Coworking in a Playground: Wellbeing Effects of Playful Design

Leland Masek
Tampere University
Kalevantie 4, 33100 Tampere
Leland.masek@tuni.fi

Barbora Šmirinová, Arttu Lakkala, Yanal Marji, Emily Zhang, Valpuri Erkkilä
Tampere University
Kalevantie 4, 33100 Tampere
barbora.smirionova@tuni.fi, arttu.lakkala@tuni.fi, Yanal.Marji@tuni.fi, emily.zhang@tuni.fi, valpuri.erkkila@tuni.fi

Keywords

Playfulness, Coworking Spaces, Wellbeing

EXTENDED ABSTRACT

The presence of coworking spaces has grown exponentially in recent years (Gandini 2015). They have been described as both solutions to the modern knowledge economy (Bueno et al. 2018) and contributors to more exploitative working practices (Moriset 2013). Despite these bold theoretical claims and widespread use, how these spaces affect user wellbeing, and engender positive or negative emotions is still underexplored (Howell 2022). While users believe that the design of coworking spaces influence their wellbeing, there are no systematic investigations on how to facilitate this consideration into the design of coworking spaces (Bucci 2023).

Coworking spaces used by students have furthermore been expanding into universities around the world (Bouncken 2018). This expansion makes the question of coworking space effects on wellbeing even more pertinent. Student psychological wellbeing is a critical topic, as the time spent in university education is one typified by heightened stress and reduced mental health (Bewick et al. 2010). The criticality of the issue of student wellbeing has only grown as COVID-19 has further increased risks of social isolation among other health issues (Liu et al. 2021). This presents an important gap in modern research: How can the design of coworking spaces in university-settings support the psychological wellbeing of students?

Playfulness is a critically growing concept for the study of wellbeing. Playfulness has been associated with reductions in psychopathology (Gray 2012), improving physical health (Proyer et al. 2018), relationship satisfaction (Brauer et al. 2021), and mental health (Masek 2023). Additionally, playfulness is a useful concept in a variety of design disciplines such as gamification (Deterding et al. 2011), social media website design (Sledgianowski & Kulviwat 2009), and spatial design in museums (Razack 2017). It is long established that individuals' behaviors, social communities and psychological

Proceedings of DiGRA 2024

experiences are affected by the environmental design of spaces (Gifford & Reser 2011). By integrating these three pools of research an intentionally designed playful space has a promising potential to increase play behaviors in the space and improve users' wellbeing. In this way, a more refined research question deserves attention: How does intentionally playful design in coworking spaces in university-settings affect student behaviors, experiences, and wellbeing?

This paper addresses this question with empirical data comparing two co-working spaces in a mid-sized university in Finland. One co-working space was designed by a game studies team to intentionally invite a variety of playful activities including game playing, playing with toys, expressive and artistic communication, socializing, and even resting. This playful coworking space even attempted to mimic workspaces that appeared similar to adult playgrounds in their design. (Kultima 2014)

The other coworking space is less than 2 minutes away, and was designed by a university-business collaboration, with more traditional design and goals. In comparing the two, both spaces are approximately the same size, in central, public locations and used the same amount by university students. This abstract presents a work in progress of a two-week comparison between the spaces. Researchers conducted interval-coded behavioral observations (Bakeman & Quera 2012) and collected surveys from the users in each space asking about general behavior, perceived playfulness, and a 23-item PERMA workplace wellbeing profiler (Butler & Kern 2016). This represents an exploratory type of data that triangulates (Thurmond 2001) between design intent, user self-perception, and external behavioral observation.

Ten periods of data collection occurred at pre-established observation times, with surveys gathered for the playful (N=46) and traditional (N=46) coworking spaces with no respondents answering multiple times. Observed behaviors and self-described behaviors were coded using a bottom-up qualitative thematic analytic technique (Yin 2015) resulting in five general categories of behavior: Work and study, games and active play, rest and relaxation, socializing and friendship, and ancillary supporting behaviors. These behaviors occurred at similar rates both in self-perception and in observer-reports. By setting up the categories of behaviors as binary variables, a proportion test was conducted showing statistically significant differences in the proportion of work, play, relaxation, and social activities between the two spaces. Individuals in the playful coworking space were statistically more likely to view themselves as engaged in active play/games, rest/relaxation, and socializing, and less likely in work. However, work was still the most reported behavior in both spaces. (Figure 1)

Behavior Category Proportion Tests			
Behavior Category	Behavior Count in Playful Space	Behavior Count in Traditional Space	Z-Score
Play	15	1	3.851**
Social	20	10	2.224*
Work	27	45	-4.550**
Relaxation	17	0	4.567**
Support	2	1	0.587

$^{**}p < 0.01$, $^{*}p < 0.05$

Figure 1: Behavior Category Proportion Tests

The data showed a statistically significant higher perceived playfulness in the playful coworking space. Furthermore, the playful coworking space had higher levels of self-reported positive experiences and evaluative happiness. The non-playful coworking space had higher self-reported scores of meaningfulness and accomplishment (Figure 2). Using Spearman rank correlation on the combined observations from both spaces, there was a statistically significant positive correlation between perceived playfulness, and three of the wellbeing measures: evaluative happiness, positive emotions, and engagement. (Figure 3)

