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**Published paper**

**[Learning over tea! Studying in informal learning spaces]**

**Author Details** *(please list these in the order they should appear in the published article)*

Author 1 Name: Mr Jonathan Hunter
Department: N/A
University/Institution: N/A
Town/City:
State (US only):
Country: United Kingdom

Jonathan graduated from the Information School, University of Sheffield in January 2013 with a Distinction in Librarianship (MA).


Author 2 Name: Dr Andrew Cox
Department: The Information School
University/Institution: The University of Sheffield
Town/City: Sheffield
State (US only):
Country: United Kingdom
Email – a.m.cox@sheffield.ac.uk

Andrew is a lecturer at the Information School, University of Sheffield. He is coordinator in the MSc in Digital Library Management and School Director of Learning and Teaching. His research areas are spatial aspects of learning; social media; and research data management.


*NOTE: affiliations should appear as the following: Department (if applicable); Institution; City; State (US only); Country.*
*No further information or detail should be included*


**Corresponding author:**  Jonathan Hunter
**Corresponding Author's Email:** Jon.Hunter23@btinternet.com

☐ *Please check this box if you do not wish your email address to be published*

**Acknowledgments (if applicable):**


**Biographical Details (if applicable):**

[Author 1 bio]

[Author 2 bio]

[Author 3 bio]

[Author 4 bio]

**Structured Abstract:**

**Purpose** - This article is an exploratory investigation of students' use of informal learning spaces for their studies at the University of Sheffield. Previous research has mainly focused on formal learning spaces such as libraries and lecture theatres, but there is an increasing recognition of the value of informal learning spaces such as coffee bars.

**Design/Methodology/ Approach** - Questionnaires, observations and interviews were the sources of data for the study. The research approach particularly looked at how students used informal learning spaces and what their perceptions of the spaces were.

**Findings**- Analysis showed that students found that the background atmosphere greatly influenced their choice of study location and that technological devices were only used sparingly. Students adapted their study habits to fit the learning spaces that they liked.

**Originality/ Value** Although, attention is often paid to the furniture and colour schemes in libraries, this article makes librarians consider the importance of all sensual stimuli in making libraries warm, friendly and homely spaces. The 'Model of Zengagement' was developed to show how stimuli from the background atmosphere influences students study experience.

**Keywords:** Academic Libraries, User studies, Students, Informal learning spaces, Universities.

**Article Classification:** Research paper

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**Running Heads:**

# Learning over tea!  Studying in informal learning spaces

## Abstract

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# Introduction

Introducing the latest technology and offering multiple types of study spaces are seen as important features of modern academic libraries (Lippincott, 2007). Many academic libraries have long moved away from being designed around a stereotypical, solitary, silent space. Beagle (1999) advocates that libraries should support multiple types of learning, because of there being a greater emphasis on group work. Libraries being a "*one stop shop*" (Massis, 2010, p. 160) in which many other services are available such as "*counselling, tutoring and disability support*" (p. 160) are becoming increasingly common.

Despite libraries supporting multiple types of work and being technology rich it is apparent that many students study in informal learning spaces such as coffee bars rather than libraries (Waxman et al, 2007). This study begins to investigate why this is the case. Three informal learning spaces at the University of Sheffield were chosen for the study. These were an open space called the Gallery and a coffee shop both within the Students' Union and a cafe within the Information Commons building. An Information Commons is a modern learning environment which "*provides reinforcement for the social aspects of learning, offers abundant technology and digital content, and provides students with a physical setting that is often available 24-7*" (Lippincott, 2010, p. 27).

**The Gallery**

The Gallery is an open space within the Students' Union. Food outlets are close by, meaning students can bring refreshments across to the Gallery. There are computers available as well as printing facilities. Wi-Fi access is freely available.



Figure 1: The Gallery

**Coffee Revolution**

Coffee Revolution is a cafe located within the Students' Union building which is at the social hub of the University of Sheffield. It is described as "*perfect for enjoying the cafe society or just sitting and watching the world go by*" (Sheffield Students' Union, 2012). There is free Wi-Fi access.



