcher-interventionists' (Virkkunen & Newnham 2013). We also provided participants with thinking tools, mainly activity system diagrams and history grids, to help mediate their experiences. In order to 'stimulate' discussion the facilitators selected what we believed to be key areas of concern for the staff (Virkkunen & Newnham 2013: 83). These included the records of earlier staff meetings in the staff room which included expressions of despair (Figure 1) and an earlier SWOT analysis. In addition, the facilitators had previously conducted an evaluation of the Design programmes and data from this was presented to the workshop. Finally, there were two videotaped interviews, one from the

current HoD and one from a recent graduate currently working overseas, both of which highlighted difficulties within the current programme operations. As is typical in CL methodologies, the facilitators (the authors in this article) attempted to provide as much stimulatory material as possible.

Table 1: Change laboratory sessions

Session	Expansive learning action from Figure 2.	Materials and activities.
Day 1, session 1	1. Stimulation, questioning and raising issues	Participants respond to Interview videos difficulties from previous meetings (see figure 1).
Day 1, session 2	2a. Analysis of the present situation	Populating activity system of the present
Day 2, session 3	2b. Analysis of the past situation	Populating the history grid (activity systems of the past)
Day 2, session 4	2. Analysis of past and present	What has changed the most over time? What has remained more or less the same? How has this led to current difficulties?
Day 3 session 5	3. Modelling the new situation	Discussion of readings on student motivation, 'disadvantage' and the ethics of care. Populating the activity system of the future.
Day 3 session 6	3. Modelling the new situation	Continued from above
Session 7 – one year later	4. Experimenting with and reflecting on the new model	Interviews with staff on learning and development from the prior CL workshops

Using the CL tools for collaborative learning and change developments

The video interviews highlighted how the course may have lost touch with both the needs of industry and the changing student profile (this is predominantly a change in the educational profile but also encompasses digitally aware students) in session one. In session two, in the afternoon of the same day, facilitators and participants collaboratively developed an activity system of the present department. The group then attempted to isolate the main contradictions from the diagram. Day 2 then focussed on building an historical change grid to highlight changes in the department over the last 20 years, in order to highlight contradictions and better understand their historical and structural roots (Virkkunen & Newnham 2013: 253). In

the final two sessions on the third and final day the group focussed on highlighting these contradictions and seeking potential resolutions, in the form of a new, more advanced activity system for the future.

We now move to a description of what occurred in the CL in order to illustrate how staff were able to focus in on problems, both individually and collaboratively and subsequently to seek possible solutions.

Learning Action 1 from Figure 2: Questioning the Current Situation and Raising Conflicts

In response to the videoed interviews and other data on newsprint in the staff room (first stimuli), staff raise a number of difficulties in their working lives. A strongly emerging trend was that of feeling that the university management and industry expect different outcomes; staff experience themselves as being between a rock and a hard place:

> So when 50 % of your students fail the first response of staff is hey that's bad but from the institutions side it is what have you done to make them fail, it is blame, not why the students fail. Then in industry when they go students do not meet industry's needs, they do not blame CPUT they blame industrial Design (the department) (D1).

And,

> I feel we are damned if we do, damned if we don't. we are damned if we let all our students pass then industry blames us for poor students, but if we fail them the university blames us for not supporting students (B).

Engeström and Sannino (2011) describe a number of useful discursive manifestations of more deep seated contradictions within the programme which may emerge in change laboratories they have conducted. The authors describe these sorts of difficulties as 'critical conflicts' in which staff may experience feelings of shame or guilt but feel powerless to deal with the experienced conflicting motives, as can be suggested by the above quotes.

Teaching in itself is challenging as the student body has changed quite recently, requiring more time and attention from lecturers.

> Colleagues agree that our students have changed. And that we need to be more responsive as our content and methods may be disconnected from who students are, we may need to change, we need a tighter connection. That is why we are here, to create this connection. It is frustrating when someone falls by the wayside (BC).

But this is not easy as staff feel that some students simply do not make the cut and should fail, but this is again made more difficult by managements' approach to students:

> I feel we cannot fail students, there is so much red tape, so we cannot enforce the rules. (not enforcing) seems what management wants (C).

At the same time staff are required, somewhat unwillingly, to do research, but that this may be at odds with the requirements of teaching.

