Faculty Wellbeing on UBC Campus: Design Guidelines and Future Research Directions

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In this report, we examine three major factors in understanding faculty wellbeing on UBC campus: workplace mental health, learning pedagogies, and built environment factors. There are significant gaps in the research literature regarding faculty wellbeing. Our recommendations include potential avenues for further study, items to include in future faculty surveys, and a new methodological approach to study learning spaces and their effect on wellbeing.

Workplace Mental Health

Mental health issues in a workplace setting are common and should be addressed as it has severe costs in well-being to the individual and financially to the organization. Workplace wellness programs have evolved significantly throughout the last 6 decades with over 90% of organizations offering a comprehensive benefits and wellbeing services offered to their employees. Universities have become increasingly aware of the importance of positive mental health and are starting to look into designing programs and an environment that is supportive of student, staff and faculty's wellbeing. In this report, we present guiding principles to guide program and intervention planning in order to achieve holistic workplace health for employees. We also identify key factors that affect faculty's job satisfaction and present existing services for faculty members at both UBC and other universities across campus.

Learning Pedagogies

Although research doesn't definitively defend this perspective, we propose that - when looking at learning pedagogies at the University of British Columbia - faculty wellbeing comes into play through teaching faculty how they can – and when it is appropriate to – apply different teaching strategies, in different settings and contexts, using different tools.

One way to delineate between different teaching strategies is to look at models that are either teacher-centered or student-centered. There are advantages to both strategies. However, student-centered models better accommodate varying student learning styles, build student-teacher relationships, promote student-student communication, and improve student and teacher motivation, among other advantages.

Much of the literature refers to a three or four-pronged approach to changing systems of pedagogical stagnation (self-perpetuating teacher-centered strategies). If a shift in pedagogies is to occur, the literature suggests that (1) faculty have access to changing technology; (2) they have support, training, and education from the university focusing on pedagogical knowledge; and (3) beliefs and attitudes towards instructional practice must change (Ertmer & Ottenbreit-Leftwich, 2010).

The largest obstacle to enhancing wellbeing of faculty is the lack of research and awareness about how the university campus environment affects faculty. There is a need to expand theory and research on university faculty satisfaction, performance, and wellbeing. There are basic questions that have remained unanswered about how spaces affect learning and better theoretical frameworks are needed to examine these questions (Boys, 2011). This is particularly true when there is an increasing number of different teaching pedagogies and new technology integrating into the teaching environment in recent years.

Occupational wellbeing and satisfaction surveys such as UBC's Workplace Experiences Survey conducted in 2011 are first steps in a much larger information gathering process necessary for faculty. Faculty working environments differ in important ways from staff. Existing research about standard workplaces may not be sufficient for understanding the unique conditions faculty work under.

With that in mind, we limited our focus to three design interventions and one programming concept. They include concepts such as introducing outdoor classrooms, increasing the number of tertiary spaces outdoors, service considerations and issues surrounding booking teaching spaces, and design issues surrounding faculty offices. Each of these concepts offers ideas for further investigation. Each of these topics requires further investigation or should be considered for inclusion on future faculty surveys.

Major Recommendations

- Assess avenues for future research including: the balance and potential conflict between engagement with students and needing time and space for independent study and research; unique faculty personality traits; and the impact of renovation and construction on students, staff, faculty and residents.

- Evaluate preferences of faculty in future surveys for themes related to wellness, teaching pedagogies, and design ideas

- Utilize ethnographic methods to document experiences of learning spaces and their effectiveness

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1.   INTRODUCTION

This report examines wellbeing from a faculty perspective, and will provide planning principles, metrics, and guidelines to inform decisions about the prioritization of investments in programs and physical design improvements to promote the wellbeing of faculty at UBC. It examines the roles of formal learning spaces, informal learning spaces, the public realm, and the surrounding community environment on faculty mental and physical health, as well as social capital.

The wellbeing of student, faculty, staff and residents has been recognized as being of paramount importance to the University of British Columbia (UBC). As such, UBC has developed a number of programs to improve their wellbeing including Thrive and Human Resources' Healthy UBC initiatives. Thrive strives to build positive mental health for all (UBC, 2014[1]). Thrive divides its resources into two groups, one for students and one for faculty and staff. The faculty and staff section includes information on: mental health resources, financial tools and calculators, fitness phone apps, laptop ergonomics and health videos, as well as information to help faculty and staff recognize mental health issues in others and provide them with assistance (UBC, 2014[2]). UBC views the mental health and wellbeing of staff and faculty as being a fundamental component of the University's commitment to building and maintaining an outstanding work environment (UBC, 2014[1]). The Healthy UBC Initiatives are free ongoing university-wide programs, as well as a series of smaller workshops and seminars, that focus on the mental and physical health and wellbeing of staff and faculty (UBC, 2014[3]). Additionally, they offer funding to UBC departments, units and operational committees to support healthy activities in the workplace, entitled Healthy Workplace Initiatives Program (UBC, 2014[4]).

UBC is currently developing a Wellbeing Initiative to promote the mental and physical health of its students, staff, faculty and residents. This initiative will affect planning directions the university undertakes into the future, as well as programs and capital and infrastructure investments. While the term 'wellbeing' is used throughout various UBC initiatives, a uniform definition was not found. As such, this report uses the definition of wellbeing from a review of glossary terms the World Health Organization published in 2006. It defined wellness as: "the optimal state of health of individuals and groups. There are two focal concerns: the realization of the fullest potential of an individual physically, psychologically, socially, spiritually and economically, and the fulfilment of one's role expectations in the family, community, place of worship, workplace and other settings" (Smith et al., 2006).

Since 2009, the university has been administrating a Workplace Experiences Survey for its staff and faculty every 2 to 3 years with a third party consultant, Ipsos Reid. This survey is confidential and anonymous, and includes questions about topics such as their career, resources and support, wellbeing, community, and leadership. The 2014 survey was administered in November, and was tailored so that faculty and staff could answer only the relevant questions. The results have yet to be processed and won't be completed until the spring; therefore, this report is based on the 2011 survey (Ipsos Reid, 2011).