Figure 2: Coffee Revolution

**The Information Commons Cafe**

The cafe is located within the Information Commons and access is only available to students and staff. Many students take their refreshments away with them rather than remain in the cafe. There are some quick use computers available and free Wi-Fi access. The Information Commons opened in 2007 and is a 24 hour; 365 days a year modern learning environment, "*which combines a variety of different study environments in one light, airy and spacious building*" (Sheffield University, 2012).



Figure 3: The Information Commons Cafe

# Review of Literature and Background

## Changing patterns of studying

It is accepted that different types of study spaces are needed to support multiple forms of learning in university libraries (Beagle, 1999; Bennett, 2006; Bodnar, 2009). For example, in the Information Commons at the University of Sheffield, study spaces include "*flexispaces, pods and areas of open seating*" (Lewis, 2009, p. 168). It is contentious whether coffee bars should be regarded as study spaces. Lippincott and Brown (2003) claimed that "*coffee bars should be considered as a place for social learning,*

*especially in libraries*" (p. 15), but Bryant et al (2009) disagreed believing that coffee bars did not promote a "*conducive learning atmosphere*" (p. 10).

There is more for librarians to consider, however than just providing multiple study spaces. Laurier (2008) found that increasingly more commuters scheduled in "*linger time*" (p. 6) at coffee bars on their route to work to prepare for the day ahead. Similarly, how students plan their time may be changing. Hagerstrand (1973) claimed that people's daily activities were planned around being in places at set times. Little research has examined how students' study patterns fit around other activities such as lectures, commuting and having jobs.

## Collaborative Learning

Whilst recent literature has focused on universities providing many different types of study space, researchers such as Bickford and Wright (2007) believe the importance of students learning together collaboratively is undervalued. They argue that "less *contact with faculty, more commuters and a secularised society have eroded social interactivity*" (p. 4.4), meaning that collaborative study in informal learning spaces is becoming increasingly common. Lefever and Bashir's (2011) findings at Bradford University support this with students feeling attached to specific informal learning spaces, seeing them as somewhere to discuss work without being confined by regulations.

 In studies at Loughborough University, Bryant et al (2009) noted that students self-governed the commons space themselves, determining what behaviour was

appropriate. This idea of being free from regulations relates to a concept known as the 'third place', proposed by Oldenburg and Brissett (1982) which is "*a public setting accessible to its inhabitants and approached by them as their own*" (p. 270). The importance of collaborative study is also supported by Francisco (2007) in research at the Steam Cafe, at Massachusetts Institute of Technology. He suggested that a magnetism effect occurred in which "*food provides the initial pull, but an equally important attraction is the people who come for the food…people attract people*" (p. 27.5).

In addition to research at universities, wider literature highlights the importance attributed to being around others in a similar position. Laurier's (2008) study highlighted that commuters enjoyed being around likeminded people at coffee bars on route to work, whilst Waxman (2006) found that it was common for there to be "*campers*" (p. 44) in the USA, who got much satisfaction out of visiting coffee bars alone for long lengths of time, because they enjoyed the company of others.

## Environmental factors

Whilst the importance of students studying together collaboratively has been underestimated, the role that environmental factors play has not. Research such as that by Chism (2007) has highlighted that the "*sensory stimulation of informal spaces such as the décor, carpeting and lighting*" (p. 2.7) greatly influences students' perceptions of where it is good to study. At the University, of Sheffield, students found the "*temperature being right, spaces not being too noisy and a good use of colour schemes*" important features of lecture rooms (Cox, 2011, p. 197). Also, Fister (2009)

claimed that *"good lighting, comfortable furniture, warm colours and access to food"* (p. 1) were the most important design features of libraries for students.

Wider research suggests that the atmosphere generated in informal learning spaces is influenced by more than just the physical design. Waxman et al (2007) highlighted that the *"opportunities to socialise and convenience"* (p. 427) greatly influenced which informal learning spaces students used, whilst Lefever and Bashir (2011) found that *"being welcoming, comfortable, safe and friendly"* (p. 5) were the most important factors in students choice of informal learning space at Bradford University. Montgomery (2008) offers another perspective. His research about the usage of seminar rooms highlighted that *"how people navigated the spaces influenced their perceptions"* (p. 129). This furthers the point that the atmosphere created in informal learning spaces is influenced by many factors.