> We felt very strongly that we have to do research, it is forced on us rather than what we wish for and if you don't you are not worthwhile in this department (D1).

And,

> You need to publish but no one has talked me through it. I don't feel like it. You bring up this difficulty in meetings (of doing research with a large teaching load) and they say do more online teaching stuff (C).

As things stand, neither research nor teaching appear to be particularly attractive to staff. Enegstrom and Sannino (2011: 375) describe these sorts of manifestation of contradictions in work as 'double binds', in which staff are repeatedly presented with 'pressing and equally unacceptable alternatives'.

In addition, staff often struggle with poor resourcing from the university, which they link to a lack of care from the university:

> Also, a big frustration is battling with resources, door handles, making lights go on. why would a student want to go where the basic resources and facilities are poor, they would rather go somewhere

> else. I also spend a lot of time on administration. This is a big frustration for me, just having to battle all the time with the university, they should be on our side, asking 'what do you need' (C).

Staff then collectively begin to model their difficulties as being akin to a 'jam sandwich', with them as the jam being squeezed between the needs of the students and university management. The metaphor is expanded then to include a further pressure, that of industry and their needs. Such strong metaphors are typical manifestations of participants' experiences of conflicts (Sannino, Engeström & Lahikainen 2017).

In parallel with these manifestations of conflicts, there is an emerging and recurrent theme of care. This begins with staff stating their commitment to caring for students but that such care is not always reciprocated by students and management.

> Maybe we try too much, invest too much care, we want to facilitate students, that is the sort of people we are (C).
>
> Does management care? I do not think they give a fig! (V).
>
> It is the care with which they do their tasks (for the entrance portfolio). It is dog eared, lacks care, on bits and pieces of paper and cardboard (BC).

Care also becomes a node for further development as the staff engage in analysis of the conflicts they find themselves in, as an approach to thinking through and possibly resolving something of these conflicts.

Learning Action 2a: Analysis of the Current Situation on an Activity System Diagram

The facilitators and the staff collaboratively assigned these conflicts to the nodes of their activity system. In this way conflicts can be understood as contradictions within and between the activity system nodes, and as systematic rather than individual or group difficulties. The system acts as a secondary stimulus to promote further learning. These systematic contradictions are marked with chevrons on Figure 3.

The staff are a diverse group who pride themselves in their ability to care for students, and their ability to develop students as competent designers

who can work to improve society. Though this potential outcome drives and motivates staff, what they are working on, the *object*, is somewhat contradictory. There is firstly their wish to work towards quality students but at the same time they have to work towards what management wants, which often appears to be the quantity of students passing, even if staff do not think all students are ready to pass. This contradiction between quality and quantity may constitute what Sannino and Engeström (2017: 86) refer to as a 'vanishing object', often leading to staff's decreased motivation. As these authors further comment, emerging difficulties within the other elements of the system often derive from changing objects.

Although staff are working on teaching and learning of their students, they feel that the *tools* they have at their disposal are mostly not adequate, for example lack of support from HR and finance and the general dilapidation of the building and its physical resources. Furthermore, administration takes much time, including email overloads, as does supporting and scaffolding students, such that staff lack time for much reflection and also for research. This latter difficulty of overwork is also reflected in reports on difficulties in academic life British universities (Zukas & Malcolm 2019).

Successfully working on teaching and learning is also hampered by the *divisions of labour*, where management (as part of the *community*) takes a dominant role. Staff feel that their specialist knowledge and expertise as designers is being usurped. The dominance of industry, another significant member of the community, which was strong in the past, has receded in favour of the influence of university management. Furthermore, students hold an expectation that they will be provided with high levels of support rather than having to take greater responsibility for their own development, as was the case in the past.

This more recent student expectation is seen as being in conflict with a more desirable student culture of self-motivation and developing independence in their learning (*a tacit rule*), which further acts against successfully moulding 'the competent designer'. Whereas staff see themselves as caring for their students, through supporting them in appropriate ways, they experience the university as holding them accountable for student failure, even where it is no fault of their own (blaming culture). In addition, the university rules on teaching and learning apply to all departments such that the particular needs and ways of operating of Design are not necessarily recognised.