The questions from the 2011 survey were organized into 14 different themes. Of the 5 areas that include aspects of mental or physical health, only equity and respect were seen as areas that employees felt the university was doing well at, with health and wellness, communications and workload all identified as areas of importance that require more work (Figure 1). These 3 themes are currently considered tier 2 issues, with Senior leadership communication and action, and career navigation considered tier 1 issues for the university.
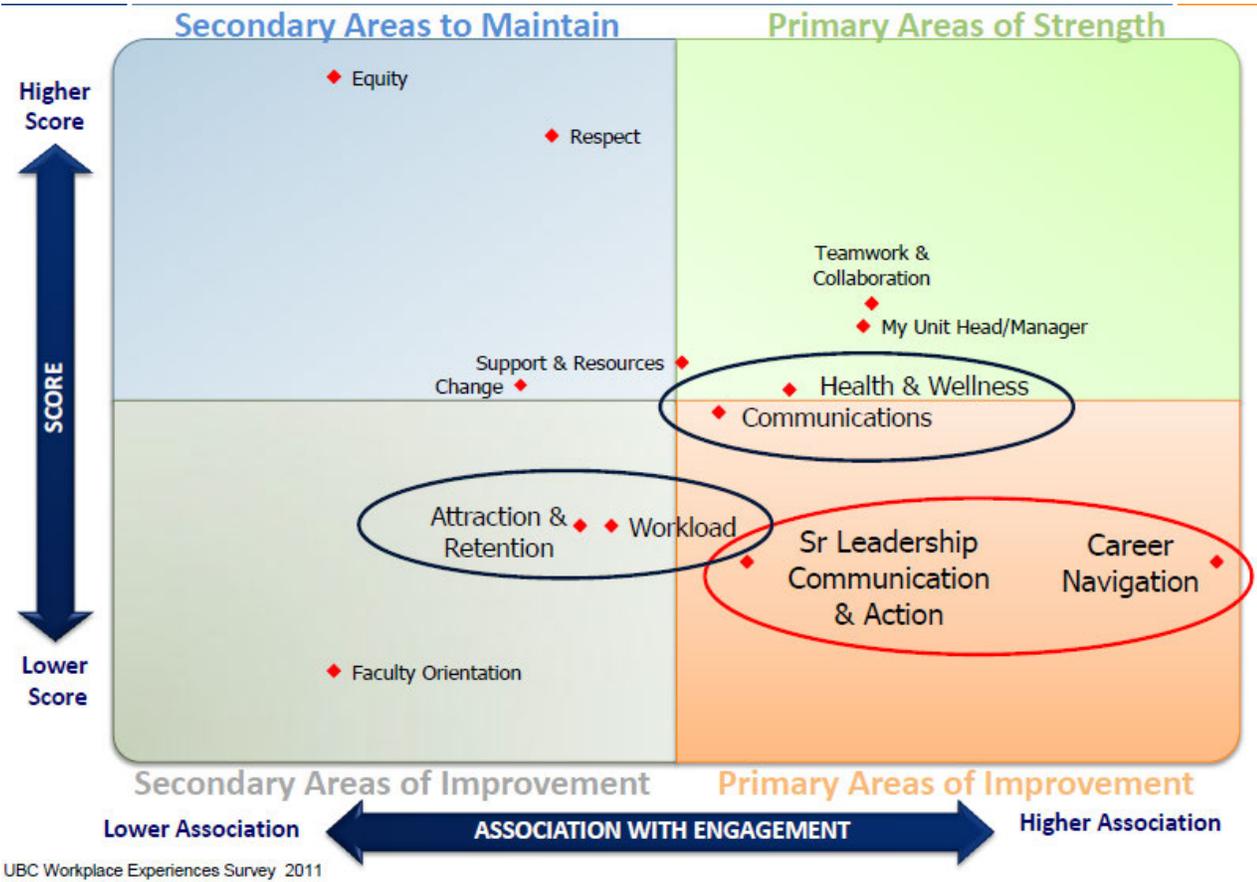

Figure 1: Themes from UBC's 2011 Workplace Experience Survey, organized based on how highly they associated with faculty engagement, and how well employees ranked them.

The first key take away point from this survey in regards to mental health is related to the fact that as of 2011, 37% of staff and faculty admitted that they were planning on leaving the university within the next 3 years. The top 3 reasons for leaving included: improved opportunities for career advancement, increased salary, and reduced stress. While the first two are clearly important and need to be addressed, they are outside the scope of this study. However, the built environment can directly and indirectly reduce stress, and is therefore discussed throughout this report.

Other key wellness takeaways from the survey include:
- 37% of faculty feel that their work as a negative impact on their overall state of mental health and wellbeing.
- 41% feel the balance of time for teaching, research and service is inappropriate
- 29% feel their work does not allow them to achieve an acceptable balance between work and personal life
- 37% feel their work has a negative impact on their overall state of health and wellbeing
- 18% feel they are not being supported in making choices that contribute to their mental health and well-being
- 21% of faculty identified resources, support and technology as the most significant change to improve their UBC experience

The Health and Wellness theme in the 2011 survey had four statements to be rated. They are as follows:
- My own career opportunities and progression have not been disadvantaged at UBC because of my personal needs or circumstances.
- My unit is a place where I feel I can comfortably raise personal and/or family responsibilities that impact my work.
- My unit supports me in making choices that contribute to my mental health and well-being.
- My unit supports me in making choices that contribute to my physical health and well-being.

While these are very valuable questions, they are missing questions about the faculty's current level of wellness. By choosing these four questions to represent health and wellness, a large part of the picture is simply not addressed. Additionally, these four questions are based in the university, and at the department level. While this was likely done to provide information to departments, it potentially localizes large-scale issues and can read as the University being more concerned about how it is perceived than the mental health of its individual faculty members. By including questions about the faculty's current mental or physical health and wellness, a better understanding of current faculty wellness can be assessed at the university level.

2.   WORKPLACE MENTAL HEALTH

Mental health issues are common among employees and have severe consequences among the employees, the organization (with regards to lost productivity) and social welfare systems (LaMontagne, 2014). Compared to health promotional efforts targeted towards improving physical health, mental health improvement related efforts is relatively infrequent contributing to low mental health literacy (Dimoff & Kelloway, 2013). The impact of poor employee mental health in a workplace is well documented. It is associated with various quantifiable costs to the employer including increased absenteeism, turnover, and increased health care expenditures (Dimoff & Kelloway, 2013). Costs that are less quantifiable, yet substantial include reduced productivity, suboptimal work performance and low job satisfaction (Dimoff & Kelloway, 2013).

Although workplace has the potential to negatively impact an employee's mental health and well-being, employment is also essential to the development and maintenance of an individual's psychological health and wellbeing (Linn, Sandifer & Stein, 1985; Fassinger, 2008; Bluestein, 2006). Not only does it provide financial security, but it also builds social capital and fulfills the human need for self-determination through work-related tasks and achievements (Blustein, 2006). Thus, it is not only important to plan programs and design environments conducive to achieving positive mental health, systematic evaluation of workplace strategies and related evidence are warranted.

A healthy workplace can maximize the integration of employees' goals for wellbeing and the employer's objectives for productivity (Grawitch et al., 2006). This notion of workplace health and well-being has evolved throughout the last couple decades, from simply avoiding unhealthy practices in the workplace, to providing fitness programs for employees in the 1990s, to today, where over 90% of organizations with over 50 employees provide a multitude of organizational programs designed to promote health (Grawitch et al., 2006). Universities have become increasingly aware of the wellbeing of not only students, but also the university community as a whole. Research on workplace interventions that address employee's mental health and wellbeing is emerging in parallel, showing that programs promoting mental health reduce depressive symptoms significantly when provided for all employees and not just exclusively to those at risk of mental illness (Mayor, 2014). However research on programs and intervention enhancing faculty's mental health and wellbeing within a university setting is scarce. Thus this section mainly draws upon research of general workplace settings as well as programs other universities across Canada has implemented to address mental health.