## Sheltering and territoriality

Having personal space is also seen as greatly important in students' choice of study locations. Bennett (2006) and Bodnar (2009) are amongst many researchers who claim that students appreciate furniture which can be reconfigured to suit their needs in libraries. Other research at universities such as Cox (2011) at the University of Sheffield highlights that students feel restricted by the design of lecture theatres, because they had difficulty spreading out their belongings. At Oregon State University the *"convenience, comfort, spreading out and the availability of resources"*

(Vondracek, 2007, p. 287) were seen as the main reasons for using informal learning spaces rather than libraries.

Wider literature such as Waxman's (2006) research at coffee bars found that customers tended to sit in sheltered locations "***those with architectural elements that offered a physical structure on at least one side***" (p. 45), to have greater privacy. Brown and O'Hara (2003) noted that commuters would sit against walls and spread their belongings out to create a boundary between themselves and others when travelling on trains.

## The use of technology in informal learning spaces

Much literature focuses on how technology influences learning at universities. Many library researchers claim that incorporating modern technology into academic libraries is essential, with the younger generation known as the "millenials" used to "***embracing technology in their daily lives***" (Lippincott, 2010, p. 32). For example, Bryant et al (2009) observed a commons space known as the 'Open' at Loughborough University and claimed that the ease of Internet access was the main reason it was popular. Lippincott and Brown (2003) highlighted that students often "***inhabit more than one virtual space at a time***" (p. 14) when using social media and it is vital that libraries support this.

Some theorists such as Martell (2007) have gone as far as saying the growth in electronic resources will mean that students will not visit libraries anymore. Six years on, academic libraries still survive. From personal experiences many students

find carrying technological devices such as laptops around on campus inconvenient. Indeed, in a study at the University of Sheffield, Cox (2011) found that in lectures most students used paper pads and pens rather than laptops.

# Research questions

Based on the literature reviewed, it was evident that most learning in higher education today is premised both on significant independent study and unsupervised group work. How this is carried through needs to be better understood both by support services such as libraries and also tutors. The following research questions were explored.

1) What is the temporal pattern of student study in informal learning spaces?

2) What are the factors shaping students' use of informal learning spaces?

# Research Method and Design

## Questionnaires

All students using the informal learning spaces were asked to complete a questionnaire (appendix, p. 33). Each site was visited from 9.00 am until 13.30. Students completed the questionnaires unattended to avoid them feeling pressurised and all responses remained anonymous. An information letter was provided explaining the study. The first seven questions were to gain an understanding of how students use informal learning spaces, whilst question eight and nine examined students' perceptions of them. The questionnaires were piloted to ensure that "*the*

*questions communicated to the respondents as intended"* (De Leeuw, 2008, p. 316).

Descriptive statistics were used to analyse the quantitative data (Connaway and Powell, 2010). When analysing the free text answers, content analysis was used with the responses being assigned to categories which were created based on the answers which students gave (Peterson, 2000).

There were limitations with using questionnaires, such as the need to keep questions simple for a broad audience (Peterson, 2000). Confusion occurred with question four, with some students circling multiple answers rather than one. This led to 31 students' answers being withdrawn for this question. Other limitations included some participants not answering the open ended questions, as well as 20% of the questionnaires being completed by non-students. As the study was about students' use of informal learning spaces, these responses were excluded from the findings. Also, it was not possible to capture the full spectrum of users of each site, because research was conducted at select times (Bryman, 2012). Students occasionally found it difficult answering questions, because their study patterns varied throughout the year. Friends sometimes discussed questions together and gave similar answers to one another.

## Observations

Observations were made at each site so that "*actions were identified that people may not think to report*" (Connaway and Powell, 2004, p. 157). Notes were taken every thirty

minutes on which study aids were in use and how many students were on each table. This was so that spatial variations could be examined.

Observational analysis had its limitations. It was difficult to record which study aids were in use without being intrusive (Bryman, 2012). Observing everything was sometimes "***overloading for the observer***" (p. 160), especially at Coffee Revolution where there were twenty seven tables.