T-Scores for Difference in Means of the Playful and Traditional Coworking Spaces			
Variable	Playful Space Mean	Traditional Space Mean	T-Score
Self-Reported Playfulness	4.00	3.04	3.60**
Positive Emotions	8.50	7.63	2.42*
Engagement	7.52	7.03	0.601
Relationships	7.90	7.24	1.34
Meaning	7.74	8.07	-2.15*
Accomplishment	6.92	7.63	-2.37*
Evaluative Happiness	8.913	8.11	2.21*

$^{**}p < 0.01$, $^{*}p < 0.05$

Figure 2: T-Scores Comparing Playful and Traditional Coworking Space

Correlation with Self-Reported Playfulness	
Variable	Spearman Rho
Positive Emotions	0.400**
Engagement	0.257*
Relationships	0.188
Meaning	-0.060
Accomplishment	-0.086
Evaluative Happiness	0.275**

$^{**}p < 0.01$, $^{*}p < 0.05$

Figure 3: Spearman Rho correlation between playfulness and PERMA Wellbeing Profiler

Altogether, the intentional playful design of this coworking space should be seen as having a significant effect on its users. This work supports a conclusion that Playful design affects play behavior, sense of playfulness and resulting wellbeing. In this way, designing for playfulness in future coworking spaces in universities has a promising potential to better facilitate wellbeing of students. These coworking spaces can, in some way, become playgrounds at the university: supporting playful, restful, and social behavior resulting in more positive experiences, engagement, beneficial relationships and overall happiness in students. At the same time, students perceived the playful design as reducing their desire to engage in work and reduced their perceptions of accomplishing work goals in the space.

While this is still a work in progress these findings are highly significant for a game studies audience. This work empirically supports a connection between playfulness, play, and games with certain forms of wellbeing. These findings spark greater questions on what types of wellbeing are supported by playfulness. Future works should investigate this new territory of how happiness, positive experience, and engagement may be facilitated by the design of university spaces through playfulness.

REFERENCES

Bakeman, R., & Quera, V. (2012). Behavioral observation.

Bewick, B., Koutsopoulou, G., Miles, J., Slaa, E., & Barkham, M. (2010). Changes in undergraduate students' psychological well-being as they progress through university. *Studies in higher education*, *35*(6), 633-645.

Bouncken, R. B. (2018). University coworking-spaces: Mechanisms, examples, and suggestions for entrepreneurial universities. *International Journal of Technology Management*, *77*(1-3), 38-56.

Bucci, D. J. (2023). *Worker Experiences of Well-Being in a Coworking Space* (Doctoral dissertation, Fielding Graduate University).

Bueno, S., Rodríguez-Baltanás, G., & Gallego, M. D. (2018). Coworking spaces: A new way of achieving productivity. *Journal of Facilities Management*, *16*(4), 452-466.

Butler, J., & Kern, M. L. (2016). The PERMA-Profiler: A brief multidimensional measure of flourishing. *International Journal of Wellbeing*, *6*(3).

Brauer, K., Proyer, R. T., & Chick, G. (2021). Adult playfulness: An update on an understudied individual differences variable and its role in romantic life. *Social and Personality Psychology Compass*, *15*(4), e12589.

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011, September). From game design elements to gamefulness: defining" gamification". In Proceedings of the 15th international academic MindTrek conference: Envisioning future media environments (pp. 9-15).

Gandini, A. (2015). The rise of coworking spaces: A literature review. *ephemera*, *15*(1), 192-205.

Gifford, R., Steg, L., & Reser, J. P. (2011). Environmental psychology. *IAAP handbook of applied psychology*, 440-470.

Gray, P. The decline of play and the rise of psychopathology in children and adolescents. American Journal of Play, *3*(4), 443-463. (https://files.eric.ed.gov/fulltext/EJ985541.pdf) (2011).

Howell, T. (2022). Coworking spaces: An overview and research agenda. *Research Policy*, *51*(2), 104447.

Kultima, A. (2014). Rainbows, Unicorns and Hoverboards Making of OASIS Story of a dream at the University of Tampere.

Liu, Chang, Melinda McCabe, Andrew Dawson, Chad Cyrzon, Shruthi Shankar, Nardin Gerges, Sebastian Kellett-Renzella, Yann Chye, and Kim Cornish. "Identifying predictors of university students' wellbeing during the COVID-19 pandemic—A data-driven approach." *International journal of environmental research and public health* 18, no. 13 (2021): 6730.

Masek, L. (2023). How Playfulness Can Enable Greater Understanding of Game-Based Adult Mental Health Interventions. In *International Simulation and Gaming Association Conference* (pp. 171-184). Springer, Cham.

Moriset, B. (2013). Building new places of the creative economy. The rise of coworking spaces.

Proyer, R. T., Gander, F., Bertenshaw, E. J., & Brauer, K. (2018). The positive relationships of playfulness with indicators of health, activity, and physical fitness. *Frontiers in Psychology*, *9*, 1440.

Razack, Z. (2017). Supporting the learner's playfulness and creativity as learning mechanisms: design specifications for interactive interfaces in arts museums (Doctoral dissertation, Bournemouth University).

Sledgianowski, D., & Kulviwat, S. (2009). Using social network sites: The effects of playfulness, critical mass and trust in a hedonic context. Journal of computer information systems, 49(4), 74-83.

Thurmond, V. A. (2001). The point of triangulation. Journal of nursing scholarship, 33(3), 253-258.