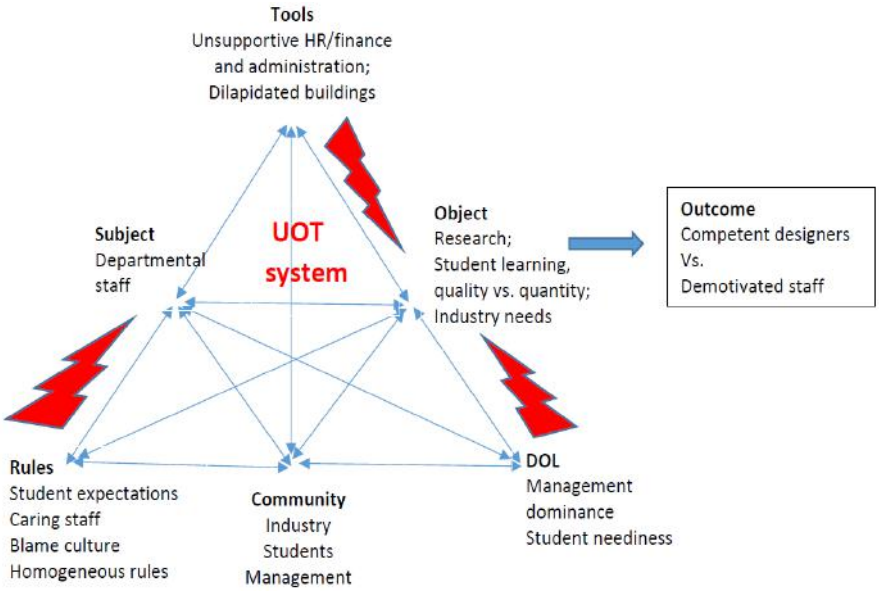

Figure 3: Activity system of the Design programme showing tensions as systematic contradictions

Learning Action 2b: Historical Analysis of Product Design: Working with the Main Contradictions

Engeström (2001) highlights that Activity approaches to learning and change are always underpinned by historical antecedents. Thus, in order for participants to fully understand present tensions and contradictions, it is important for them to go back in time. In the Change laboratory this is accomplished through using a 'change matrix' (Virkkunen & Newnham 2013: 253) in which each element (tools, object, rules, DOL) of the system being analysed is examined at different time periods. Then what has changed the most and what has changed the least can be identified. In Design's matrix the object of working on students towards creating competent graduates who can make an impact on society has remained constant, 'everything else seems to have changed, it is like a new activity system' (as one participant put it). In the past there was a strong departmental identity and a sense of autonomy with good access to resources and strong industrial linkages. As the participants suggest:

> We felt we were part of something, a weird non-specific coolness. Well known designers and industry would talk to us and (some of us) also visited Sweden, it was awesome.

This enthusiasm, they felt, was also transmitted to the students. Now, however, they have lost their specialist departmental status and been homogenised, access to resources is made difficult by red tape and problematic student and institutional expectations have led to 'care fatigue'. Furthermore, there is significant change in the student body, mostly in terms of their initial ability in Design and their expectations of what staff can and should offer in support. This changing nature of the student as object, often generates difficulties in other elements of the activity system (Sannino & Engeström 2017), thus highlighting the important of historical analysis in CL research.

In fact, care emerges as a pivotal issue, but one which is understood differently by different constituents. For the participants it is about developing competent graduates for industry, but for the university and for government, care has a different focus; it is about taking on as many students as possible, with a maximal throughput. For students, care may take the form of an expectation of high levels of support and guidance from the university.

Furthermore, one of the women raises the issue of working within what Clegg (2008) refers to as the more normative masculinity of academic departments. She describes how she feels excluded as a woman from often important but informal discussions on departmental issues, and that this affects her wellbeing. Taylor *et al.* (2020) point out that it is often these mundane moments of discrimination which silence, frustrate and damage woman academic's sense of self. The issue of gender discrimination per se was not explored further in this CL, but rather used to highlight the importance of intra-departmental care more generally.

As is typical in CL work the facilitators provided readings for the workshop participants on some of the issues raised (Virkkunen & Newnham 2013). This was so that they may obtain a deeper understanding of, for example, issues of care (as an example, participants were given an article to read on Joan Tronto's ethics of care in AD (Bozalek *et al.* 2014).