## Follow up interviews

After analysing the results, three follow up interviews were conducted with staff involved in the management of each of the sites. The interviews were semi-structured to encourage the interviewees to give detailed, personal accounts about their experiences (Bryman, 2012). These transcripts were used to support findings in the results and discussion chapters.

# Results

## Research question one: What is the temporal pattern of student study in informal learning spaces?

Overall, 174 students completed the questionnaire, with 90 students completing the questionnaire in Coffee Revolution, 53 in the Gallery and 31 in the Information Commons Cafe.  38% of students stated that they were studying in the informal learning spaces, which shows that studying is common outside of formal environments such as libraries. It was clear that there were some distinct user groups with 39% of students staying for less than one hour. Much of the group is quite

transitory. A small cluster of 14% of students stated they were staying for over four hours. Of those studying 26% of students stayed for over four hours. Unstructured observations highlighted that some students spent the whole morning studying in informal learning spaces, especially in the Gallery. Some students appeared to have a regular table to go to in which they met up with friends and studied collaboratively together.
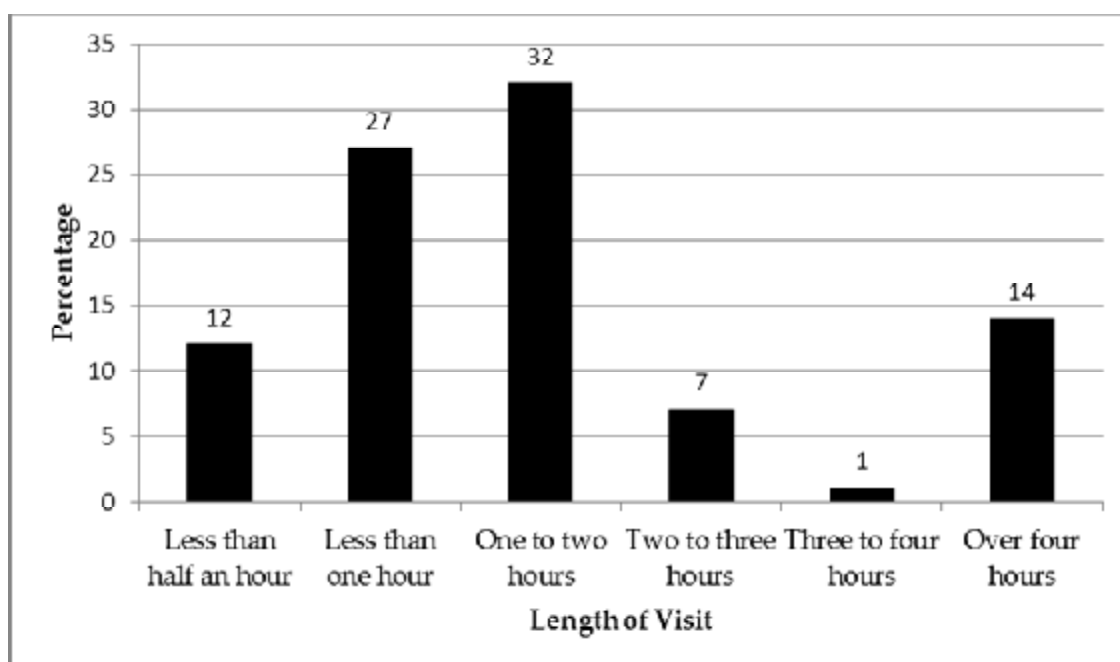


Figure 4: Average length of time spent in informal learning space

From unstructured observations there were more individuals using informal learning spaces early in the mornings, often sitting around reading books and making notes over a coffee. This was reaffirmed by a senior member of staff from Coffee Revolution, who stated,

 "*We have very, very regular customers who we see throughout the day. Mainly we see them during their first visit to the store [coffee shop] between 7.00 and 8.30 in the morning*".

There were considerable differences between the sites in how they were used. The Gallery had the most long term visitors with 23% staying over four hours compared to 17% in the Information Commons Café and 4% in Coffee Revolution. 70% of students used the Information Commons Cafe for less than one hour, compared to 56% in Coffee Revolution and 32% in the Gallery. This supports the observation that in the Information Commons Cafe, many students bought drinks to take away with them to consume elsewhere.

