

## **THE ADOPTION OF MODERN OFFICE WORKSPACES BY TERTIARY EDUCATION INSTITUTES: A CASE STUDY OF UNITEC**

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### **ABSTRACT**

Modern office workspaces, and particularly activity-based workspaces (ABW) are emerging in the education sector. The primary reasons for making changes to workspaces vary from institute to institute. Yet, there is limited research on the objectives, the overall value of making these changes, the strategic plans used, the types of workspaces being implemented and the issues faced by higher education institutes, which can potentially affect their users and their associated work practices. Semi-structured in-depth interviews within a case study approach were carried out with three groups of participants: staff that have had previous experience in new types of workspaces, staff that have not worked in such environments, and institutional key decision-makers. Field observations and a review of supporting documentation complemented the interviews. The findings indicate that there are wide-ranging organisational changes occurring within Unitec, and not just simple changes to existing workspaces with the aim of increasing collaboration, reducing facility costs and creating sector alignment. Additionally, ABW are being implemented throughout the organisation based on prototype office spaces in one campus building heavily influenced by commercial workspace design. However, higher academic work practices make unique demands potentially creating tension between the aims of the institution for increased collaboration and interaction and established work patterns. The inclusion of more private quiet spaces is suggested by the interviewees to help staff adapt to these new ways of working. Furthermore, keeping the lines of communication open and regularly updating all staff on the redevelopment of the new workspaces ensures an overall smoother transition.

*Keywords:* academic work, activity-based workspaces, organisational change, tertiary institute

## **1. INTRODUCTION**

Tertiary education institutions with their collective knowledge have a major impact on the national economy and society as a whole. Yet, there is limited research exploring the changing nature of academic office environments and the potential effects on the users and their associated work practices. Some tertiary institutes have adopted in recent years modern flexible workspaces with the aim of facilitating cooperation and knowledge-sharing through informal interactions. These changes are primarily influenced by technological advancements and driven by economic factors. However, the users of these new spaces and management often have different views on the value and potential benefits of modern office environments. This is mainly due to the current dominant culture of individual research in academia. Despite apparent tensions, academic work practices are evolving and progressing towards change, even though being drawn-out.

This study examines the characteristics of well-designed modern workspace environments at Unitec Institute of Technology and ascertains whether they meet the requirements of all stakeholders involved. Unitec is New Zealand's largest Institute of Technology, with more than 20,000 students studying over 150 work-oriented programmes at three Auckland campuses. Unitec is currently undergoing a complete transformation of its organisational structure, academic culture and physical environment. At the core of this transformation is a commitment to providing world-class learning and teaching opportunities that are integrated with industry. The support of these learning and teaching models requires: the creation of new spaces for students to learn and work; a reshape of the existing services; and a drastic upgrade of technology. The physical redevelopment, focused mostly on the Mt Albert campus currently with 177 buildings spread over 53.5 hectares, aims at developing it as a more compact and lively campus at the southern end of the existing site. In addition, the research investigates the challenges during the transition period.

## **2. BACKGROUND**

### **2.1 The nature of academic work**

Academic work is predominantly individual, concentrated, autonomous and without distractions. Occasional meetings and collaborative working are an exception rather than the norm (Lansdale et al., 2011; Pinder et al., 2009). Academia has its own cultural norms and rules that individuals must follow and learn through interaction with others to be accepted by the fraternity (Lansdale et al., 2011). Despite academic work's mostly independent nature, informal face-to-face communication proves to be

the preferred method of information exchange (Lansdale et al., 2011; Toker and Gray, 2008).

Commercial and higher education work environments have very similar attributes. However, it is also important to note that there are distinct differences (Lansdale et al., 2011). Firstly, postgraduate research, in particular, is conducted over a long period of time, independently, with minor collaboration, little supervision and insignificant interaction. Secondly, open-plan layouts prove challenging for academic research which is cognitive, non-routine, requiring a high degree of application and minimum distractions. Thirdly, workspaces are highly individualised through the display of personal items such as qualifications, photos, etc.