Learning Action 3: Modelling the New Situation

On day three of the workshops, after one day's break, the participants discussed the short readings provided. These stimuli assisted the participants

in rethinking their orientation to students and to one another as they attempted to model a new activity system in learning action 3 (see Figure 2). In the new model participants suggested that curriculum should start where the students are, but 'not changing the goalposts, just the starting point and processes'. In so doing, staff suggested that students may bring new ways of thinking about Design, and that there may need to be flexibility within the curriculum so as to include these ideas. Furthermore, staff saw a need to give value to student work through, for example, exhibitions of student's work (these do happen but often only later in their career).

Moreover, it was suggested that the object of the activity system, rather than focussing in on a seamless student, should address the concept of the heterogeneous student (Figure 4). It would be useful, therefore, to start the year with what students already know and bring to the classroom, and how this can be best acknowledged and developed (for example as a development plan). Staff would also focus on encouraging students to think ahead, to imagine what products might be needed in the future, as well as identifying and solving current needs in society. These new 'tools' would assist the academic staff in working on this heterogeneous student object, with the potential for productive outcomes.

In addition to promoting staff's attentiveness and responsibility towards students, it was also suggested that students reciprocate this responsiveness, and following Tronto (1993) promote staff's attentiveness and responsibility to one another's feelings and needs (Cf. the 'boys club') as well. A 'care code of conduct' was thus suggested as a possible new 'rule' amongst students and staff.

Hopefully, the programme would develop a culture of flexibility and resilience amongst themselves and the students. In terms of community, participants highlight the importance of bringing the university administration on board, so that there is collaboration towards a common goal of developing competent designers to improve society. Administration would include closer connections, possibly in the form of regular meetings and updates, between the university's' funding department and teaching staff (following up on funding has been an arduous and time consuming administration task in the past). A further vision for the improved division of labour is the creation of greater programme autonomy, though it is not clear how this will be accomplished (see Figure 4). The arrows within the system point to how key nodes can influence one another.

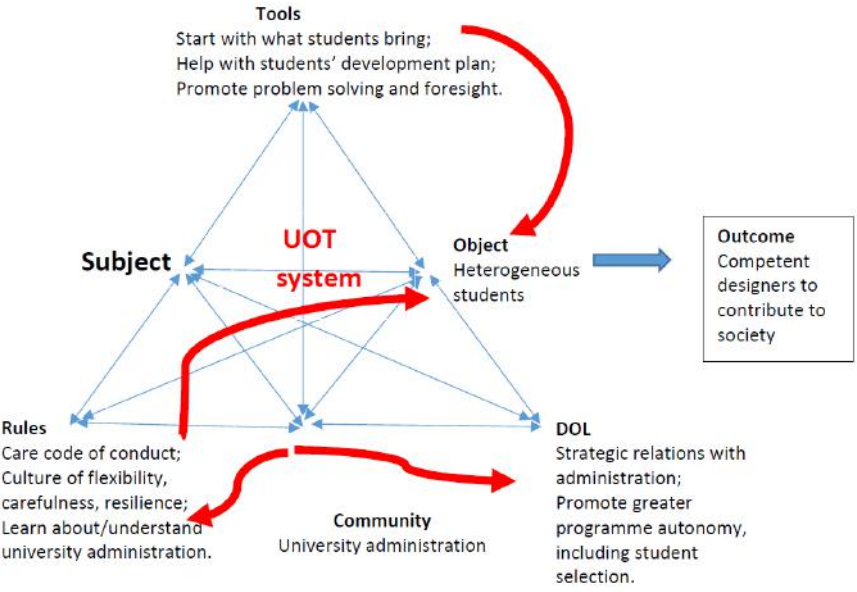

Figure 4: Modelling the new activity system

At the end of day 3, after 6 consecutive change workshops, the participants and facilitators left on a very positive note. What had initially been seen as immovable difficulties were now seen differently. There was the possibility of resolving these often 'paralysing conflicts of motives' (Engeström, Nuttal & Hopwood 2020: 2) through using learnings developed in the CL. As one participant observed:

> What is interesting in the triangle is that there are lots of tools available to us now that we didn't have, that were not visible at the beginning. I look at the current situation we had which was very negative compared to what we have now. And the thing we did not really do anything with was the object, what we are creating, and the subject, who we are, and the community we are working in. It is these things that we work on, which is great (D1).