When students were asked how often they studied at each site, 40% of students in the Gallery studied there every week, 28% in the Information Commons Cafe and 17% in Coffee Revolution. When a chi square test was conducted to test if these differences were down to chance, the results were significant with the value of 7.21 higher than the critical value needed of 5.99 (Geography Site, 2006).

The percentage of students mentioning 'distractions' as a disadvantage of studying in the Gallery was 10% lower than the average across the sites. This was possibly because students respected that it was a workspace and made an effort to keep quiet or maybe enjoyed working in an environment with background distractions. 27% of students felt productive working in the Gallery, which was considerably more than the average of 19% across the sites. This highlights that some informal learning spaces are percieved as study spaces more than others, despite the technology available being similar.

# Research question two: What are the factors shaping students' use of informal learning spaces?

## *The Environment*

**Students found the background atmosphere the best reason for studying in informal learning spaces as well as the worst.**
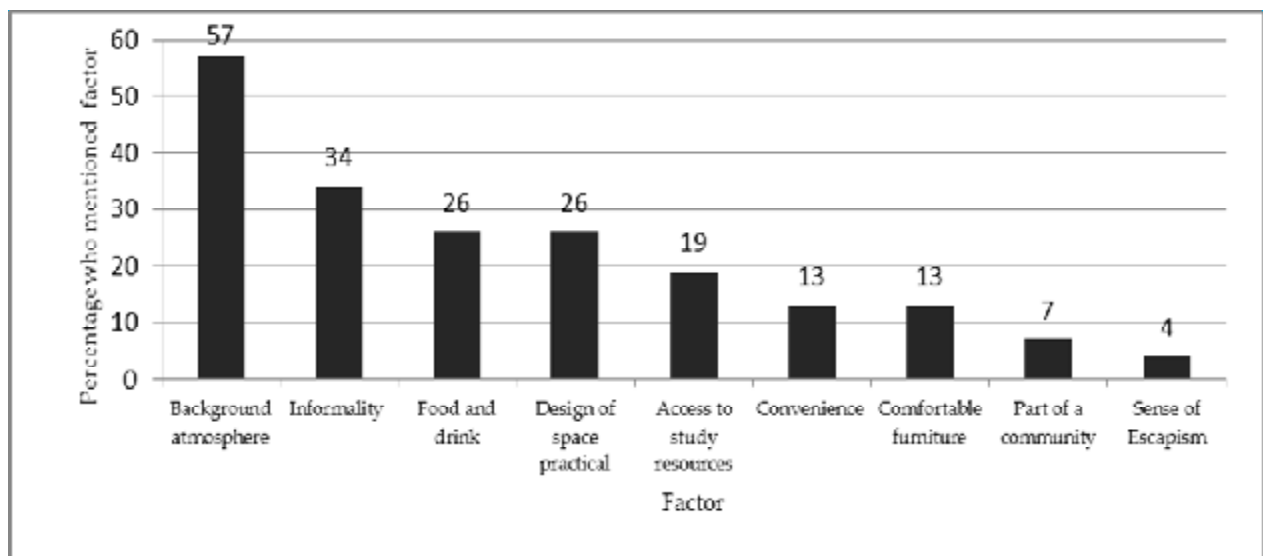


