Who owns the teaching and learning environment?

Craig A. Watterson, Bernadette Knewstubb, Dale A. Carnegie and Marc Wilson

Victoria University of Wellington
Wellington, New Zealand
craig.watterson@vuw.ac.nz

Abstract—This paper uses a Foucauldian Discourse Analysis (FDA) framework to examine the first-year engineering teaching and learning environment. Specifically it investigates perceptions and actions relating to the concept of ownership inside the construction of the learning and teaching space by examining interviews of lecturers and supporting related government and university policy material. In doing so this paper reveals the operation of power and its complex effects in higher education. Importantly, by doing this, it shifts the domain of investigation beyond that of the student to the context the student finds themselves in.

Keywords—teaching and learning; first-year engineering; Foucauldian discourse analysis

I. INTRODUCTION

Like many STEM subjects, Engineering (ENG) is currently suffering from recruitment, success and retention issues, both nationally and internationally. Many researchers have attempted to investigate the issues surrounding STEM retention [1], Studies which explore student experiences of the barriers to their learning and retention have enabled ENG departments to introduce changes to address some of these issues, but the problem remains.

Many of the studies which currently inform our understanding of student success and retention in STEM adopt a student perspective, and seek to address student needs as inferred from student experience. However, the project from which this paper draws adopts a different perspective, placing lecturers at the epicenter of the situation. We argue that University, lecturers and students are all part of an educational setting which is comprised of a complex network of power relationships; and that this network is active in the operation of the teaching and learning environment. By understanding the ways in which lecturers both experience and manifest power in the teaching-learning environment, we suggest, the issue of STEM retention may be reframed to support *both* lecturers and students to eliminate barriers to student learning.

The larger study adopts a Foucauldian framework to investigate the ways in which lecturers in a New Zealand ENG department experience the power within their larger network, and how, in turn they manifest power in ways that impact the learning-teaching environment. This paper focuses on one question which has emerged from preliminary analysis: 'who owns the first–year teaching-learning environment?' We define ownership as encompassing the rights and responsibilities; the process of enacting power, by various groups and individuals over subjects in the class room. Ownership in this context is visible as processes both outside and inside the construction of the learning and teaching space, and is evidenced in one of these group's descriptions of their experience; that of the lecturers.

II. FOUCAULT AND THE EXERCISE OF POWER

Before examining this environment it is helpful to understand the theoretical framework which is being applied to this study. Michel Foucault (1926-1984) defined the exercise of power as 'a way in which certain actions may structure the field of other possible actions. What, therefore, would be proper to a relationship of power is that it be a mode of action upon actions.' [2] For Foucault power is seen in the system of social networks and is not a specific thing in itself but a process that pervades every social relationship. As such, there are many forms that power which operate on individuals and organisations. They vary in forms of intensity, and can sometimes reinforce or even cancel out one another' [2].

Yet, Foucault notes that there are sections of society where the operation of power take a more concentrated or systematic form and becomes more visible: 'Take, for example, an educational institution: the disposal of its space, the meticulous regulations which govern its internal life, the different activities which are organized there, the diverse persons who live there or meet one another, each with his own function, his well-defined character-all these things constitute a block of capacity-communication-power. The activity which ensures apprenticeship and the acquisition of aptitudes or types of behavior is developed there by means of a whole ensemble of regulated communications (lessons, questions and answers, orders, exhortations, coded signs of obedience, differentiation marks of the "value" of each person and of the levels of knowledge) and by the means of a whole series of power processes (enclosure, surveillance, reward and punishment, the pyramidal hierarchy)' [2].

Ownership in the teaching and learning space is the manifestation of power being enacted over subjects. The exercise of ownership, the actions taken, the perceptions developed through this process demonstrates the way power relations create a subject, create truth. Without the action of ownership and its implied act of control the process of power does not exist, as Foucault noted: '…something called Power, with or without a capital letter, which is assumed to exist universally in a concentrated or diffused form, does not exist. Power exists only when it is put into action, even if, of course, it is integrated into a disparate field of possibilities brought to bear upon permanent structures' [2].

A complex network of disparate possibilities and a permanent structure exists between the groups in Table I. below. The very relationships between these disparate possibilities within this structure, involve the operation of ownership through

the rights and responsibilities of each group and when investigated reveal power in operation. As Foucault explains: 'In effect, what defines a relationship of power is that it is a mode of action which does not act directly and immediately on others. Instead, it acts upon their actions: an action upon an action, on existing actions or on those which may arise in the present or the future. A relationship of violence acts upon a body or upon things; it forces, it bends, it breaks on the wheel, it destroys, or it closes the door on all possibilities. Its opposite pole can only be passivity, and if it comes up against any resistance, it has no other option but to try to minimize it. On the other hand, a power relationship can only be articulated on the basis of two elements which are each indispensable if it is really to be a power relationship: that "the other" (the one over whom power is exercised) be thoroughly recognized and maintained to the very end as a person who acts; and that, faced with a relationship of power, a whole field of responses, reactions, results, and possible inventions may open up [2].

III. FOUCAULDIAN DISCOURSE ANALYSIS

This study is informed by the theoretical work of Foucault and utilizes Foucauldian Discourse Analysis (FDA) as its means of investigation. Discourse analysis is a general term used to describe research approaches which treat meaning as constructed through discourse, often in spoken language or written text. However discourse can include social actions, beliefs and practices and even the architecture surrounding us. Because discourses can be examined wherever meaning is being experienced, they can lead to multiple truths – multiple meanings and even multiple analyses [3].

FDA focuses on broader constructions of meaning and their impact. The FDA researcher focuses on the historical social setting that enables power structures to construct rules and meanings. For the proponent of FDA, truth, or what is correct in a given social situation is being made all the time and it is through the process of examining this truth and knowledge-making process that the researcher can see what is happening in a given context.

Importantly, as discourse is where meaning and truth making practices are enacted, in FDA, discourse represents the very thing that is being fought over. As Foucault stated: 'Discourse is not simply that which translates struggles or systems of domination, but is the thing for which and by which there is struggle; discourse is the power which is to be seized' [4]. The dominant discourse of ownership is where power is acted out and fought for in this study and it is located in the teaching and learning education space. Inherent in this are many actors within this educational nexus: Government, institution, teaching staff and students. Of course the educational nexus goes beyond this to include many aspects of the social world surrounding education such as family and employers, to name only two.

IV. METHODOLOGY

A. Participants

In 2015 lecturers from Part I first year BE programme courses were invited to participate in an interview study. At least one lecturer from each course, and where possible two, participated. 15 first year BE students also participated on a voluntary basis,

selected from Pastoral Care interviews undertaken by the fist author, but are not included in this part of the study.

B. Data

Lecturer and student data comprised individual unstructured interviews focused on what lecturers and students thought were the barriers to student success at first year. The interviews were transcribed verbatim at the sematic level and analysed using Ian Parker's (1992) [5] methodological guidelines.