Learning Action 4: Examining the Model

Engeström and Sannino (2010) suggest that learning action 4 typically invol-

ves some form of experimentation and concretisation of the possibilities proposed in the new model. The facilitators had hoped that this action would occur early on in 2020 however, student unrest led to the closure of the campuses, followed shortly by a national COVID lockdown and the rapid move to convert all courses to online formats. The result was that the facilitators were only able to meet up with the participants again at the end of 2020 for a final session in order to assess whether any changes had been developed. Given the circumstances there was, unsurprisingly, scant evidence of concrete change. However, what did become clear was that the CL had provided an important reflective space for academic development and that the work could productively be carried forward:

> The CL made us aware what was in the back of our heads. It was having that platform. Let us all sit down in a room and make some mental space, everybody needs to be on board and that is what happened in the CL (D2).

And:

> I think it is really useful. I feel like this (CL) has made us step back and look at things from a different perspective, you need fresh eyes on it (C).
> The triangle was really good (V).

Furthermore, the participants saw the need for future work and suggested that there should be additional CL in the future:

> In all fairness, what we did was really good, that care code of conduct, we want to write it up, everybody can bounce off that, it is definitely going to help us speak to students in a more focussed way (D1).

And,

> So let's just, before start again in 2021, look at the triangle, so in that sense it is really useful. It might be useful to go through those notes again when we meet (D2). Let's have a pre and post pandemic CL (C).

Discussion and Conclusions

Sannino and Engeström (2017) describe the emerging conflicts and their analysis as contradictions as the 'pushes' for the participants towards new ways of thinking and doing, or new possibilities for change. The new model of the activity system for the future is then a potential 'pull' towards realising these new possibilities. The participants in this CL began with surfacing such conflicts (the 'push'), and developed a new model (the triangle), both of which are referred to in the final reflective section. As they stand the elements of the new model for work in the department (care, diverse students and an enlarged community), which constituted the 'pull', are only emerging new possibilities. They have the potential to 'open up rich and diverse possibilities of explanation, practical application, development, and creation …' (Sannino & Engeström 2017: 83).

Academic work is often complex, messy and riven with controversies as authors such as Clegg (2008) and Zukas and Malcolm (2019) have pointed out. There are thus not always easy or enduring changes that can be made to fix issues. Change involves reiterative discussion of problems, experimentation and reworking of original ideas, a point raised by Engeström, Nuttall and Hopwood (2020). Furthermore, some changes may be difficult for staff on the ground to enact as they arise from powerful external forces (such as funding and administrative loads, for example), a critique also raised more generally about the efficacy of expansive learning/change laboratory approaches (Lee *et al.* 2004).

In the Design CL, there was limited evidence of actual changes implemented in practice. Though much of this may be laid at the door of external forces such as a sudden move to online teaching against the backdrop of the pandemic, it can also be suggested that the CL process itself was too compacted to have significant effects. Participants themselves also suggested that more CL follow up and work would be advantageous, possibly supporting the idea of longer, more substantive CLs. However, even in longer, more complete versions of the CL in universities as described by Englund (2018) on integrating Pharmacy modules, there was limited change on the ground. In addition, Fang (2016) acknowledged that, even though CL work was carried out over a number of months on better integrating service learning, the work at the university was still at an early co-creation stage. Virkkunen and Newnham (2013) recommend that first cycles of the CL generally always require follow ups, and Bligh and Flood (2015), writing

specifically about CL in HE, suggest that even completing an expansive cycle is more of a pilot unit than a finished product. In addition, in Sannino and Engeström's (2017) summarisation of three CLs they comment that the outcome may be more about developing an improved understanding and better control over troubling situations, rather than that of implementing substantive changes to current practices. Likewise, what did come through strongly in the shortened Design CL was the importance of the CL as a reflective space. Staff learnt about the complexities of change, and some of the collaborative tools and processes to work with this which Healey *et al.* (2011) propose as an important aspect of AD work. Staff were able to utilize Activity Theory tools (such as the activity system) to successfully raise and confront difficulties and open up new possibilities for action, which was the original research question addressed by the article.

Finally, Bligh and Flood (2015) propose that the CL shows some promise in the academic development field, but that it has not yet been extensively developed for HE. The authors further suggest that there is a need to experiment with this relatively new methodology within the sector. We hope that this article, through rolling out a compact version of the CL, which we propose may be more suitable to academic working life than the more typical longer version, has contributed to such experimentation and development in the future.

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