In recent years the impact of information and communication technologies on academic work within the higher education sector has been profound (Watson et al., 2014). Laptops and portable technology provide the flexibility for researchers to work away from their dedicated workplaces and collaborate in various locations. Consequently, this has changed the space requirements of campus-based workplaces. Additionally, wireless technology has allowed new and existing workspaces to be flexibly configured to respond to the demands of new work practices (Pinder et al., 2009).

## **2.2 Benefits of modern workspaces**

A number of studies in the literature argue that open-plan office designs with non-territorial workspaces create flexible quality work environments and offer additional savings in the form of reduced occupancy costs. This approach has been considered as an acceptable strategy to resolve low occupancy rates usually associated with traditional academic spaces (Haynes, 2008; Lansdale et al., 2011; Värlander, 2012). Flexible workspaces utilise standardisation and design norms, achieve more efficient use of space by incorporating new technologies that are constantly decreasing in size, and have space-saving storage solutions (Pinder et al., 2009).

Well-designed modern workspaces do stimulate frequency of interactions amongst occupants. Both the 'flow model' and 'serendipitous communication' model state that the layout of a workspace environment can influence interaction and hence improve productivity (Peponis et al., 2007). Effective communication is best achieved when occupants are located in close proximity and when they congregate in common areas known as 'interaction nodes' - main circulation corridors, hallways and lounges. Good spatial design with the added benefit of technology, can compensate for the loss of privacy, as well as the loss of workspace personalisation, territory, and expression of one's status. Creating a communal workspace with its own qualities, thus generating a 'group territory' atmosphere and own collective identity is suggested as a way to offset the loss of territory and personalisation (Voordt, 2004).

### **2.3 Disadvantages of modern workspaces**

Often despite the willingness of organisations and a well-thought out strategy, intentions and desires differ significantly from resulting outcomes (Pinder et al., 2009). In some instances this has led to unanticipated outcomes such as the establishment of new rules, routines and procedures being learnt by the occupants (Värlander, 2012). The lack of privacy in open-plan workplace environments is a major issue for both the commercial and education sectors despite design provisions (Eisinger, 2002; Gorgievski et al., 2010; Lansdale et al., 2011; Värlander, 2012; Voordt, 2004, 2008). Due to the very nature of academic work with a high degree of concentration and creative thinking, minimal detractions are paramount. In comparison with individual cellular offices, open-plan academic environments have a tendency to decrease psychological privacy and increase noise and distractions, which ultimately affects negatively the occupants' productivity and motivation (Gorgievski et al., 2010; Parkin et al., 2011). There are also claims in the literature that instead of promoting informal interactions, open-plan workspaces reduce the spontaneity of interactions (Pinder et al., 2009) and encourage superficial conversations due to concerns of being overheard or interrupted (Fayard and Weeks, 2011).

For academics, the loss of privacy is associated with the loss of independence due to the loss of control over their personal space. This loss of independence is particularly severe during a transition to non-territorial workspaces (Wells et al., 2007). On average 10% to 20% of employees are unable to cope with a non-territorial work environment as they miss their personal workspace and the opportunity to personalise it. The hot-decking policy does not prove as effective as initially thought as employees still prefer their own decks (Gorgievski et al., 2010). Taken to a very extreme, some occupants perceive the inability to display own personal items as a loss of their own individual identity. This gives rise to negative behaviour such as squatting and colonisation of space in desirable unassigned areas (Värlander, 2012).

## **3. RESEARCH APPROACH**

A case study of Unitec Institute of Technology was used to explore how the organisation embraced modern office workspaces, the approaches used and the progress made thus far. Document analysis, field observations and semi-structured interviews were used as data collection methods within the case study research approach. Unitec has a number of strategies and plans to help it achieve the goals set by the Unitec Council and government. Of particular relevance to this research were a number of specific strategies regarding Unitec's Transformation Programme: the Sector Alignment, the Property Strategy and the Student Services Blueprint. The document analysis, which took place first, helped in formulating the questions for the face-to-face interviews that followed.