In addition, supporting documentation was gathered to contextualize participant responses. This material broadly comprised course outlines and materials from the first-year School of Engineering and Computer Science SECS courses, enrolment and marketing material from the institution together with SECS, Government and University information relating to tertiary strategy and policy.

C. Analysis

Interviews and contextual material were analysed using FDA (following Parker, 1992) [5] triangulated by a mixed disciplinary team. The primary author is a historian, the three other members comprise a linguist and academic developer, a psychologist and an electronic and computer systems engineer. From this analysis a number of themes emerged, relating to power as it is experienced by lecturers, and as they manifest it themselves in their teaching. One interesting question which arose from the initial analysis was "who owns the teaching-learning environment in engineering courses?" In the following section we present examples of our findings based on the discourses of interviewed lecturers and supporting documentation.

V. THE TEACHING AND LEARNING ENVIRONMENT

Broadly speaking the teaching and learning environment refers to the context in which a university operates, as well as the classroom itself. For example, the university in this study is a publically-funded, Government- owned institution operating both nationally and internationally as part of a global tertiary sector. The university environment includes the immediate situation such as the operating practices and policies that encompass the business of an educational institution, for example: funding, research, administration and teaching. This is in turn translated by disciplinary departments into day-to-day processes and policies which impact the practices of lecturers. The teaching and learning environment is perhaps most apparent in the classroom, lecture laboratory and tutorial.

The table below gives a broad overview of the teaching and learning environment and an even broader look at where ownership exists for these groups:

TABLE I.   RIGHTS AND RESPONSIBILITIES

Table I. Ownership of the first-year tertiary teaching and learning space: rights and responsibilities.		
Group	*Rights*	*Responsibilities*
Business & Professional Bodies	Numbers of graduates; Graduates with certain adequate skills	Employment of graduates; feedback to Govt and university sector on quality of graduates; Accreditation and

		recognition of Degree
Government	Demand for Quality Education for national and International standards; Demand of quantity of graduates; Demand of accountability; Provide funding; Right to withdraw funding; Make laws that govern conditions	Funding; Negotiate with business community; Authorise, legitimize and provide educational certification
University	Interpret Government policies into institutional strategy and policy; Disburse resources according to priorities; Expect academics to meet policies; Expect Government to support through funding; Expect Government to support through policies; Expect Government to set reasonable accountability targets	Provide a teaching and learning (including research) physical space; Provide lecturers with appropriate workload (jobs); Provide opportunity for lecturers to research; Facilitate communication of processes; Meet Government accountability targets; Set policies to meet needs of all students; Meet accountability reporting demands
Lecturer	Prepared students (from High School); Adequate funding; Academic freedom; Ability to conduct research;	Teach; Produce adequate and aligned curriculum; Design appropriate assessment; Deliver quality teaching in the classroom; Deliver quality research
Student	Expectation of all parties above to construct frameworks from which they can learn; Expectation of quality teaching	Arrive academically prepared for first-year; Do the required work; Prepare themselves when here for current and subsequent study; Pay fees

Table I. above indicates the rights and responsibilities of various groups and individuals who impact the teaching-learning environment. In effect what we can see is who owns what specific aspect of that environment. There are of course many groups not mentioned that also have an effect on this, such as, tutors, administrations staff and of course outside influences like family. This study though focuses on the lecturers and as a result limits investigation to the table groups. Where for example, one group such as the government expects something from another group, for example, the university, we see an operation of ownership and in the actions taken in response, the operation or exercise of power.

VI. RESULTS

From the analysis of lecturer interviews together with textual analysis of government and university documentation, a number of subthemes emerged relating to 'ownership' of the teaching and learning environment. In particular, the following themes were evident: Ownership of the STEM recruitment crisis; competing ownership; competitive ownership and ownership of the subject. These themes are explained and illustrated below.

A. Ownership of the STEM crisis

Complex processes permeate the teaching and learning environment and reveal the operation of power. Ownership, by institutions and individuals is exerted both consciously and unconsciously as modes of control. It is important here to see that in this environment there exist multiple hierarchal tiers that operate either independently or in association with other aspects of the educational apparatus. In this sense, ownership provides an active visible process or function in the discourse, and can be seen in the statements and messages received. The political drive to have effective educational programmes in STEM and in particular in engineering frames the context in which tertiary institutions operate. For businesses the lack of graduates is seen as an acute problem as they rely increasingly on the growing number of STEM-educated individuals for successful economic growth in a highly competitive global economy. Unfortunately in the world of tertiary Science, Technology, Engineering and Math (STEM) education poor retention of students is not unusual.

This desire for graduates to meet an employer need places increasing pressure on Government policy in New Zealand. In turn the Government puts in place policies for tertiary organisations to help deliver this business demand. Governments rely on business to assist in the country's economic stability and growth. In New Zealand our tertiary institution is a public university, receiving around about fifty percent of its funding from the Government. This funding is attached to what the Government Tertiary Education Commission – the body which sets university operating policy – dictates as important.

For example one of the key goals set by the New Zealand government is the recruitment and retention of engineering students through to graduation. This is clear in the discourse as evidenced in the messages New Zealand universities receive. In 2013 the New Zealand Minister for Education announced a goal for tertiary institutions to produce 500 more engineering graduates every year from 2017:

'New Zealand has an undersupply of engineers. Historically the number we have been training is about half the OECD average…The reality is if we want faster economic growth for New Zealand then we need to invest in skills that will help grow the economy. Having more engineers will assist in building a more productive and competitive economy' [6].

Similar arguments have been made in countries such as, Australia [7], the United Kingdom [8], and in the United States of America [9].

The exercise of power exerted from business to Government reveals a joint ownership of this aspect of the educational environment. The implications of this 'ownership' impacts university operating policy and places it on a business footing. Every year a fresh cohort of between 150 to 180 first-year Engineering students enter our four-year Bachelor of Engineering with Honours programme (BE). They each select one of the three majors we offer, either, Electronics and Computer Systems (ECEN), Network Engineering (NWEN), or

Software Engineering (SWEN). These students must attain an above average grade across a set of specific first year courses to continue in the BE. This requirement was set through accreditation of our BE by the Institution of Professional Engineers New Zealand (IPENZ) and the Washington Accord.

To date the number of students who have achieved this requirement in their first or subsequent attempt has never reached 50% of the entering cohort. As a result we have never been able to meet our internal target of graduating 100 engineers each year. For lecturers, there is a clear message and a visible power directive from the government, and therefore the University, that they need to provide increasing numbers of engineering graduates. Poor recruitment and retention places universities and their academic programmes and staff under pressure to take on more students and pass them. As one lecturer puts it:

> **Lecturer H:** Well okay so there's the business there's the business thing again, because the university wants - if you want to have this many staff then you've got to have butts on a lot of seats. If you want butts on a lot of seats then you're going to have students who aren't as well prepared … on average as the ones the tiny universities could get twenty years ago or thirty years ago.