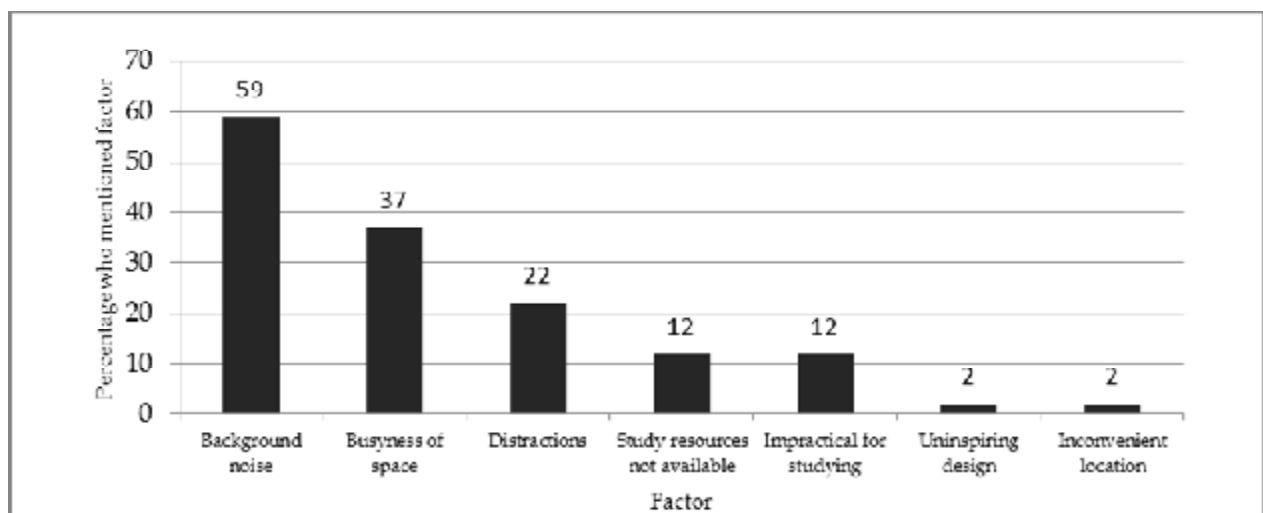**Figure 5: Advantages of studying in informal learning spaces**



**Figure 6: Disadvantages of studying in informal learning spaces**

Advantages of studying in the informal learning spaces to do with the background atmosphere included,

"*Calming environment, music with the right mood is played*"

"*Informal space, relaxed atmosphere*"

Negative factors to do with the background atmosphere included,

"*Too distracting…light, music, other people*"

"*Too loud to concentrate*"

When asked what feelings they associated with the informal learning spaces, students most commonly mentioned feeling relaxed and productive.

"*I enjoy using this space over either of the libraries. It's quite a calm space but not eerily quiet like the [*main library*] or too busy like the [*Information Commons*]*"

"*It's less stressful to work than in the libraries*"

This in turn highlights that some students feel they work better in a low pressurised, relaxed atmosphere.
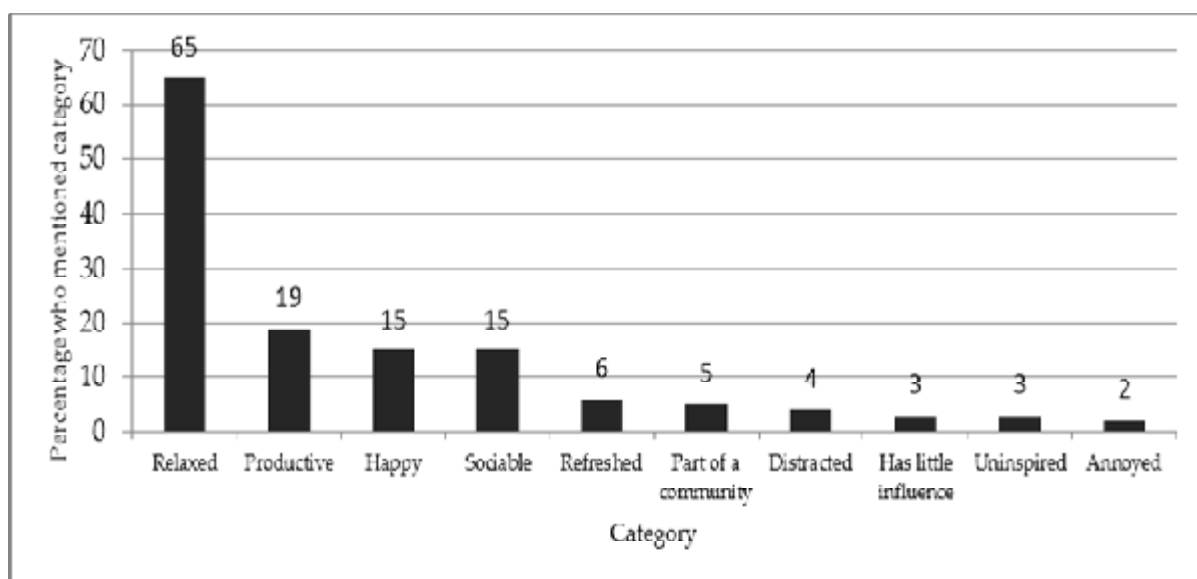


