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**How can indoor environmental quality be shaped to
promote positive avenues of motivation?**

For this research question, a phenomenological approach will be used. The sample of people will be a deliberate cluster sample of a business group who regularly works in a coworking space. Coworking spaces are places where small businesses can go and work. They are particularly useful for businesses without their own offices. An office setting was chosen because it provides an environment where people are already performing tasks; therefore, motivation will be more easily evaluated. Groups who use coworking spaces were selected because it is assumed, they will more easily adjust to working in a similar environment that will be used in the study. Adjustability is important so the participants feel comfortable and relaxed in the space, which are two factors of wellbeing. A coworking space setting was also chosen because it already allows for flexibility and variety, which are essential to measure different levels of indoor environmental quality. Recruitment will take place by visiting existing coworking spaces and asking for business groups to volunteer. The business group should have approximately 5 to 25 employees to meet the criteria of a phenomenological approach. Those not included in the sample include anyone currently unemployed and employed people who do not regularly use coworking spaces.

The study will take place in a building with room for a full coworking space. The space will include rooms and features commonly found in coworking spaces. Different locations throughout the space will be designed to boost the indoor environmental quality in the areas of air quality, temperature preferences, lighting, sound, ergonomics, odor control, and aesthetics. For some spaces, there will be adjustable controls while others will be fixed. This is an

interesting location because it allows flexibility and variety to find places where individuals can work most comfortably. The site will add to literature on workplace settings, indoor environmental quality, and motivation. Spaces included in the site will be any space commonly found in a coworking space. Spaces not included will be any extra amenities typically found in conjunction with coworking spaces, restroom facilities, lobbies, and any spaces outside of the coworking space. If it can be easily worked in, outdoor spaces will be included because of their benefits to air quality and aesthetics. Participants will be allowed to work wherever they see fit for themselves.

Indoor environmental quality factors will be manipulated, and motivation levels will be recorded. Indoor environmental quality factors include air quality, temperature, lighting, sound, ergonomics, odors, and aesthetics. Temperature, lighting, and odors will be adjustable via control panels and diffusers. Air quality will have set standards, as will acoustics, ergonomics, and aesthetics, but they will vary throughout the space to test different levels. Motivation levels will be evaluated using the Situational Motivation Scale (SIMS). Those conducting research will observe in different designated areas and will hand the SIMS evaluations out to participants in a variable interval schedule. This is a self-evaluation that measures intrinsic motivation, identified regulation, external regulation, and amotivation. The evaluation was created by Guay, Vallerand, and Blanchard in 2000 and contains sixteen different statements. Participants are asked to evaluate each statement based on how well it corresponds to the reason the participants are currently engaged in the activity they are currently performing. The visual observations from the researchers will be jotted down for note taking and later analyzed.

At the end of research observation, participants will be asked to participate in an interview. The interview will be informal and will be given individually and in business groups.

The interview will ask questions based on the choices made by the participants. The questions will target why a participant chose one space over another to work, which space(s) was(were) their favorite and why, spaces they avoided and why, why so much time was spent in certain spaces based on researcher observation, and what could be changed to better support participant wants and needs. The questions will also address physical health after spending time in certain spaces, comfort levels, productivity, and satisfaction of the space. Motivation levels will also be discussed, and participants will be asked to state why they responded the way they did.

Interviews will be recorded using audio recording and post-interview data dumps.

Data will be analyzed using some statistical methods and coding. Statistics will be utilized to determine which spaces were the most liked by the participants and which spaces were most occupied length wise and population wise. Coding will be used to evaluate the interview feedback. These methods are used because they will most accurately analyze the data in a way useful to the research question. Statistical methods will allow researchers to analyze which spaces, and therefore which indoor environmental quality factors, were favored and which contributed the most to encouraging motivation. Coding will allow researchers to analyze feedback given in interviews to identify common themes and talking points among participants. Interviews performed individually will allow for analysis of specific individual responses and individual preferences. Business group interviews allow for analysis of what worked well for the groups as a whole and it is speculated answers will be given as to which spaces were best for collaboration and group work. A business group interview also allows participants to discuss and recall things they may not have thought of individually.

Potential threats to credibility could be the generalizability of the study. Results may vary if tested in a specific company office or in different building types such as schools, retail, etc.

Testing a different set of participants could also give different results as all the people would come from the same business and could have similar backgrounds. Because not every viewpoint may be tested, saturation could also be an issue. Another drawback is that the participants know they are being tested and could act differently when being observed. However, validity should not be a problem as the test is set up to answer the question being explored. Reliability is also not an issue because the tests being done are open-ended informal interviews and the SIMS evaluation, which has been tested and created by a third party.

Figure 1

SIMS Questionnaire

The Situational Motivation Scale (SIMS)							
<p>Directions: Read each item carefully. Using the scale below, please circle the number that best describes the reason why you are currently engaged in this activity. Answer each item according to the following scale: 1: <i>corresponds not at all</i>; 2: <i>corresponds a very little</i>; 3: <i>corresponds a little</i>; 4: <i>corresponds moderately</i>; 5: <i>corresponds enough</i>; 6: <i>corresponds a lot</i>; 7: <i>corresponds exactly</i>.</p>							
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Why are you currently engaged in this activity?							
1. Because I think that this activity is interesting	1	2	3	4	5	6	7
2. Because I am doing it for my own good	1	2	3	4	5	6	7
3. Because I am supposed to do it	1	2	3	4	5	6	7
4. There may be good reasons to do this activity, but personally I don't see any	1	2	3	4	5	6	7
5. Because I think that this activity is pleasant	1	2	3	4	5	6	7
6. Because I think that this activity is good for me	1	2	3	4	5	6	7
7. Because it is something that I have to do	1	2	3	4	5	6	7
8. I do this activity but I am not sure if it is worth it	1	2	3	4	5	6	7
9. Because this activity is fun	1	2	3	4	5	6	7
10. By personal decision	1	2	3	4	5	6	7
11. Because I don't have any choice	1	2	3	4	5	6	7
12. I don't know; I don't see what this activity brings me	1	2	3	4	5	6	7
13. Because I feel good when doing this activity	1	2	3	4	5	6	7
14. Because I believe that this activity is important for me	1	2	3	4	5	6	7
15. Because I feel that I have to do it	1	2	3	4	5	6	7
16. I do this activity, but I am not sure it is a good thing to pursue it	1	2	3	4	5	6	7
<p>Codification key: Intrinsic motivation: Items 1, 5, 9, 13; Identified regulation: Items 2, 6, 10, 14; External regulation: Items 3, 7, 11, 15; Amotivation: Items 4, 8, 12, 16.</p>							

References

Guay, F., Vallerand, R. J., & Blanchard, C. (2000). *Motivation and Emotion*, 24(3), 175–213.

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