Not only do businesses want graduates they also want quality graduates – graduates who can participate not only nationally but at an international level:

> **Lecturer H:** … under international standards you have to get them to a certain level, so we simply have to work harder and smarter, the management keeps telling us this, and it's the solution to everything, work harder and smarter…

Business and Government ownership of the funding and direction universities must take to achieve an 'end result' conflict becomes even more complex for lecturers when combined with the educational drive for certification and educational excellence:

> **Lecturer H**: … therein lies… the dilemma for universities right? Because, universities these days are businesses I don't think any of us are naïve enough to say that they're not businesses… And what is it that they're selling? They're selling really two products aren't they?… …They're selling other products elsewhere but in the teaching environment they're selling education and certification… so in the idealistic world the education may allow anyone who wants to learn to learn, but in the real world where the certification is a big part of the product that's being sold, if you don't maintain standards your degree becomes worthless.

While ownership of the STEM crisis itself is shown to be multi-layered and hierarchical, as Lecturer H's description shows, it is made up of competing factors. The pressure to perform permeates all levels of the university and can be seen in

its founding documentation. The Faculty of Engineering began offering the BE in 2007 and was the result of a strategic direction by VUW as stated in our Draft Business Case for the Establishment of a Bachelor of Engineering 2005 [10] and Business Case for Introduction of Bachelor of Engineering 2006 [11]. The draft documentation notes:

> 'Recent government publications (e.g. the ICT Taskforce Report, 2003 and the Digital Strategy Report, 2005) have set ambitious goals for New Zealand's ICT Sector. A trebling of jobs in the ICT sector is forecast by 2012 with an acute shortage already visible of suitably qualified graduates. This will create a significant increase in demand for tertiary ICT studies (including electronics) and a clear opportunity for Victoria' [10].

The draft report goes on to identify numerous opportunities additional funding, connections with Government and industry, the alignment of national goals and the obvious increase in enrolments as reasons to develop the BE. Interestingly the significant threat of another institution is also stated as one of the reasons to proceed with the BE. This is an example, of the university laying claim for ownership of a disciplinary learning and teaching space.

The foundational documentation reveals what Thornton and Ocasio argue: 'while power and politics are present in all organizations, the sources of power, its meaning, and its consequences are contingent on higher-order institutional logics. Institutional logics define the rules of the game by which executive power is gained, maintained, and lost in organizations…. Moreover, institutional logics are historically variant and are shaped by economic and social structural changes' [12.]. As such we can see that ownership of the teaching and learning environment does not solely belong to those teaching in the classroom (if at all). Rather, as the following examples illustrate, the lecturers' processes are affected by their interpretation of power being exerted upon them from external and intraorganisational hierarchies.

The following section presents other messages embedded within the teaching and learning environment and how these act to promulgate competing goals and further muddy ownership of the teaching and learning environment.

B. Ownership of Entry

The pressure to recruit students by the university to meet the government funding, ultimately relates back to the business pressure for qualified students. VUW has an enrolment target set by the Government through the TEC. In turn the University through a combination of recruitment and enrolment endeavour to meet this target. Individual faculties in turn have targets that they must meet in the enrolment of students. This is administered at the Faculty and then School level (such as, SECS), and individual courses also have enrolment targets that determine their financial viability. These targets are based around a business model set by university management. One lecturer describes the business process of recruitment:

> **Lecturer D:** …here it's completely open entry, and open entry doesn't mean that anybody can come - in theory… In fact there's a university entry you have to get which is a number of points across a number of disciplines…. …now individual subjects could and

maybe should put in specific things like points in merit and excellence for physics and maths for engineering… And in theory… university entry and higher education, have its own entry… However, what normally happens is there's something called waitlist… So students come in, we say we've got two hundred spaces in engineering nominally… And this is the target, and we keep filling up those spaces… We have the students that we want to take in terms of what we've set as entry, but the university has its own targets and for the last six years I've been here I don't think the university has ever early on hit those targets - probably hit the targets later on in the process, but in general it's needed students, and therefore these waitlisted students who are the students who haven't got what we wanted but have got university entrance come in… From faculty and no Dean of Engineering has ever turned round and said we don't want the money that these students will bring in 'cause they might stand a chance of passing and it's university entrance

In an increased pressure to perform, it is interesting to note that SECS and its academic staff have little ownership over the entry criteria of students. For example, SECS maintains no restrictions on entry to the BE other than that required by VUW. Currently, a student could enrol in the BE with a mixture of subjects from the New Zealand secondary school National Certificate of Educational Achievement (NCEA) curriculum that contains few engineering-related subjects. In fact it is even possible to enrol in the BE with no math, physics or digital technology (Computer Programming) background. While the actual number of students who enter with no related skills are small they do exist. More common are students with poor NCEA results in specific related subjects, such as, physics, math or digital technology or are missing key standards (assessment topics) in one or more of these subjects. It is common for many of our students to have either not taken calculus or physics at secondary school before enrolling in engineering.

This means that there is a significant amount of our first-year cohort that do not take all the papers required for Part 1 in their first year and are required to take bridging papers. Bridging papers for engineering are MATH132 for all subsequent math and engineering math courses, and PHYS122 for ECEN only students bridging into the core Physics papers. In 2014 we had 160 students split across the three majors and of these 22 enrolled in MATH132 (4 ECEN, 13 SWEN and 5 NWEN). MATH132 is the paper students take if they have below the entry credits for our core mathematics paper at first year. In addition 19 of 56 ECEN students enrolled in PHYS122. PHYS122 is the core physics paper for SWEN and NWEN but is considered a bridging paper for ECEN students who lack the entry level requirements for their core first year Physics paper PHYS114. Similarly, in 2015 we had 170 students split across the three majors and of these 27 enrolled in MATH132 (7 ECEN, 15 SWEN and 5 NWEN). And 19 out of a total of 46 ECEN students enrolled in PHYS122.

Students who VUW has let in believe the courses are going to be of an achievable academic level. They certainly think they will be difficult but having never experienced a university course base their expectations on their secondary schooling; the only thing they know, and the trust they place in the institution's acceptance of them as students.

SECS has what I would term 'relative open entry' requiring no specific academic subject requirement from NCEA. SECS can be being seen by some as giving an equal opportunity to participate to everybody and thus benefitting those that may have been disadvantaged if excluded on a basis of entry through educational achievement standards. One lecturer describes the dual role of this entry policy:

> *Int: So why do we let a whole lot of people in to the BE that we think are not academically prepared*
> **Lecturer A:** Multiple reasons, one is money… Another is giving people an opportunity… because we don't know… Whether they're going to fail, and giving them an opportunity to try- I think that's important.