The interview questions were exploratory and qualitative in nature. The first stage of the construction development on the Mt Albert campus began in late 2014 and primarily focused on developing and testing prototype learning and office spaces with the intention to use them as models for future development. The on-site observations of the new prototype office workspaces were conducted in building 48 before and at the time of the interviews and resulted in the collection of image data. The refurbishment of the existing building was completed in mid-2015 to showcase a much more open plan office environment which features no offices, two quiet rooms, three bookable meeting rooms, and no set desks. The observations provided further evidence of the physical transformation of the existing workspaces particularly with regard to their suitability based on workspace design strategies; the progress being made; and the goals that had been set.

Twenty five semi-structured in-depth interviews were carried out with three groups of participants: ten with staff that have had previous experience in adopting modern office workspaces; ten with staff that have not worked in such environments; and five with institutional key decision-makers responsible for the management of Unitec facilities. The interview participants were from a number of departments located on the two levels of building 48: Accounts & Finance, the Corporate Office of the Chief Executive, the International Office, Marketing & Communications, the Pacifica Centre, Te Puna Ako and Te Waka Urungi. Their background was primarily admin work, student learning support and curriculum development. Five interviewees were also engaged in teaching. The interview data captured the participants' attitudes, opinions and experiences in relation to modern workspaces and associated work practices. A matrix of responses was created to analyse the collected data from the three groups of participants and the reviewed documents.

## **4. FINDINGS AND DISCUSSION**

### **4.1 Broad organisational changes taking place**

Unitec is in a process of widespread organisational changes, it is not just undergoing a simple transformation of its existing workspaces. Unitec has adopted various strategic plans for the implementation of these institution-wide organisational changes and for the upgrade of its physical environment. These changes include new work practices, new programme design, the disestablishment of exiting roles and establishment of new ones in a flatter organisational structure where desk-sharing in modern ABW environments will become the norm. According to the research data, interdisciplinary collaboration, co-creation, innovation and community culture are at the core of the proposed organisational model with the aim to meet the expectations of employers, students and government (i.e. sector alignment).

Official documents state that the existing workspace facilities at Unitec are inflexible to changing technologies, hamper the institute to deliver contemporary teaching and learning models and saddle it with unsustainable financial costs. The main reasons for the physical transformation of the institution's existing workspaces are: to facilitate the sector alignment as part of the new organisational model; to encourage more interaction and cooperation within its academic fraternity; to enable the introduction of advanced teaching technologies; and to reduce facility costs. Although the reasons for having new workspaces vary across institutes, there are some common threads such as fostering interactions, collaborations and creativity or reducing facility costs (Pinder et al., 2009). However, the interviewed staff were of the opinion that new workspaces alone would not be enough to make substantial changes to existing work practices. This finding is similar to other studies where the physical workplace environment is not considered as the sole factor able to alter the culture of an organisation and facilitate change towards a more collaborative environment (Lansdale et al., 2011; Pinder et al., 2009).

#### **4.2 Workspaces mirroring user's requirements**

The decision-makers provided conflicting information regarding user's workspace requirements. On the one hand they indicated that all users had the same universal requirements and there was no specific workspace design. On the other hand, a decision-maker elaborated on the various strategies focusing on proposed new spaces tailored to the specific needs of individual users. Furthermore, the decision-makers pointed out that the ABW concept implemented in the prototype spaces in building 48 would be a template for all new workspaces at Unitec, which will be flexible enough to adapt to the changing requirements of each individual user. These prototype spaces have been modelled on typical commercial office use. The industry influence on new workspaces within higher academic institutions and the inclusion of non-territorial spaces as part of work areas has become a pervasive trend in recent years (Pinder et al., 2009).