Presented in Table 1 is a model of psychologically healthy workplace proposed by Kelloway and Day (2005a), which can act as guiding principles for designing programs that enhances positive mental health among employees in workplaces. This is similar to the SHAPE (Stimulating Health and Practice Effectiveness) framework proposed by the American Psychological Association (APA), which outlines five broad principles of practice including "employee involvement, work-life balance, employee growth and development, health and safety, and employee recognition" (Dimoff & Kelloway, 2013). Employing these guiding principles to support mental health and well-being of employees is crucial in achieving "holistic workplace health," where an employee's quality of life is improved both within and outside the workplace (Kelloway & Day, 2005a).

Develop a culture of support, respect, and fairness
Create an employee involvement and development
Provide and promote a physically and psychologically "safe" environment
Develop and promote positive interpersonal relationships at work
Ensure appropriate and fair work content and characteristics
Encourage positive work-life balance

Table 1. Features of a psychologically healthy workplace.

Adapted from Kelloway and Day (2005a)

Although organizational strategies that aim to improve employee mental health have the potential to be highly effective, more scientifically based research is required to provide policy makers with a better understanding of the financial and human impacts of workplace mental health interventions (Dimoff & Kelloway, 2013). Goetzel et al. (2012) conducted a series of benchmarking studies and identified a number of practices that would allow organizations to improve existing mental health programs while controlling costs and enhancing overall profitability. The most important strategy identified that successful organizations employ is collecting measurable data and conducting program evaluations to inform future program planning as well as calculations of return on investment to provide an objective justification for the program's financial effectiveness (Dimoff & Kelloway, 2013).

In an attempt to identify key priorities in improving faculty's work life, Johnsrud and Rosser (2002) conducted a system-wide study across 10 campuses on faculty members. It was demonstrated that dimensions most relevant to the quality of academic work life and morale which impacts their decision on intent to leave are: 1) professional priorities and rewards, 2) administrative relations and support and 3) quality of benefits and services (Johnsrud & Rosser, 2002). Building on this research, Rosser (2004) conducted an extended research to identify issues most relevant to faculty satisfaction. Presented in Table 2 are issues explored in Rosser (2004)'s research, which have all been identified in previous research to be significant in the professional life of faculty members (Rosser, 2004).

Professional Development	• adequate funding for professional activities and development • travel support to attend conferences, meetings, workshops • releasing time from teaching and course load responsibilities to pursue research interest or enhance existing ones
Administrative Support	• Providing adequate and equitable support services • secretarial and office support • library services and availability of materials • teaching and graduate assistants • filling out bureaucratic forms and requests
Committee and Service Work	• nonresearch and nonstudent contact hours can take up faculty members' valuable time • ethnic minority, women most vulnerable to being assigned to time-consuming service tasks and responsibilities • Mindful monitoring of time allocated towards service activities
Technical Support	• Incorporating technology into every aspect of teaching, research, and service is challenging • Positive impacts of infusing technology in all aspects of teaching, research and service on faculty work life is yet to be researched

Table 2. Issues that impact professional and academic life of faculty members
in a university setting. Adapted from Rosser (2004).

As the responsibility towards student's learning experience is central to the faculty's academic duty, previous research has found that the majority of the faculty's time is devoted to activities involving students such as coursework prep and student advising (Rosser, 2004). It was found that a high satisfaction with students correlates with a faculty member's satisfaction of their work life (Hagedorn, 1996). Female faculty members are identified to be more likely to reside in primarily junior faculty positions and to have heavier teaching loads, resulting in more time spent on student advising (Austin & Zelda, 1983). In addition, ethnic minority female faculty members often are expected to be a role model and confidant serving ethnic minority students (Aquirre, 2000).

A large, cross-sectional survey conducted across 378 colleges and universities on 33,785 university faculties in the US showed that less than half of the faculty members indicated satisfaction with their salary and benefits (Rosser, 2004). Research suggests that salary, benefits plan (e.g. medical and retirement) and securing tenure-track positions have also been shown to be important issues relating to faculty members' satisfaction (Rosser, 2004).

All of these issues are important to consider when creating an environment that supports job satisfaction. Growing evidence shows that employment conditions that erode job satisfaction can directly damage both physical and mental health of employees (Faragher, Cass & Cooper, 2005). Existing research in the UK shows that employee self-reported job satisfaction is by far the most strongly linked to employee wellbeing (Faragher, Cass & Cooper, 2005). Findings from this meta-analysis suggests that employees expressing a low level of job satisfaction are more likely to experience mental health issues such as emotional burnout, reduced levels of self-esteem, and increased levels of anxiety and depression (Faragher, Cass & Cooper, 2005). Due to the large amount of waking hours adults spend at work, it is reasonable to assume that if issues regarding job satisfaction are left unresolved for any length of time, these negative emotions and languishing mental wellbeing can penetrate other aspect of the individual's life (Faragher, Cass & Cooper, 2005).

UNIVERSITY SERVICES FOR FACULTY MEMBERS ACROSS CANADA

Universities across Canada offer a wide variety of services for faculty to improve their mental well-being. The University of Toronto has not only a health & well-being program and services, but there is also a unique commitment to familial responsibilities including a team of 'quality of work/life advisor,' 'manager

of the family care office,' 'consultant in health and well-being programs and services' and ' manager of the family care office' (University of Toronto). Together this team of professionals aim to keep the university focused on family-friendly policy and provide individually geared support regarding various aspects of family life including childcare and elder care. When the stress of attempting to juggle familial responsibilities while pursuing a career in academia is relieved, faculty members have more time spend on their responsibilities as a faculty member.

McGill is committed to creating a psychologically healthy work environment for staff and faculty by providing training programs seminars and online resources on health related topics (stress and anger management, burnout prevention, work life balance, suicide prevention and smarter spending) (McGill). While, the University of Manitoba took a more systematic approach and developed "Success Through Wellness," a mental health strategy the supports students, staff and faculty members equally, creating a community that is committed, supportive and responsive to supporting a healthy campus community (University of Manitoba). Similarly at Simon Fraser University, the mental health and well-being strategy employed aims to support the needs of all members of the university community including students, staff and faculty (Simon Fraser University).

At UBC, there are two main groups that work specifically to enhance faculty well-being. The first of which is the UBC Faculty Association, which consists of faculty members facilitating members' social and employment relationship, providing support services such as salary negotiation, promotion/tenure-track appointment, housing, benefits, leaves and career development (UBC Faculty Association). Additionally, advocacy on behalf of its members on a wide variety of issues is also performed. Faculty Relations is the other group that works with faculty consisting of Human resource personnel (UBC). Services that this group provide for faculty include appointment information, recruitment, compensation, tenure and promotion, retirement, immigration and other relevant policies and procedures.

Furthermore, UBC offers a wide range of services on campus for faculty including musical performances at the School of music, discounted programs for food and non-alcoholic beverage purchases on campus, a wide range of continuing education courses (tuition waiver applicable), recreational activities at a discounted rate, discount on computer-related soft and hardware, discount for fitness center, parking spaces and a range of public transportation options (UBC).

All of these services aim to improve faculty quality of life and wellbeing. Although the design of all programs are informed by evidence, concurrent evaluation of these programs and services should be in place to identify areas of strengths and weaknesses inform future planning.