At the same time this policy of 'relative open entry' allows students to enrol who could fail because they do not have the required academic background and aptitude to enter the course. Equal opportunity for entry does not mean equal opportunity for success. Success in this sense would be in-part determined by the quality of the instruction and having appropriately designed material to allow those with poor academic background a high chance of passing and gaining the knowledge to succeed in subsequent courses. Ownership of entry by the university places considerable demands on both students and lecturers to be successful, and makes the role of the lecturer pivotal in the classroom teaching and learning environment.

C. Ownership of Courses

In the tertiary education environment, lecturers exercise the freedom to design and deliver their courses with little direct input from other lecturing staff, the university or government. This relative lack of input in part relates to the constructed identity of academic freedom/ownership as generated by the role of lecturers within a broader tertiary educational environment.

This freedom places ownership of the university course in the hands of the lecturer. The following two excerpts, reflect how the concept of academic freedom is expressed as ownership through the freedom of choice:

> *Int: How much is that academic freedom and the nature of the way we structure things here, how much of that's the barrier to first-year students?*
> **Lecturer A:** I don't think it's a barrier - I don't think that's the barrier. I think that's the reason barriers won't get torn down easily… The different views and attitudes of staff and in some case straight poor teaching methods or attitudes, that's not the barrier, students don't have to interact with that at all. What they interact with is the lectures and the assignments and the exams and the assessment and the labs the things the course design.
> *Int: Yes, but … does that not come out of those other things?*

Lecturer A: Yes it does… But those things are the barriers… And how you change - how you reduce those barriers? I do not want to even think about taking a head-on attack on those issues of academic freedom and… teaching things. I would much rather put requirements in place for our first-year programme… Say 'look we're going to do all the first year courses like this'… 'Cause this is engineering and you want a job don't you we've got to get you your students so we're going to try this' and let's put these external structures in place to try and remove the big barriers. It's the most we can do. And if I can get more staff to think more effectively on teaching, so that they do it better, that would be good.

This first excerpt draws attention to the nature of academic freedom as a barrier to students. It describes an environment that places multiple commitments on a lecturer and clearly this lecturer feels that they do not have enough time or interest to dedicate to confronting differing lecturers freedom to teach how they want. Ownership of the way a lecturer designs or teaches a course reveals the power relationship at work in the organization. Diffusing ownership of courses to individuals makes the task of coordination and educational reform difficult. The second excerpt exposes the inherent sense of individual ownership lecturers have through emphasizing that freedom of diversity is preferable to an agreed course design approach:

> *Int: Well, essentially what you're saying there is your academic freedom, you would like to retain in terms of what you teach. How does that sort of freedom impact on the students or the way we organise our courses?*
> **Lecturer F:** I don't know. I really don't have a strong opinion, I mean I feel that so like, you know, if I had my way I'd work the students quite a lot harder… maybe I should just do that anyway. But I don't know so I would rather that there is, sort of diversity amongst lecturers, than an agreement that this is the right way to do it.

We can see the mandate for this level of academic freedom in Government policy. Our organization, adheres to the provision of academic freedom as expressed in the New Zealand Government Education Act 1989: 161 [13]. This act states, among other things that academic freedom includes:

(c) the freedom of the institution and its staff to regulate the subject matter of courses taught at the institution:
(d) the freedom of the institution and its staff to teach and assess students in the manner they consider best promotes learning:

However, academic freedom is not unconstrained freedom, as the Act goes on to say:
(3) In exercising their academic freedom and autonomy, institutions shall act in a manner that is consistent with—

(a) the need for the maintenance by institutions of the highest ethical standards and the need to permit public scrutiny to ensure the maintenance of those standards; and
(b) the need for accountability by institutions and the proper use by institutions of resources allocated to them.
(4) In the performance of their functions the Councils and chief executives of institutions, Ministers, and authorities and agencies of the Crown shall act in all respects so as to give effect to the intention of Parliament as expressed in this section.

This act offers a relatively open and free educational environment which encompasses a set of assumptions by the Government about the role of the university. The Government assumes that the lecturing staff and the university as a whole have in place appropriate educational mechanisms to facilitate student success for the majority of entrants. It also assumes that the mechanisms of accountability established through the TEC and the university body are sound.

Interestingly, there is a tension between freedom and accountability. Accountability of an educational institution raises the question of whether there is true freedom. Accountability embedded in the Act works to constrain this freedom in certain ways. For example, one mechanism that is applied to enforce accountability is the low-performing provision or (LPP). The New Zealand Government which has overall ownership of the tertiary strategy and funding policy, sets requirements on the number of students it expects to pass individual courses (not a programme of courses) in order for the course to maintain full funding.

The TEC requirements under the low-performing provision (LPP) allow for removing funding for courses that fail to pass more than 60% of those enrolled, if a course falls below this threshold for two previous years. The TEC does not arbitrarily withdraw funding but looks at each course on a case by case basis. Included in this assessment is consideration for the reasons relating to poor performance [14].

Currently VUW has never received a formal request for funding to be returned. However, the TEC has the ability to do this and can in the future 'claw back' funding for courses that have breached the conditions/rules since inception of this policy into law. If funding were clawed back it would be the full funding for the course concerned and not only for those students that did not pass.

The scaling of course marks is one way that this target is met:

> *Int: I think they [the students] definitely…performed better at grade wise?*
> **Lecturer F:** But that was that was built into the system because it's a curve. So literally me and Lecturer 3 sit there and we go 'well you know what's typical for Vic' we ask around okay and then we just put them on that, so the number of As Bs Cs and they're not competing with pure math guys any more so…

The following lecturer, while reluctant to admit scaling occurs certainly indicates an awareness of the need to take into account pass rates:

Lecturer J: I realise that the pass rates are a cause for concern… both, you know well basically that quality of students entering second year is a cause for concern. I mean a couple of years ago it was it was a great cause for concern about the actual pass rate because we were getting close to that trigger point Where you know fees can be pulled back...
Int: Yeah, so, well that's an interesting point so I mean do you scale?
Lecturer J: I never had to thank God… So ((laughs)) I'd - really don't want to, but there was one year when we quite close and we looked very hard at it, and we reached some kind of accommodation where we don't feel we're being unfair to anyone.

From the perspective of the first author as a staff member in SECS there is a common verbal acknowledgement by staff that they have to ensure that course pass rates do not drop below the TEC claw back level. This has on numerous occasions been conveyed to staff in meetings with senior management, and may be in focus, as Lecturer J describes during meetings about scaling student grades. This process puts an interesting aspect on ownership, the lecturer may own the classroom and assessment, but not the percentage of students deemed to 'pass'.

In terms of power this is what Foucault would term as being not obvious or invisible power – in this case it is the institutional processes and cultural context of VUW and SEC relating to their interpretation of TEC messages. This interpretation, while lacking a formal overt structure still acts, albeit in a decentralised way, throughout the hierarchy of the university and the ways in which individuals within these environments interpret the messages they both receive and in turn act to create and perpetrate for others.