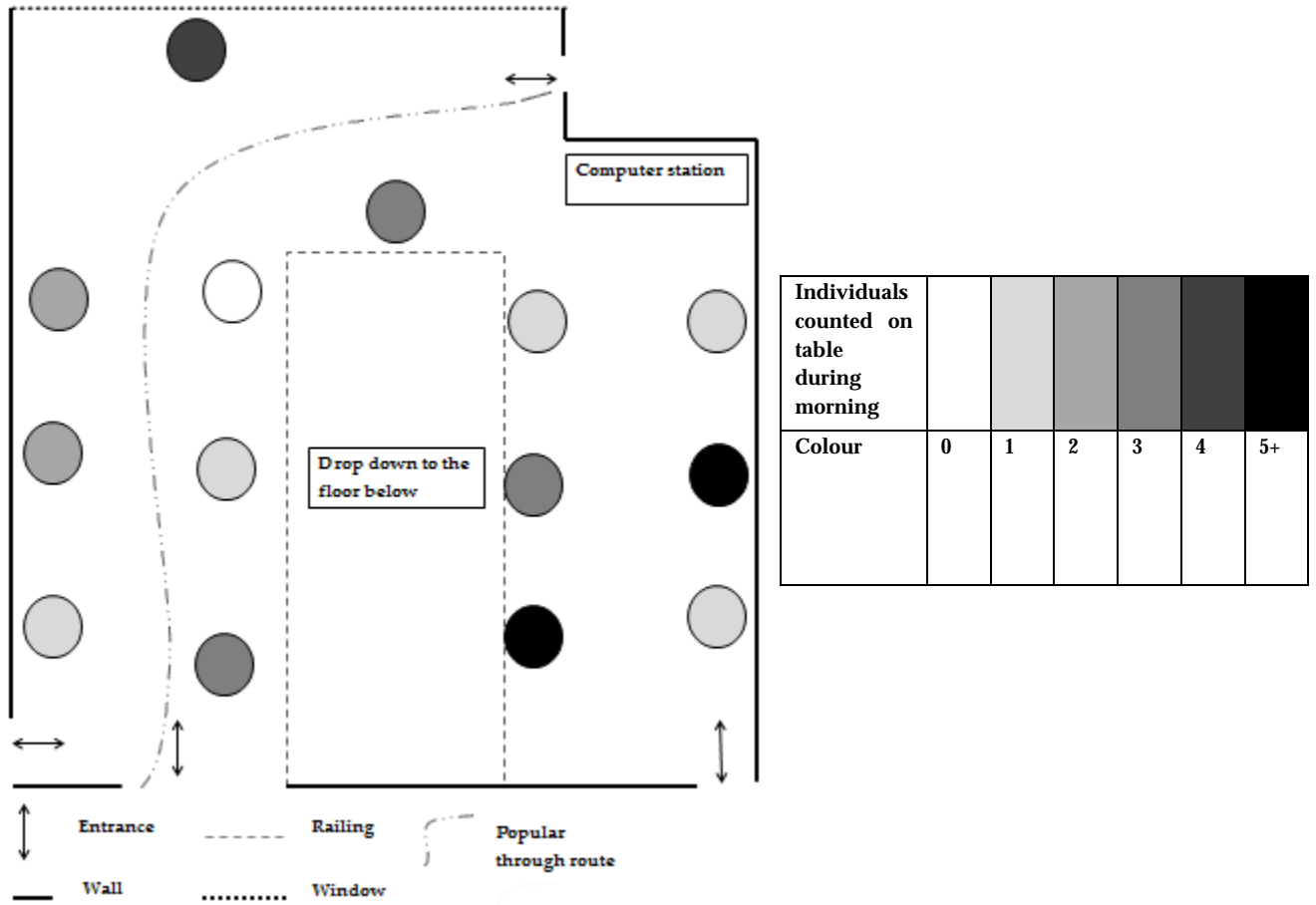**Figure 7: How does the space tend to make you feel?**

The background atmosphere plays a vital role in determining whether students work well. In informal learning spaces, the background atmosphere energises and motivates some students to study, whilst others find the background stimuli too much.