The University of British Columbia identifies a number of pedagogy approaches in a report on learning space design guidelines. These include, but are not limited to:

Method	Description
Lecture	Oral presentation given by faculty member, intended to provide context and present information on particular
Demonstration	Showing by reason of proof, examples, and experiments
Tutorial	More interactive and specific than lecture, employing examples and faculty directed specific tasks
Problem-Based Learning	Challenging problems that are ill-defined and ill-structured, presented in group format
Studio-Based Learning	Mimicking practicing professionals in the shared learning environment of a studio
Project-Based Learning	Classroom projects that employ deeper learning and test subject matter competency
Seminar	Recurring meetings of small groups, reviewing and discussing different subjects that build upon each other over time through Socratic dialogue; not intended for beginners in a given field
Team-Based	Supporting the development of high-performance learning teams, as they perform significant learning tasks. Membership is long term to encourage commitment to both the team and the challenging task

Table 3 - Examples of learning pedagogy approaches identified by the University of British Columbia (Resource Planning Group Inc. & The University of British Columbia, 2014)

Although research doesn't definitively defend this perspective, we propose that faculty wellbeing comes into play through teaching faculty how they can – and when it is appropriate to – apply different teaching strategies, in different settings and contexts, using different tools. We think that this coincides directly with the University of British Columbia's "Campus as a Living Laboratory" initiative. If faculty are provided the tools to ensure that different learning styles and techniques are applied appropriately in different learning environments than this idea may be better encouraged on campus. This is especially true in the case of being "early innovators in areas where others may not be prepared or are not equipped to do so" ("Campus as a Living Laboratory", 2014) Providing faculty with these tools may take the form of on-site staff available to consult faculty, and training programs to ensure that faculty have access to these skills.

One way to delineate between different teaching strategies is to look at models that are either teacher-centered or student-centered. Teacher-centered strategies include lectures or tutorials where the faculty member is assumed to be an expert or has some formal authority on a subject. Student-centered strategies often differ from teacher-centered strategies in that there is still an assumption that the faculty member is an expert, but more often plays the role of a facilitator or delegator.

Teacher-Centered	Student-Centered
Lecture	Problem-Based Learning
Demonstration	Studio-Based Learning
Tutorial	Project –Based Learning
	Seminar
	Team-Based

Table 4 – Examples from Table 3 are sorted into either teacher-centered or student-centered strategies.

Early understandings between models of teacher-centered and student-centered teaching strategies are summed up nicely by Trigwell et al (1994). In their paper Trigwell et al explain that the two learning strategies outlined above are appropriate in different contexts. Teacher-centered strategies recognize that students require a strong base of knowledge before they are able to conceptualize information and think more critically about different themes and frameworks that underpin knowledge regarding many topics (especially those covered in undergraduate, and to an even greater degree, graduate level education). With this in mind, student-centered teaching strategies move past the contextual information that may be provided by teacher-centered strategies, into exploring the conceptualization of that information. The difference between the two is illustrated in the figure below.

		Strategy	
		Teacher-Centered	Student-Centered
Intention	Inform	☺	☹
	Conceptualize	☹	☺

Table 5 - Illustrating how certain learning/teaching strategies fit better with different intentions and in different contexts

There are advantages to both strategies, as illustrated above. However, student-centered models better accommodate varying student learning styles. Student-centered models also build student-teacher relationships, promote student-student communication, and improve student and teacher motivation, among other advantages (Barnes, 1994). After an analysis of the literature, and from our own experiences, it seems that much of the learning that goes on at university campuses – especially when dealing with subjects related to planning – would benefit from a migration to student-centered pedagogy.

RETHINKING PEDAGOGY AND THE INFLUENCE OF CHANGING TECHNOLOGY

After framing this discussion from the perspective of pedagogy, it is interesting to look at the origin of the word itself. Pedagogy comes from the Greek word paidagogos, which literally translates to "the slave who led children to school" (Beetham & Sharpe, 2013). When looking at this origin in a literal context it points to the lagging in our understanding of learning frameworks and how they have evolved – and continue to evolve – overtime. As we move away from lecture-based (teacher-centered) information sharing to more critical self-learning approaches, the term pedagogy itself may no longer apply to our conceptions of learning frameworks (Beetham & Sharpe, 2013). This is especially true as student-based learning techniques are further facilitated and, indeed, encouraged by advances in technology.

As with many other professions, faculty members are expected (at least to some degree) to utilize technology in such a way that increases their effectiveness as both researchers, as well as teachers (Ertmer & Ottenbreit-Leftwich, 2010). In this sense faculty could be using technology to make that leap in teaching framework from teacher-centered to student-centered. However, having access to technology-rich environments doesn't encourage this transition on its own. A 2009 study of technology-rich universities and their effects on teaching practices demonstrates that:

1) Teachers use technology mostly for preparation, management, and administration
2) Teachers' use of technology in supporting student-centered strategies is still rare
3) Teachers continue to perpetuate their teaching methods

(Palak & Walls, 2009)

These downfalls are the result of relying solely on technological changes to create some sort of ideological change in teaching frameworks. This failure happens because technological changes are continual, while curriculum changes occur over time. As well, though teachers may recognize that technology helps them perform professional and personal tasks more efficiently, "they are reluctant to incorporate the same tools into the classroom for a variety of reasons including the lack of relevant

knowledge, low self-efficacy, and existing belief systems" (Ertmer & Ottenbreit-Leftwich, 2010). Much of the literature refers to a three pronged approach to changing this system of pedagogical stagnation. As is shown in Figure 2, if a shift in teaching framework towards student-centered strategies is to occur, the literature suggests that (1) faculty have access to changing technology; (2) they have support, training, and education from the university focusing on pedagogical knowledge; and (3) beliefs and attitudes towards instructional practice must change (Ertmer & Ottenbreit-Leftwich, 2010).
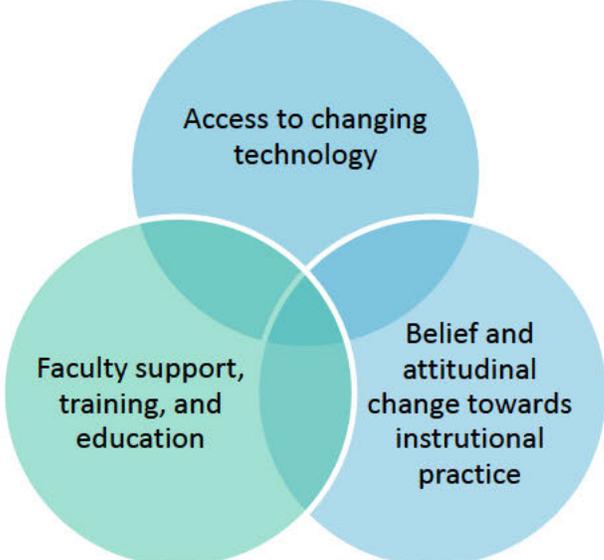

Figure 2: The literature suggest these three approaches, acting together are necessary for a teaching framework shift

LEARNING PEDAGOGIES AND SPACE

This shift in the teaching framework has implications for the design of the classroom. Peter Jamieson (2008), Strategic Advisor Learning Environment Design at The University of Melbourne proposes two disciplines are best able to facilitate analysis of the ideal spaces for new forms of teaching. These are the field of teaching and learning research, and the field of environmental behaviour and psychology (Cited in Boys, 2011). Together, environments are capable of supporting, framing, or inviting specific intended behaviours, while at the same time not prescribing intended uses to all places and leaving some spaces ambiguous and more adaptive. (Jamieson, 2008 as cited in Boys, 2011). At the same time, it is essential to acknowledge built forms do not have an explicit cause and effect relationship upon behaviour. Navigating environmental determinism and pinning down the complex relationships between the environment and behaviour is a large field within psychology.