Academic freedom does not suggest that there are no controls or constraints on course design but rather that what controls exist are minimal with the lecturer considered the subject and teaching expert. VUW has a Programme and Course Design Handbook, however it is difficult to tell if this has any significant direct effect upon individuals' course or programme design [15]. The course design book is a necessary administrative document that shows outwardly that this aspect of the teaching and learning environment is taken seriously but it does not significantly challenge ownership of courses by lecturers and pass rates by university management and the Government.

Controls on course design within SECS are handled by the various majors teaching groups and by course auditors. A course auditor is assigned to every course and takes the form of another academic who is supposed to review the course and complete a checklist before signing off the course. According to interviewed lecturers, in reality little is done and in many cases the lecturer would not do an in-depth investigation of a course they sign off. The respective teaching groups talk about content of courses but do not generally get involved in how a lecturer teaches or assesses a subject.

All this reinforces that there is considerable freedom of operation of lecturers and courses which as the following excerpts suggest results in relatively ad-hoc communication between lecturers and reasonably informal course- and first-year programme design process:

Lecturer E: From my understanding of how the courses are constructed, the courses are constructed by setting a set of learning objectives which are assumed to be met from the previous courses on a whiteboard… And then they say if they know this then we can teach them this and this and this
Int: So if we don't know what…they're coming in from school with… In terms of background knowledge how are we making that? Are we just making an assumption of what they should they should know?
Lecturer E: Yep
Int: Based upon what… So is that based upon just gut intuition of the lecturer?
Lecturer E: It seems to be… I mean there doesn't seem to be any change or modification of the course based on the response of the students to the material. So a classic example here that I could come up with was is PhysicsA… So there was little to no acknowledgement that a chunk, so let's say twenty five of the students in in PhysicsA had never done any maths previously and weren't enrolled in the MathsA course. Yet they started in their very first lecture rearranging equations. And sure for us that's trivially easy but it wasn't for them. They didn't cover that until like week four of MathsA and even then they spent a week on it… So requiring them to do that at that point in the trimester just throws this massive disconnect and we've done the same thing in trimester two with EngineeringA and the corresponding maths content in EngineeringB… It's the right content but taught at completely different times from when it's needed.

The following three excerpts from lecturers' A, C and F continue to illustrate a similar disorganized approach to course design and planning. They contain specific examples of differing lecturer perceptions of course design and teaching planning in the new Engineering math courses, EngineeringA and EngineeringB, cross-disciplinary, multi-instructor courses. The excerpts are taken from interviews with two engineering lecturers and one math lecturer from these courses:

Int: So in terms of being able to understand whether first year is pitched at the right level for incoming students
Lecturer A: That's really hard… No one knows what's in those maths courses so nobody in engineering really seems to know what's really in those maths courses. I guess Lecturer E, Lecturer H and Lecturer N have seen a fair bit from the tutorials… But I don't think they know what's in the heads of the lecturers - the course organisers.
Int: Well they wouldn't for physics either
Lecturer A: Right… welcome to the university, this is how it works.

Lecturer A indicates a sense of business as usual or normalized behavior around the way ownership allows course organisers and lecturers to retain, rather than share, course information.

> *Int: Is there much use of educational pedagogy going on in the design and methods behind what are used to sort of lecture at students or engage students?*
> **Lecturer C:** No
> *Int: Does that even come up in conversation?*
> **Lecturer C:** It might do in the new engineering math papers… Because I think I think that we have new staff members and I think it was impressed on them how important it was that some thought - actually some proper planning went into it. Most of the other courses tend to run on historical precedent or how the current lecturer feels, thinks is the best way
> *Int: Yep so do you think that's helpful?*
> **Lecturer C:** I have a phrase benevolent dictatorship ((laughs)) the courses at least the courses I know of.

In the conversation with lecturer C it was clear that the lecturer thought that there was some 'proper planning' made in the new engineering math courses however the following excerpt explains that this was not really the case. In particular we can see that the concept of ownership becomes quite clouded when individuals in the environment believe that certain things have or are going to happen in courses but actually they do not. There is also the notion of historical ownership versus current ownership, with historical ownership having some potential effect on how courses are subsequently run.

> **Lecturer F:** I thought at the end of last year everything was a bit weird so Lecturer O and I were hired we came in we taught this course. We weren't given that much guidance. And we were given… the notes from EngineeringA so we just kind of went with it. The kids are very happy. So from that point of view I think - at least in terms of what they wrote it was all very positive, you know the pathway… you know on paper everything is perfect. But if you ask me why did it work, like I mean, I'm in math but I work in computer science now so I maybe I had a slight computer science-y flavour and Lecturer O's an applied mathematician not a pure one so fine. But we didn't try that hard to be engineering-y, the labs, Lecturer N I think did a really good job and the labs were just completely different and interesting so maybe that changed their attitude but it seemed like they had much more, as I understand it, they had a much better experience than they had previously but it's not clear to me why. I don't see what the actual added value was unless it was the labs.
>
> *Int: …are you teaching this course the way you would run this course?*
> **Lecturer F:** EngineeringA I'm happy with. EngineeringB I'm doing now and I'm not super happy with - you know I'm not so comfortable with [it], so we don't have a text book which maybe I should have, like I don't know got them out. Maybe I was a bit passive I felt like other people were in charge of [it] Yeah you know it's the logic and then it's probability and statistics and then these can be integrated better than they're going to be….

Lecturer F indicates a lack of guidance from his colleagues and reveals an interesting process; one that indicates that lecturers are reluctant to tell others how to teach and do not appear to be sure of who owns a particular course. The lecturers above indicate the effect of academic freedom and the lack of clear deliberate educational management, the result of this is the promotion of a culture of individualism. This individualism places ownership of specific course subjects, materials and practices within that of the individual lecturer.

Individualism and a lack of communication can be seen in the following excerpt, however there is also a desire for greater communication and shared course design:

> **Lecturer D:** I think the courses could be improved. One of the ways the courses could be improved is by the lecturers starting to talk more together. Whether they should have done this in the past is a moot point because it wasn't done and now it ought to be done. I think one of the reasons when you're developing courses it's important to get the course material there before you worry about how it relates to other things. So you get your core first and once you've got your core you then fine tune it to relate it to others which is definitely the approach we've taken in the engineering mathematics course. Yeah let's get the fundamental subject matter across 'cause without that transferable skills, the ability to design if you're designing with no knowledge or you're talking about something with no knowledge it just doesn't work so well… Now is the right time to get people to talk to each other and I think it will improve with coherency about what's expected. I think it's frustrating for students if they're told in one course that yes they can have a re-sit but not in another course. I think it's frustrating if they end up with three or four hand-ins on the same day without any planning to actually let them know that this was going to happen. I think it's got to be very carefully managed if a student becomes ill for a week for example how does that coordinate and how does that work do we build in enough time for students to catch up… A more cohesive approach between the courses is good. I would like to think we would get to a cohort approach but I don't think we will, so one of the problems is for example if you're teaching matrices in mathematics it would be good that in engineering and physics in the next week that they use examples of matrices… But that level of coordination is unlikely to ever happen. It's just everything becomes very rigid when you require too many courses to be prerequisites and corequisites to each other.