The majority of staff that have had experience working in modern workspaces before felt that the new workspaces did facilitate the different needs of users. However, some thought that such spaces focus more on the tasks at hand rather than on individual user's preferences. Staff that lacked such experience were not convinced that the new spaces would cater for individual working styles. Some privacy is required especially in the cases of quiet concentrated work (Haynes, 2008; Parkin et al., 2011). A site visit to building 48 revealed readily available workspaces that met the specific needs of the admin staff and executive team. However, these spaces were not suitable for individual work styles, if required, due to the uniform workspace design for a uniform approach to work.

### **4.3 Workspaces facilitating work collaboration and interactions**

There was a general agreement across the three interviewed groups that the proposed ABW do support work interactions, and facilitate collaboration and knowledge sharing among various groups that normally would not have regular contact. Even the group of staff participants who have never worked in modern office environments expressed a more optimistic view that these shared spaces could be beneficial to all, especially in combination with the new flatter organisational structure. An example of such spaces fostering collaboration and informal interactions among staff are the non-territorial workstations located in a 'neighbourhood zone'.

Various institutional documents also emphasise the importance of collaboration among Unitec staff within the proposed organisational model. By upgrading its physical environment and creating new modern workspaces with the purpose of encouraging cooperation and knowledge sharing, Unitec is following in the footsteps of other tertiary institutions (Cole et al., 2014; Pinder et al., 2009). However, the question still remains how shared spaces are going to support individuals who need to work in isolation. Such sentiments were particularly prevalent in the group with no experience in modern office environments. These findings are similar to other studies which highlight the tension between the need for concentrated individual work and the requirement to share information within modern workspace environments (Haynes, 2008; Parkin et al., 2011). Furthermore, some interviewees were sceptical as to whether or not collaboration could be achieved in these new non-territorial spaces between disparate disciplines within Unitec and between staff members and their respective superiors.

The interviewees also described their own personal experience working in an open space office environment and identified an inherent weakness in the design, where the distance between users determines the frequency of collaboration. A communal area design approach undertaken in building 48 has allowed for centrally positioned purpose-built spaces to compensate for such distances. Such common areas or 'interaction nodes' stimulate frequent interactions (Peponis et al., 2007) and encourage separate groups of staff that do not normally work with each other to interact (Fayard and Weeks, 2011; Jaitli and Hua, 2013). A decision-maker described these informal interactions facilitated by the new workspaces as 'bump culture'. In Unitec's case although staff tend to congregate and socialise in these common spaces, the general perception of the interviewees was that that was not very effective.

### **4.4 Staff engagement**

Meetings, workshops and ongoing discussions with Unitec staff over a long period of time aimed at clarifying the concept of ABW and developing an awareness of what management was trying to achieve. According to

the decision-makers, staff from across the campus were also encouraged to test the work environment in building 48. There were some inconsistencies in the interview data collected from the different participant groups regarding direct staff engagement, input and feedback. The decision-makers thought that staff whose workspaces were directly affected by the changes were approached for feedback on the overall design and the definition of their new sub-culture. However, the affected staff felt that they were left out and had only been made aware of the existence of these prototype offices after they were built; they were never involved in any discussions revolving around desk-sharing with others within their department. Interviewees that have had past experience working in modern office environments mentioned that feedback regarding workspace design was sought only from selected user groups. If other discussions of any kind took place, they must have been with the department heads. Similar cases in the literature with a lack of engagement in the planning and design process have resulted in a negative impact on staff's satisfaction from their new workspaces (Gorgievski et al., 2010; Parkin et al., 2011).