Boys (2011) argues that this shift in the form of education has created learning activities that are far more complex and dynamic, and present challenges to creating flexible, non-hierarchical classrooms; where students are free to rearrange furniture, move around, and engage in a wider range of learning activities (Jamieson, 2008 as cited in Boys, 2011). However, Boys argues design responses to student-centered classrooms are often simplistic, ambiguous, and "common-sense", and the field itself lacks theories about the relationship between learning and space (Boys, 2011).

Boys (2011) calls for research exploring how certain environments affect a student's (but also faculty's) sense of comfort and safety. For example, a recognizable lecture theater places expectations on a student to become a passive listener, and cues the faculty to engage with the class in familiar and traditional styles. Unconventional and unfamiliar learning spaces may disrupt a student's expectations and undermine their confidence as they are uncertain how to behave and what to expect from the learning environment. Similarly, faculty not used to teaching in this environment have no familiar cues or physical structures on which to draw upon. They too may undermine their confidence and affect overall teaching quality. There is a lack of understanding how these different environments can affect psychological comfort and whether it can be leveraged to push students and faculty out of their comfort zones and into new ways of teaching and learning (Boys, 2011).

4.   THE BUILT ENVIRONMENT AND WELLBEING

The campus environment not only affects student wellbeing but also faculty wellbeing. University faculty require special attention as research about their environment and its effect on their wellbeing is significantly under-researched. Studies within this area are typically over a decade old and focus on elementary and high school teachers. There are far fewer university faculty than there are K-12 teachers and they teach a smaller proportion of the population. University faculty have far higher levels of independence and control over their curriculum and teaching pedagogy. Their teaching environments also vary more widely than elementary and high school teachers. As a result, research about university faculty is less studied in the academic research literature.

There is a need to expand theory and research on university faculty satisfaction, performance, and wellbeing. There are basic questions that have remained unanswered about how spaces affect learning and better theoretical frameworks are needed to examine these questions (Boys, 2011). This is particularly true when there is an increasing number of different teaching pedagogy and new technology integrating into the teaching environment in recent years. The largest obstacle to enhancing wellbeing is the lack of awareness about how their environment affects faculty, their teaching, and their students. Jamieson (2008) put it succinctly,

> There is a lack of concern shown by most academics for the classrooms in which they operate. Few academics give much thought to how the physical environment of the classroom setting influences their approach to teaching of how it impacts on the quality of the student learning experience. This is hardly surprising when the majority of academic staff are not formally trained in teaching practice, and professional development is infrequent and often optional. Also, due to the formal demarcation of professional responsibilities and authority within institutions, even the most capable and motivated university teacher generally has no opportunity to participate in the design of these learning environments where they conduct their own teaching.
>
> (Jamieson, 2008, pp. 25, as cited in Boys, 2010)

EXTENDING RESEARCH FROM GRADE SCHOOLS

A wide range of elements in the physical environment can affect the instructional quality of teachers (Anderson, 2004). When these elements negatively affect their performance, this also affects student learning outcomes and possibly faculty psychological wellbeing. Only a handful of studies have examined teacher and their perceptions of teaching environments. It is challenging to measure faculty attitudes,

perceptions, and teaching effectiveness quantifiably, but ethnographic approaches and simple questionnaires have been very helpful in this process. The following is a review of studies about the quality buildings and their effect on teachers and students attitudes in elementary and high school settings.

In a questionnaire administered to elementary school teachers, Lowe (1990) assessed how the building conditions affected teacher's perception of performance. Teachers in buildings in poor conditions reported that the appearance and design negatively affected their learning climate. Teachers in buildings in good condition reported the buildings positively influenced their learning climate. Additional factors that influenced the perceived learning climate were the size and organization of the classroom, the maintenance of the building, and the overall design and appearance of the building.

Building renovations negatively affect teachers. In a study of high school teachers, Dawson and Parker (1998) examined their feelings about the building before, during, and after a renovation project on the school using a descriptive analysis procedure. Teachers reported negative feelings about the renovation particularly regarding what was not a part of the renovations and should have been. Several teachers were upset they had no control over paint color. Noise, disruption, and uncertainty with navigating the changing environment were also major concerns. After the renovations completed, morale was much higher, and reports of frustration were much lower. Teachers reported that the improvements greatly enhanced their teaching and learning environment. They reasoned that this compensated for the negative feelings experienced during the renovation process.

Classroom conditions can cause morale problems in teachers. Earthman and Lemasters (2009) surveyed high school teachers about their satisfaction with their classrooms and linked their responses to an independent assessment of classroom conditions. Supporting previous findings, low quality classroom conditions negatively affected the attitudes of teachers, which in turn can affect their productivity. When teaching in buildings rated as "unsatisfactory", 43.8% of teachers reported that their environment hindered their efforts in teaching. Conversely, 77.9% of faculty in satisfactory buildings disagreed with that statement. Similarly, 36.6% teachers in unsatisfactory buildings agreed that the buildings caused them health problems. Teachers in satisfactory buildings did not agree with that statement 81.1% of the time.

POTENTIAL FACTORS AFFECTING FACULTY WELLBEING

Based on this brief review, it is apparent that research within research in K-12 classrooms can inform post-secondary institutions about faculty wellbeing and environment. However, most research on school environments typically focus on students. When teachers are the focus of the research, it is typically

regarding retention, salary, and indicators of motivation and commitment the school (Buckley, Schneider, & Shang, 2004). Even within the much larger research field of K-12 classroom environments, faculty wellbeing (as we have defined for the purpose of this report) is examined unfrequently.

Another obstacle is the absence of research focusing on faculty wellbeing. Before we can understand how the university environment can play a role, it is necessary to establish what factors are important to faculty wellbeing in the first place. Research about occupational satisfaction, skills, and wellbeing are well established. Occupational wellbeing and satisfaction surveys such as the Workplace Experiences Survey conducted in 2011 are first steps in a much larger information gathering process necessary for faculty. Faculty working environments differ in important ways from staff. Existing research about standard workplaces may not be sufficient for understanding the unique conditions faculty work under.