Lecturer D talks about a "cohort approach" – so that curriculum could become joint ownership of course material across courses but also notes that difficulty of changing the individual nature of the course design due to the requirements of prerequisites and corequisites. Lecturer A below points to an alternative view for the individualism and lack of cooperation when he explains that lecturers are perhaps more interested in BE courses which are closer to their research interests. The lecturer also shows how this individualism of ownership through academic freedom makes it difficult for lecturers of differing opinions to work cohesively.

> *Int: Do you guys talk about what's going on in your courses?*
> **Lecturer A:** There's some discussion, not a lot. There's that first year Workload Committee so that's had discussion there's informal discussions that I have with people and I pick up stuff so I was working with Lecturer Z… Providing some mentoring yesterday - last year… So I had some feel what was happening in EngineeringD I'm involved in EngineeringC I've taught EngineeringD and they're using my design basically. I'm a sort of lynch pin here I know what some of these are because it's because I've been so involved… But there's little formal discussion

Lecturer A's commentary indicates that even though he can 'mentor' and the other lecturers can use his course material, he still cannot own the teaching-learning environment of this course. When a lecturer takes over the teaching in a course it becomes the 'property' of that lecturer. Evidence of this can be seen below:

> **Lecturer A:** I don't think they're especially interested in [course planning]…Lecturer J is not especially interested in EngineeringD. He had to teach it. He works at it but he doesn't have a vision of computer science. He's not driven by course design. I suspect if you tried - if you asked him, why we have priority queues in there? I doubt that he could tell you.
> *Int: Is this true across the programme, I mean is it an academic thing?*
> **Lecturer A:** When you get to the higher level - When you go to the third year you get much more ownership of material…. It tends to be in the specialist area. So Lecturer S is the database person that's her course she cares about it… Lecturer T has half of the AI course and Lecturer U has the other half and they disagree quite considerably on what ought to be in there. And neither of them are happy with each other. And they talk but they don't say what they actually think 'cause then they'd start fighting. First year - our first year's sort of weird because I care about it.
> *Int: But you don't have control over it either?*
> **Lecturer A:** Of comp I do
> *Int: Yes but not over the Engineering or the two Engineering courses?*

> **Lecturer A:** No
> *Int: The Physics courses or the Maths courses?*
> **Lecturer A:** No.

The excerpts above illustrate how the concept of ownership has an impact on the way our courses have been designed and delivered. They also show how individual ownership of the teaching and learning space is part of a complex system that points to varying aspects of individual ownership and also points to a certain lack of ownership. Lecturer A's admission that lecturers difference of opinions can lead to fragmentation within courses with lecturers apply discrete ownership of their sections and in effect apply a complete lack of ownership for the other parts of the course. In the description below we see that this lack of ownership or responsibility can translates to a complete lack of direction in a critical first-year course:

> *Int: What's the purpose of EngineeringA which is this compulsory core course all engineers take?*
> **Lecturer G:** Well that's the thing that we have been struggling with for the past three times this thing has been conducted. I think each time we sit down you know there's no one clear vision of what it needs to do. You know it's kind of like we are making it up as we go along ((general laughter))… We come up with what we call a plan, a schedule, okay? But there's no clear vision, you know on what it is actually intended to achieve you know. It's only later when you talk to some more experienced ones that they [say] 'oh so you were supposed to do that'
> *Int: Okay, so this is what more senior academics in the department?*
> **Lecturer G:** Yeah yeah
> *Int: So they have an opinion on what the course should do?*
> **Lecturer G:** Yeah yeah
> *Int: So had they not made that clear to you guys?*
> **Lecturer G:** No.

First year feeds into all majors in the BE in subsequent years. At first year there is a lot of student movement between courses as they begin to find what they like and what they are good or bad at. There is no single programme director for first year, programme directors exist for all of our majors but really only affect the courses that pertain to their specific major. At first year this means that there are multiple programme directors who in reality lack the mandate to affect significant change to first year. Responsibility for course design and day to day teaching is the responsibility of individual academic course coordinators. The result of this is a tension between the ownership of the student cohort, the degree, major within the degree, and individual courses. The following excerpt highlights the current situation:

> **Lecturer D**: The problem of our fifty percent I don't believe is on the good to averagely good student… It's the average to poor students that don't have the skills to cope with what we want and we're not providing the mechanisms to get the skills to get what they want
> *Int: …. So is that because like most courses are up to two or three people to decide what they're teaching?*

Lecturer D: Yeah and I think this was the case 'cause up until last year we didn't have an Associate Dean academic development that could look over it and Lecturer A is looking across, vertically and horizontally across courses, we have programme directors but programme directors worked on specialisations and there was talk of having an engineering programme director… But that wouldn't have worked because they didn't have the remit to change anything… They couldn't change, across specialisations, whereas Lecturer A has the remit so that works better
Int: So Lecturer A actually has authority to come into, say for example your course, and tell you to teach a certain way?
Lecturer D: I hope he has - and I hope he does.

The net effect of the lack of coordination and communication between lecturers and courses is that there has been no clear design and delivery of an integrated first year curriculum. There is a lack of communication of course content, best-practice or the use of pedagogical theory in the first year courses which marks a clear shift from the government, business and university goals of delivering both quality and quantity of students. Academic freedom has in effect resulted in the relinquishment of the means to effect a comparative and measureable quality education. This fact was illustrated by Lecturer A when he noted above that he could mentor but not change a course. There is no official way for a lecturer or for that matter an Associate Dean Academic to force course change, in design or teaching methods, unless a course received extremely bad student feedback. Ownership remains a contested space in the teaching and learning environment.

D. Ownership of the Teaching

There is also little evidence in the interviews of acknowledgement of a student scaffolded learning process. This is not surprising when one understands that there is a systemic lack of adult educational training in the university sector. Academic freedom given to the tertiary sector in New Zealand maintains no official requirement that academic staff obtain and maintain a teacher training qualification despite other required accountability measures. The message from the Institution, as perceived by academic staff is that, in a research-intensive and competitive environment, teaching is not an important enough skill to justify training. Experience at university in an academic position is considered on the job training:

Int: So teaching skills, I mean, you've read some pedagogy you're involved in that, have you thought about it?
Lecturer A: Not much
Int: Okay so
Lecturer A: Have I thought about it yes
Int: Okay, so you've thought about it based on obviously what??
Lecturer A: Experience
Int: Okay…. are lecturers trained teachers at all
Lecturer A: No.