In relation to staff being engaged in discussions regarding the changes to the Unitec organisational structure and work practices, it appears that staff were well informed of what was happening at Unitec. Various institutional documents, campus-wide discussions, presentations and departmental meetings in 2014 and 2015 helped in that regard. A number of staff were also involved in the 'new ways of working'. However, staff that have never worked in modern workspaces before claimed that they had no knowledge of any structural changes occurring within their department, similarly to the lack of consultation regarding new workspace design. Situations were described where departmental heads within Unitec 'would only pass on selected information of their own choosing'. Staff were only privy to general organisational changes. This claim is acknowledged by an organisational document, outlining staff's concerns about being adequately heard, openness and transparency, and a lack of communication in the engagement process. The breakdown in communication lines between the decision-makers and general staff members was apparently an issue. It is also possible that the decision-makers did not intend to include every staff member in the decision-making process. Most institutions still have a silo decision-making process when it comes to facilities planning which does not involve all stakeholders (Groat and Stern, 2002). Interviewed staff felt that for a 'complete buy-in' of what management is trying to achieve by both general staff members and middle management (i.e. heads of departments), they all have to be fully engaged with the process from early on to accept these widespread changes.



#### **4.5 Privacy, distractions, loss of personal territory**

The view of the decision-makers was that there are no distinguishable differences in work practices and work areas between industry and academia. Although commercial workplace environments and tertiary institutions do have similar characteristics, there are also distinct differences (Lansdale et al., 2011; Pinder et al., 2009; Voordt, 2008). Designated spaces will be available to staff as part of the ABW design for reflective and quiet individual work. Interviewed staff who had worked in modern office workspaces before were more perceptive to the suggested changes in comparison to the staff who lacked such an experience. The latter group were concerned that there would be peripheral noises, distractions and inadequate privacy, although were prepared to work in these new environments as long as there were sufficient workspaces for individual work. Such private spaces that provide full audio and visual privacy are available in building 48.

Some contrasting views were expressed with regard to 'protecting personal territory of each individual user'. Staff who had never worked in modern workspaces were particularly passionate about this concept and felt that it could be incorporated into the new design. This view was questioned by the decision-makers who thought that the need for personal territory was unjustifiable. Currently, academic staff have their own office, lecture theatre and tutorial space. On average only 35% of the time these spaces are utilised making the current use of space inefficient. The decision-makers' opinion was that 'the workspaces are Unitec spaces and not the individual users'. The loss of personal territory is clearly illustrated at building 48 in the common central core area and the main workstations within the 'neighbourhood zone' with the desk-sharing. However, this loss of personal territory is partially compensated by a 'group territory' atmosphere when the team personalises their communal work area within the neighbourhood zone, for example, through the use of graffiti on the storage lockers.

### **5 CONCLUSIONS**

The current organisational changes taking place at Unitec range from the introduction of activity-based workspaces and associated new work practices to changes in the academic culture and management structure. The principal aim is to reduce facility costs, create an environment for more interdisciplinary interactions and collaborations, and better meet the needs of both the commercial sector and students. The ABW prototype spaces in building 48 at the Mt Albert campus have helped the increase in collaborations and informal interactions among staff. These spaces, whose design has been heavily influenced by the commercial sector, will be used as a template for future workspaces within Unitec. However, there appears to be tension between the management's objectives of space utilisation and the staff's workspace requirements for concentrated

individual work. Work practices and work styles in academia are distinctly different from industry despite decision-makers insisting otherwise. A level of uncertainty remains whether these proposed spaces will be adequate and fit for the intended purpose.

There have been genuine attempts on the part of the decision-makers to fully engage staff with the change-management process. However, this process has had limited success so far according to staff surveys and interviews. The lack of engagement could have a negative impact on staff's satisfaction from their new workspaces. The particular approach which was adopted during the workspace design process involving a few selected staff does not help either. It only contributes to the perception of a silo decision-making process occurring within the organisation.

The planned implementation of non-territorial workspaces at Unitec will lead to a loss of personal territory for all staff. Strategies are put in place to compensate for this loss by creating a team culture within staff groups. Workspaces need to be viewed as a valuable resource, which has an influence on strategic style, organisational culture, work practices and employee performance. Likewise, workplace strategy should primarily be focusing on the users of the workspaces; hence these areas should not be considered just as a facility issue to ensure their successful implementation by the organisation.

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