Many questions remain as to how classroom environments affect student-faculty interaction, faculty preparedness, and psychological attributes such as confidence, self-efficacy, self-esteem, belonging, and sense of social-support. A host of possible psychological, social, and physical indicators may relate to faculty-wellbeing. The following items are potential factors to consider when developing indicators to study faculty wellbeing:

- Career self-selection is a strong factor among academics. Very specific interests motivate individuals to faculty positions and these are often highly idiosyncratic. Faculty members may prefer a wide range of environments, and it may be difficult to generalize preferences and indicators of wellbeing for the entire faculty.
- Along with the self-selection factor, faculty members may share common traits that are different from other members of society. For example, higher levels of independence, high motivation and interest in their work, pressure for performance and productivity, and a desire for a flexible work schedule and work environments. These preferences are different from most workplaces on which occupational satisfaction and wellbeing research is based.
- Faculty are encouraged to engage and collaborate with students while at the same time require time to work independently without interruption. They may feel pressure to juggle these two roles. This may lead faculty to avoid places with high student activity and be less likely to use informal and outdoor areas on campus.

Currently, we are too ill informed to make many confident recommendations about the influence of built forms on faculty-wellbeing. We offer several design ideas and recommendations and identify faculty services that could be re-examined or improved in light of current knowledge. A large part of this report focuses identifies gaps in understanding and identifies on specific directions for future research.

Many facilities exist on UBC campus for faculty. Faculty have the same fitness services access privileges as students to UBC REC, BodyWorks Fitness Centre, UBC Aquatic Centre, and the BirdCoop Fitness Centre. However, UBC no longer has a faculty club, a common organization on other university campuses. For reasons unexplained, in 1994 the faculty club went into receivership and its furniture and fixtures were liquidated (Leon and Thea Koerner University Centre: A Look Back). In a blog post, Larry Kuehen speculated that email technology made this socializing space for faculty obsolete. Faculty now had no specific reason to meet in person when email could be used to share information.

The Peter Wall Institute for Advanced Studies is now in the location of the former faculty club within the Leon and Thea Koerner University Centre at the north end of campus. It offers a range of support for faculty who are members of the institute. The Ideas Lunch and Wine Bar are also located in this building and caters exclusively to UBC faculty and staff. Also within the same building, Sage Bistro is open to everyone and offers lunches on weekdays.

The Peter Wall Institute is intended to support faculty by organizing workshops, seminars, guest speakers, and roundtable discussions. It also provides research grant and encourages interdisciplinary collaboration and collegiality. Within the center, the institute The Ideas Lunch and Wine Bar, bookable seminar and conference rooms, and beautiful outdoor patio space, office spaces, and even four guest rooms. One noteworthy aspect of the Peter Wall Institute is that it only funds basic research (as opposed to applied), and thus only caters to certain faculty disciplines. Currently only 367 faculty are members of the Peter Wall Institute out of a total population of 5,130 faculty at the university (Peter Wall Institute for Advanced Studies, External Review, 2011; UBC Facts and Figures, 2013/14).

Sage Pool, Peter Wall Institute for Advanced Studies

Ultimately, we do not have information regarding faculty interest for services. Faculty members need to be surveyed to assess their needs, preferences, and interest for services on campus. Without this information, we cannot make informed decisions about appropriate services and facilities for faculty. Possible survey questions are outlined in a later section in the report.

With that in mind, this section focuses on three design interventions and one programming concept. They offer new directions to explore when considering faculty wellbeing. They include concepts such as introducing outdoor classrooms, increasing the number of tertiary spaces outdoors, service considerations and issues surrounding booking teaching spaces, and finally design issues surrounding for faculty offices. Each of these concepts offer ideas for further investigation. The UBC Learning Space Design Guidelines dictates the formal student learning environment and therefore we decided to focus environments outside these guidelines.

Outdoor Classrooms

Research indicates a significant relationship between outdoor learning and student achievement in K-12 education (see Crowder, 2010, Lieberman & Hoody, 1998; Tanner, 2000, 2006, 2009). However, little research has gone into possible benefits to outdoor classrooms in post-secondary institutions. Teaching outdoors could also have a positive effect on faculty. Again, there exists no research to support this. Several barriers prevent this from occurring, students laptops need power outlets, faculty often desire projection screens, seating needs to be comfortable, and the weather needs to be agreeable. Not all classes are amenable to the outdoor environment. However, having the option and freedom to move the class outdoors would be a welcome change of pace for faculty and students.

On campus, the Roseline Sturdy Amphitheatre in the UBC Botanical Gardens is a possible outdoor classroom location. However, it is not readily accessible from the campus, and is typically booked for weddings and ceremonies. Outdoor classrooms can be relatively small in scale. Several small teaching amphitheatres scattered across campus would allow more faculty to take advantage of them.

Roseline Sturdy Amphitheatre, UBC Botanical Gardens

For example, the department of agriculture at Texas State University constructed an outdoor classroom. Professor of Horticulture, Dr. Tina Cade, led a renovation effort of an existing garden sitting areas. This space can now accommodate larger groups of students and hold classes even for groups outside of horticulture who would sometimes meet in the garden.

Texas State University Department of Agriculture Living Library Garden

Another example of an exceptional outdoor student environment is the Swarthmore College amphitheatre. It can accommodate very large groups of people. Spaces this large may not be entirely suitable for holding standard lectures, but certain classroom formats such as those within the Department of Theatre and Film would be well-served by these places. An amphitheatre of this calibre on UBC campus could provide a considerable outdoor asset.

Swarthmore College Amphitheatre constructed 1942

Tertiary spaces area a method to encourage faculty to leave their office and enjoy the campus landscape. Whether to study alone, meet with colleagues, or have a meeting with a student, faculty should have outdoors places that suit their specific needs. Tertiary spaces are outdoor areas that provide opportunities for individuals and groups to gather in informal setting that is separate from more public outdoor gathering and sitting spaces (Dober, 2000). They are landscaped nooks and crannies that offer seating and privacy. These areas act as outdoor living rooms with clustered seating for small groups of people. These areas are separated from main pathways and entrances and are enclosed by planting, trees, grass, water, and retaining walls or building walls. These places are intended to feel semi-private.

An attractive feature of tertiary spaces is that they are not easily visible. In a sense, they feel like a residential backyard seating area as opposed to exposed "public seating" of the campus (Dober, 2000). This allows people (particularly shy faculty) to discover these locations and develop a sense of ownership over it. Some of these places may be designed like "secret" spaces, delighting those who stumble upon these thoughtfully designed areas for study and socialization. Features like moveable furniture and tables enhance the domestic and private attributes.