Int: Yeah so nobody teaching first year has a teaching qualification?
Lecturer B: No. Not that I know of
Int: And has anyone - do people do the CAD [Centre for Academic Development] training?
Lecturer B: I've done a couple of workshops… And I know other people who've done a couple of workshops as well… But that ends up largely being personal choice.

Int: is there any kind of educational theory you apply in your teaching?
Lecturer F: No
Int: So it's how you were taught you then teach?
Lecturer F: No, I kind of just make it up as I go along….

Int: But I think what more I'm talking about is the way you approach the fundamental teaching of problems or skills
Lecturer F: Yeah, that's black boxed, you know?
Int: And do you think that's an issue?
Lecturer F: It's a difficult question because it opens a can of worms. Yeah I don't know. Oh I would enjoy such a discussion if my point of view was to win but if I was being told how to teach.

We can see this lack of emphasis on teaching skills as an invisible power structure at work imparting this message by virtue of not promoting a culture where educational pedagogical knowledge is considered paramount. Evidence of this power exerted upon them can be seen in the fact that 13 out of the 14 lecturers interviewed do not have teacher training qualifications. These lecturers rely on hands-on learned experience, informal conversations with other staff and the occasional attendance to a Center for Academic Development course or seminar.

Course design and teaching is perceived as secondary for many lecturers due to the messages they perceive from the university and government concerning their research duties. As Lecturer G describes, lecturers are subject to the power of the institutional and government discourse and react according to their understanding and experience of it.

Int: So why don't academics - why don't you kind of learn some teaching skills?
Lecturer G: Well first of all, 'do all academics realise that this is a problem?' is the first question that you should ask, you know, because unless it is - well for me you know it wasn't really clear that that was a problem yet… Until you saw that they really don't get, even the first - the simplest thing that - even to us the simplest thing that we wanted to teach. When they don't get that then there's a problem… Okay, and I think it is to really make them see that it is a problem, first, and then that's when- that realisation will trigger you know - okay how can the feedback look to say that, how can I actually improve on this?… So the first step is that the lack of this

awareness that that is a problem… Ah, and then, going to further so, what is the best way to actually deal with this? You know I'm sure you know if you start reading up there'll be some books you know. Even just doing some self-reading on how to improve, this would really go a long way to help the students… So I think that they are equipped with that skill go and study how to do - how to do better teaching. But with time restraints, research and all this and that… They probably don't have the time to do it, don't want to do it, don't see any incentive to do it, and don't realise there is a problem

Int: So the priority for you guys is what research?

Lecturer G: Yep

Int: So, do you do you view your teaching as secondary to research - do you have a priority order of work?

Lecturer G: Well that for me personally it's actually a constant struggle… Okay, between research and - I like to do research I enjoy what I do er, - and this whole you know research-teaching thing I think –it's it's a mess here…

Int: Here at Victoria, or…?

Lecturer G: Well I would say in New Zealand you know… I think it it's a mess. You're there there's no clear instruction if you want to do teaching where's the pathway you're not told you're not providing clear guidelines on you know… If you're an academic your main job is to teach, okay or in a teaching-based university you know… And then on the other hand you go off and say you know oh, PBRF [Performance-Based Research Fund] is, you know, what is the message? It's actually completely - as an academic I find that this message is conflicting… You know there's no clear instruction whatsoever okay, so, I just do what I can which is, I try to teach as well as I can… but that that may just because of yourself your personal values and so on you know… and at the same time you know you're interested in doing research and you want to because of promotion and all those other…So, for me I recognise that, if you look at the job description it was actually to teach… Okay, but then on the ground you know very well it's actually based on your research….

Int: Okay, are there any penalties if you're a bad teacher?

Lecturer G: Yes of course

Int: Yeah, so what are they

Lecturer G: I think you have to go - if you get below a certain grade you have to go to this CAD or something to get some help…

Int: But are there any actual career penalties that you know of?

Lecturer G: Well you can do - you can suck at teaching and you can do good research and no one no one's going to come knocking on your door

Int: Okay, yep, so do you think that affects the way we teach our courses?

Lecturer G: Well the inaction actually promotes, just by virtual inaction… You know, you are in fact promoting it… Not actively we are promoting but by not doing anything we are in fact promoting it.

Lecturer G identifies a major competitive relationship academics have between the desire to deliver research versus the commitment expected in teaching and course design. The question of who owns the learning and teaching space exposes that fact that there are multiple stakeholders-multiple pulls and pushes on all of those involved. It also raises the issue, as Lecturer G points out it that inaction or resistance in the teaching space because of this also has an effect of not promoting the importance of teaching skills by the 'we' – the lecturers.

E. Ownership of Learning

While, the previous sections have explored the broad framework of ownership in the classroom, there remains a further process – ownership of learning. Ownership of the learning belongs both to the student and the lecturer. The lecturer is responsible for the delivery of knowledge through education. Knowledge itself, is intrinsically linked to acceptance or conformity with the rules and meanings espoused. A key theme of this discourse lies at the heart the educational nexus and is rooted in an Enlightenment conception of modernity. Richard Edwards and Robin Usher identify this in their 1994 book Postmodernism and Education where they note: 'Education is very much the dutiful child of the Enlightenment and, as such, tends to uncritically accept a set of assumptions deriving from Enlightenment thought. Indeed, it is possible to see education as the vehicle by which the Enlightenment ideals of critical reason, humanistic and individual freedom and benevolent progress are substantiated and realised' [16].

This statement locates the power struggle of educational discourse in the theoretical battle for ownership of 'truth'. Edwards and Usher cite Jean-François Lyotard (1924-1998), the famous postmodernist philosopher who argues: 'that the project of modernity is deeply intertwined with education, modernity's belief being that progress in all areas will emancipate 'the whole of humanity from ignorance, poverty, backwardness, despotism…thanks to education in particular, it will also produce enlightened citizens, masters of their own destiny' [18]. In doing so they claim that education's primary rationale is founded in the humanist idea of a certain kind of subject. The humanistic idea of a subject in this educational sense describes a person who as an inherent potential to be self- motivated and self-directed. Educations role is to take this subject and help them fulfill this [16]. However, the fulfillment of this takes place through the particular lens of an educational institutions teaching practices – in the broadest sense.

We can see this creation of a subject in the way lecturers describe students or the way students perform in their classes. For both the student and the lecturer; the lecturer becomes as the owner of the teaching space and the director of the learning

environment. The following excerpts illustrate that lecturer ownership of the learning environment creates a contested space for students, where ownership of the actual learning only belongs to a certain type of student, with a certain ability:

> *Int: But is that not our job? I mean are we not supposed to motivate them…?*
> **Lecturer E:** Yeah so that's, I think that's the crux of it right? Is that what you just described is how many academics view students, is right you're at university now, you're an adult, you've paid a large amount of money to be here, it's your responsibility to engage with the course and the material, and if you don't you're an idiot and you shouldn't be here, and that's for, you know if you were teaching adult literacy, that that could be a really valid assumption. I don't know I've never taught adult literacy… but the reality is that doesn't describe most of our students. Most of them are school leavers that think this may be something they want to do. And they struggle to motivate themselves… Particularly those average students because they probably will have struggled with motivation at high school… Exactly, so they're - they're turning up saying, 'alright I'm Tom, I'm nineteen I have the entrance requirements for this course I have sixteen credits they're all at achieved. I technically match what you on paper say that you want. Except that what we actually want is, or what our courses are set up to allow to pass are students that are motivated and are probably at the cream of the crop so the merits/excellence maths students, that will, kind of breeze through relatively easily…. They're essentially to be pretty well perfect from the get go.

Lecturer E describes the learning space as being set up for the top students, the ones who are self-motivating, self-learning, responsible and academically excellent. The lecturer also notes that most of the students we have do not fit this category. As such, we the learning space is designed for a certain category of student. This conflicts with the rights and responsibilities in Table I. by limiting the potential success in the learning space to a certain group of students. This lecturer also draws attention to the fact that the entrance requirements send a message to the student that they have what is required to succeed which seems to be at odds with the idea of only teaching the top students.

> **Lecturer C:** Okay, so the academic one's straightforward yes? Because the academic stand point is looking at the top cohort, under some measure of the high school students so, apart from that top cohort everybody else struggles.
> *Int: So we pitch our courses at the top cohort?*
> **Lecturer C:** I think so… Well, of the top high school cohort which is not necessarily the wrong thing. The University doesn't want every high school graduate I think… but it's very easy then to fall in to aiming at the top ten percent of the class here, which is the top, might be one percent from high school, and then

there's - there's big transitional issues in the learning styles - how to organise stuff, being organised. The students aren't given as much guidance in for general courses as they would be at high school, contact, they're used to having small class contact with people, looking after them where that doesn't always happen.

Lecturer C also describes the learning space as being set up for the top students, and also suggests that the university does not want every high school graduate. This is interesting again when compared with the desire by the university for increased numbers of students.

> *Int: How does PhysicsA fit students going from that path going into PhysicsB or PhysicsC in trimester two…?*
> **Lecturer K:** Not well… It's a big jump, because I mean the ones the ones who do well in PhysicsA have many of them have leapt streets ahead, I mean they've really made… They've really made good progress… They've gone the distance, but even so there is a big difference in the level of sophistication… And it has to do, I think, with the academics, some of the other subject lecturers there having very high expectations, maybe excessively high. Perhaps less prepared to make allowances for their entry level… For where they are and where they've come from.
> *Int: So are they not seeing it as, like you say you take a student here and your job is to get them to the finish line? So you need to change the way they think and help them learn in a different way. Is that not how the other Subject papers are taught?*
> **Lecturer K:** …I can think of some people who would agree with that, and others who would just ignore it, and this is this is the standard they have to reach and they have to do it by themselves and the plonkers won't… That's a word I've heard before, plonkers… And you know I mean I find that that rather difficult to accept, that I think everybody would benefit from a further education of some kind or another.

In the excerpts above, several lecturers identify that the learning space is aimed at teaching students who fit the category of being self-motivated, self-directed and have a high level of academic ability. However, Lecturer K also identifies differing opinions amongst his colleagues about the role of education, and also has the perception that higher education should benefit all, not just a certain group. It is certainly the duty of students to be academically prepared for higher education and a right of lecturers to expect this, though as discussed earlier exactly what level of preparation required is complicated by varying messages. Students arrive in courses with university entrance granted according to their high school academic level, yet this level is not necessarily the same as what is required by lecturers in their courses.

In addition, having a learning environment that targets a certain type of student allows the lecturers freedom from the responsibility of ownership for the learning of students who don't fit their view of what is good academic preparation. It is clear that ownership over the level of academic preparation represents a tension between the messages the university are sending academics through enrolment policies and their academic freedom to set an educational level. Failure to possess the required level of academic ability, motivation and independent learning positions these students as subjects who are unsuitable for the current system. We have an environment where the enlightenment ideals of teaching and making a certain subject are in-built within the educational system and represents a 'truth' within the discourse. Not truth in the sense that it is actually true, but true for the particular operation of power in this situation. There is consistent but possibly unconscious acknowledgement by lecturers that successful students – the subject – in the educational context has inherent qualities that remove ownership of the need to develop extensive teaching skills or teaching materials that would help an 'other' type of student.

This is visible in the academic discourse above and is at odds with the business goals of the government and university. As such, it can be seen as resistance to the demands for better education and ownership of the teaching and learning space by Government and institution, but is also acceptance of ownership of a discourse which divides students into good or bad.

VII. Summary

Government, business and university policy, coupled with lecturer perceptions, subsequent actions and inactions reveal the operation of power networks in the New Zealand teaching and learning environment. For example, Government and businesses are looking for engineering graduates. Government funding is conditional on a mixture or recruitment, course completion and graduation numbers, with the additional demand for research encroaching on these. VUW is looking to meet enrolment and graduation targets and to deliver the required number of graduates while maintaining a highly ranked international university. Within VUW, Faculties and Schools seek to meet their course completion targets, and graduation targets, while maintaining quality of student outcomes, and research accountability. Subsequently, lecturers are looking to maintain their standards for educational quality, teach courses and conduct research while also contributing to administration duties.

While Government and business exert ownership over the university, it in turn applies it over lecturers who react with counter-ownership. This exercise of power is a continuous series of actions and reactions, compliance and resistance. For example, lecturer inability to set restrictive entry standards leads to the reluctance of lecturers to amend the academic level of their courses. The result is a reluctance to fully comply with the business and government need for increased numbers of passing students. The lecturers indicate that the teaching of courses is aimed at the 'top' student, thus individual course targets have to be met with scaling for poor performing students.

There is a growing gap between the responsibility and rights of all the groups in listed in Table I. The lecturers have

ownership over the right to construct curriculum, but do not have to talk or cooperate with each other or fully interact with business or professional bodies. The lack of communication and integration results in an individualistic first year teaching culture and course design. The acquisition of teaching skills is not emphasized in the operational procedures of the university. There is a growing realization that we need to operate differently to meet the needs of the students. As can be seen in the lecturer statements above, some lecturers want to share their teaching and curriculum development, while others do not.

There is a constant message in the interviews of increasing and competing pressures on academic positions. Lecturers describe a lack of time to meet the pressures placed upon academics. Ownership of the course and classroom teaching is given to academics, but not in a way where they feel empowered to improve content, context or process. This problem is exacerbated by the competing demands of research, publishing, administration, as well as the agenda of recruitment and retention.

The concept of ownership in the teaching and learning space represents a manifestation of power, and also of resistance to power. The consequence of competing ownership on the teaching and learning space suggests that there are negative effects for students. Further work will investigate the tension of competing demands on lecturer time, expressed in the need to research and contribute to the Government and New Zealand University Performance Based Research Fund [17].

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