Potential locations of tertiary spaces include unused or underused courtyards, underperforming and partially-enclosed grassy areas adjacent to buildings and areas adjacent to retaining walls. Tertiary spaces can also be created through building gazebos, garden folly, and in areas of tree canopy cover. One example of this is a little known courtyard at the northeast corner of Wurster Hall at the University of California, Berkeley. A team of landscape and architecture graduate students enhanced the space by adding folding wooden benches to serve as a small outdoor classroom. An example on UBC campus includes the Buchanan courtyard, recently renovated in 2011.
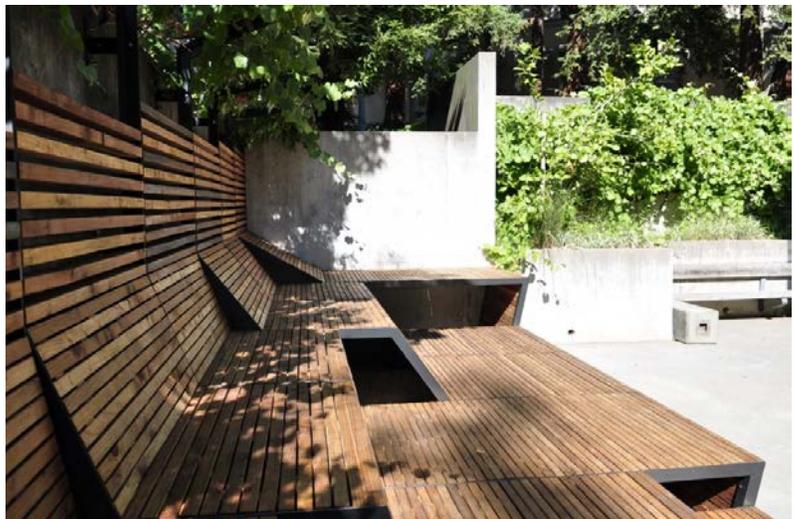
Wurster Hall Courtyard, 2010

UBC Buchanan Courtyard, 2011
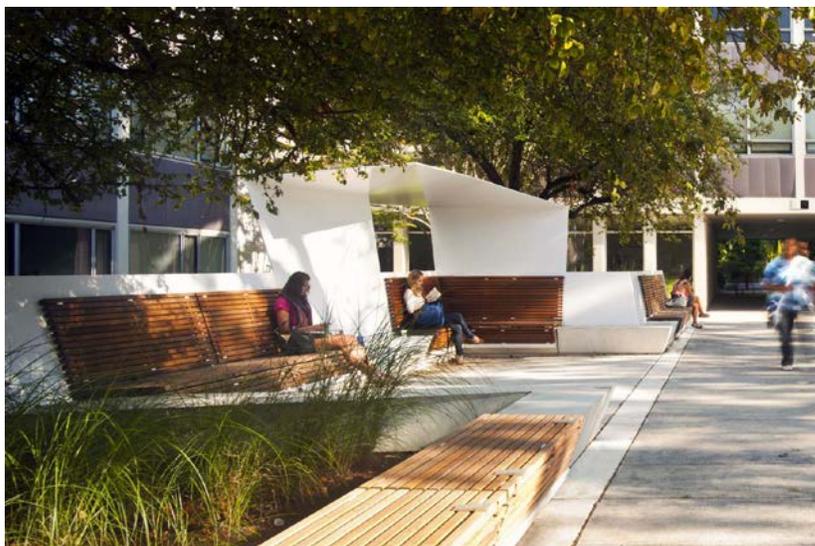
Booking Teaching Spaces

Classrooms and other teaching spaces are a resource that faculty must book and timetable in order to have access to the spaces they desire. Boys (2011), criticizes commonly applied techniques for managing room booking and space charging services available at many universities. Tracking and managing room booking through a central service is an effective and efficient method of managing space. Institutions that had all of their teaching spaces centrally timetabled have 17% less space (Space Management Group, 2006) than institutions who do not book spaces. Timetabling and booking spaces promote an efficient use of space, help overhead and maintenance costs low, and could ultimately lower the amount of space necessary for future expansion and renovation. Boy (2011) states this runs contrary to what most institutions intend spaces to be. Temple (2008) explains the issue:

> On the basis that much effective learning takes place as a result of interactions between students, designs need to provide a variety of spaces for them to work and socialise in together (Kuh et al. 2005, 206). However, cost-driven pressures in higher education to maximise space utilisation may have the unintended effect of reducing the opportunities for informal learning. For example, improving space utilisation by the central timetabling of space previously 'owned' by departments, where teaching took place and academics worked, reduces the possibility of casual encounters between academics and students (Barnett and Temple 2006, 10).
>
> <div align="right">(Temple, 2008, 232)</div>

If the goal is to have active, flexible, adaptable, and personalized spaces for teaching and learning, strict booking and timetabling and can result in a loss of ownership and belonging to a space. When classrooms and teaching spaces are constantly changing across locations, the sense of having a department

home turf or may be lost. The booking service may also instill competition among faculty to acquire the most desirable classrooms. Faculty who did not acquire their ideal classroom setting may feel disgruntled with the service but also with their peers.

Faculty Offices

Unlike learning spaces that have specific design guidelines (See UBC Learning Space Design Guidelines, 2014), faculty offices vary widely in design. Faculty typically spend large amounts of their time in their office. The office environment should be the focus of any serious workplace satisfaction and wellbeing questionnaire. Many universities attempt to standardize faculty offices but this is a challenge due to existing space limitations and the yearly shrinking and growing of faculty within the department (Neuman, 2003). Faculty members want their offices away from noise and activity but at the same time must be accessible to students. Neuman (2003) offers several design recommendations for faculty offices:

- Offices should be equally sized to avoid faculty perceiving preferential treatment or signs of special treatment due to seniority
- 170-180 square feet is considered an acceptable norm for office space
- Clustering of faculty offices help encourage collegiality and collaboration
- Offices should be located near department administration areas

One method to conceptualize informal faculty spaces on campus is to adopt a continuum that ranges to campus "public" spaces (freely accessible to all students and visitors), to faculty offices (private spaces that faculty have exclusive access to). A number of potential design questions arise from this model and will be addressed in a later section. See figure 3 (next page) for a diagram of this continuum.

Campus "public spaces" include outdoor spaces, common informal study spaces, libraries, cafes and restaurants, and the Student Union Building. Anecdotally, faculty do not prefer these loud bustling locations. Department specific informal learning spaces are located within department or school specific buildings. Typically students from the department use these spaces, so they are less active and noisy. It is likely faculty are more comfortable spending time in this space.

Faculty administration areas and common faculty areas are usually smaller areas adjacent to department specific informal learning spaces. Depending on the department or school, this may only be a hallway with a few chairs. Other departments may have faculty offices opening onto a common meeting room. Students typically do not spend their time studying or socializing here. For students it is a place where they meet with faculty. For faculty, it may consist of a few comfortable couches or large table and offer an alternative to working in their office.

Faculty offices are exclusive to faculty members. Students are invited to these places, and cannot freely enter. It is a highly productive location.
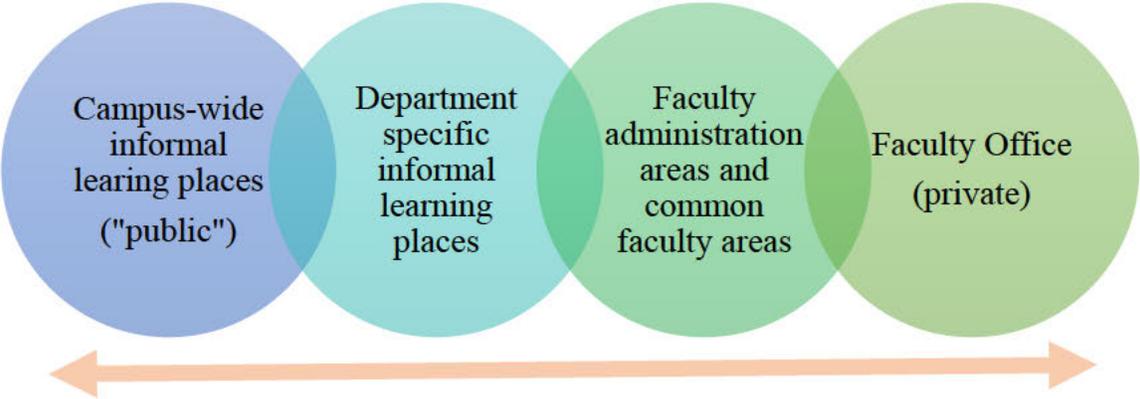

Figure 3. Public – Private Continuum from the perspective of faculty

5. RECOMMENDATIONS

Our recommendations are threefold. As we discussed in the report, there are methodological and theoretical gaps in our understanding of faculty wellbeing. We suggest several directions for further study. Second, as we knew so little about the preferences of faculty, possible survey questions started to arise as we investigated psychological impacts, teaching pedagogies, and design ideas. We identified the several themes for survey items and provided sample questions we recommend to be included in future faculty surveys. Lastly, we propose existing spaces be evaluated using ethnographic methods techniques. This could offer nuanced analysis of space thereby enabling targeted interventions that could improve daily functioning and relationships in those spaces.

AVENUES FOR FUTURE RESEARCH

University Faculty

- Assess the balance and potential conflict between collaboration and engagement with students while at the same time needing time and space for independent study and research
- Investigate possible unique personality traits among university faculty. Do they differ significantly from the general population?

Indoor and Outdoor Spaces

- Impact of renovation and construction on post-secondary students, staff, and faculty
  o Effects upon wellbeing
  o Teaching effectiveness
  o Learning and concentration
- Student willingness to renovate and take ownership of common areas
  o University micro grants for students to renovate "their" spaces
- Psychological impact on faculty on teaching outdoors

POSSIBLE FACULTY SURVEY ITEMS

Mental Health

- Are you aware of existing services for faculty?
- Do you feel comfortable using these services?
- Do you require more faculty-only programs?

- Do you feel that you have achieved the highest level of wellbeing you can while at UBC?

Teaching Pedagogies

- Do you feel you know enough about learning pedagogies and changing attitudes towards them?
- Would you want to get support and/or training regarding alternative teaching methods?
- Do you feel that you are adequately prepared to integrate new technologies into your teaching habits?

Informal Learning Environment

- Do you require spaces outside of your office to accomplish your work?
- Are the informal indoor spaces available to you useful?
- Are the informal outdoor spaces available to you useful?
- Would you be interested in more informal learning space to interact with students?

Design Elements

- Interest having the option to teach outdoors for some (not all) classes
- Willingness to work outside if given adequate facilities (tertiary spaces)
- Reasons for not spending time in student spaces and outdoors

Office

- Does your office have an effective layout and design?
- Does your desk and chair meet your ergonomic needs?

Time Scheduling

- Have you experienced conflict over booking spaces for classes?
- Are you satisfied with the current room booking system?
- Are you making trade-offs between classroom amenities, location, and preferred time and day?
- Do you feel you cannot engage with students after classes due to due to incoming classes into the same room?

Social

- Would you attend guest lectures hosted by the university?
- Would you attend in-department faculty-only socials?
- Would you attend out-of-department faculty-only socials?
- Does UBC have an adequate amount of faculty-only spaces?
- Are you aware of the *Ideas Lunch and Wine Bar?*
- How often do you attend museums and cultural centres on campus?

- Would you be interested in joining Peter Wall Institute for Advanced Studies?
- Would you have interest in establishing a new UBC Faculty Club?

Physical Fitness

- Do you feel comfortable using existing UBC workout facilities?
- Do you use the existing UBC workout facilities?
- Do you work out outside of campus?
- Would you use faculty-only workout classes?

Possible open-ended questions

- What does your ideal classroom look like (i.e. one that enable you to teach most effectively, while increasing your wellness and the wellness of your students)?
- What is your greatest barrier to achieving personal wellness at UBC?

EVALUATION OF LEARNING SPACES

Very few studies have examined the interface between the classroom environment and the daily subjective experience of the place. Typically, budgets do not allow follow-up and evaluation after a space was built or renovated. We argue this is an essential part of determining the effectiveness of the learning environment. This kind of critical analysis is often unwelcome. Considerable resources and thought went into the designing the space and any negative feedback could be interpreted as an attack on the process, no matter how carefully conducted.

New techniques have been proposed to explore how student, staff, and faculty experience learning spaces. Melhuish (2010) conducted a pilot study aiming to explore how ethnographic methods might be used to document experiences of learning spaces. She adapted a predetermined set of spatial and aesthetic characteristics developed from her previous work and applied this set response to interpretations of people she interviewed about the spaces.

The methodology was very similar to phenomenological analysis. This technique recognises the speculative and intuitive character of data interpretation with the author expressing their subjective experiences, skills, and insight. Five staff members and 15 students examined three new technology-supported teaching spaces. Data collection consisted of observation notes, semi-guided interviews, photographic documentation, and a sensor-operated camera that triggered with movements were sensed by the device. The learning spaces were very productive, but several obstacles were identified that prevented

students and faculty using the spaces to its full potential. Often this prevented student and faculty feeling a sense ownership and full engagement with the spaces (Melhuish, 2010). Major findings included:

- Physical comfort and mobility was important to engage and sustain concentration
- Incidental activity and environmental interest external to the space itself is significant in sustaining attention
- Flexibility in the space, particularly seating facilitated group work and "encourages self-expression, exploration of ideas, and acquisition of presentational skills for professional life" (pp. 48)
- The space was productive in promoting interactions and mixing with other students and outside visitors from industry
- The design quality and amount of resources in the space raised aspirations and self-confidence. It feels good to be in a place with 'cutting-edge' technology. The perceived investment in technology could boost self-esteem and self-efficacy.
- Rooms with expensive technology are often locked and exclusive. Features of the high-tech room are bookable by outside groups, possibly at the expense of students and faculty using the space
- High-tech rooms have an implicit pressure for faculty to show off the technological resources at hand. This may not always be necessary for teaching purposes and may alter their preferred teaching practices
- Faculty may lack training for using the high-tech features of the room.

Based on the study by Melhiush (2010), we recommend:

- Faculty are trained in how to operate the features of high-tech electronic classrooms
- At the same time, faculty should not feel pressured to adopt teaching styles to fit with the classroom format, and should be free to retain their preferred teaching practice
- Where there is flexibility, faculty have open access to rooms to use at any time
- Rooms with high-tech equipment that may require a relatively structured layout should still have moveable elements such as tables and chairs
- High-tech rooms should not necessarily be visually closed off, as activities outside the space can be stimulating and engaging and can promote interactions with students and faculty outside the space
- Faculty should take priority over any external booking service for the room by groups outside the university

All told, we would recommend implementing a method to evaluate existing university spaces. These approaches would be time and labour-intensive, but could offer key insight into how faculty use space. Undergraduate or graduate students specializing in disciplines such as architecture, urban studies, anthropology, or sociology could be potential partners in this initiative. The ethnographic approach may prove ideal to capture nuanced concepts that cannot be easily captured empirically.

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