### Creating territory and being sheltered.

The observations involved recording how many students used every table at each site at half an hour intervals. The usage was mapped onto a floor plan of each site to see if certain locations were used more than others. The analysis showed that tables in sheltered locations were most popular. Sheltered means "*tables with architectural elements that offered a physical structure on at least one side*" (Waxman, 2006, p. 45).

Tables in the quietest locations in the Gallery, secluded from students passing through were most regularly used for studying. These tables were at the opposite side of the Gallery from where students briefly met up to socialise and have lunch.

# The Gallery



| Individuals counted on table during morning | | | | | | |
|---|---|---|---|---|---|---|
| Colour | 0 | 1 | 2 | 3 | 4 | 5+ |

Entrance    Railing    Popular through route

Wall    Window

# Coffee Revolution
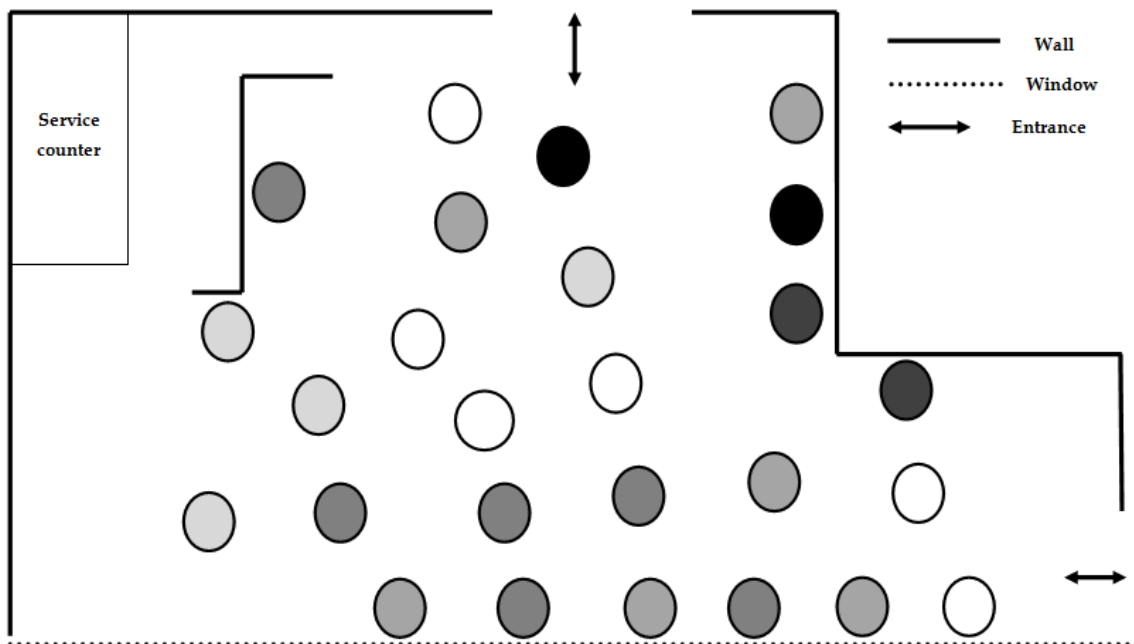


Service counter

Wall

Window

Entrance

**Figure 8: Distribution of individuals in the Gallery and Coffee Revolution**

In Coffee Revolution, tables in sheltered locations such as against the wall were most popular with individuals who were studying. Groups generally preferred the tables in the centre of Coffee Revolution, because furniture could easily be reconfigured to suit different group sizes.

## Technological devices

As part of the structured observation the study aids that were in use were recorded. It was difficult to count how many individuals had each type of study aid. Instead, it was recorded whether each type of study aid was in use on each table every half an hour. The percentage spread of each type of study aid across the three sites was then calculated.
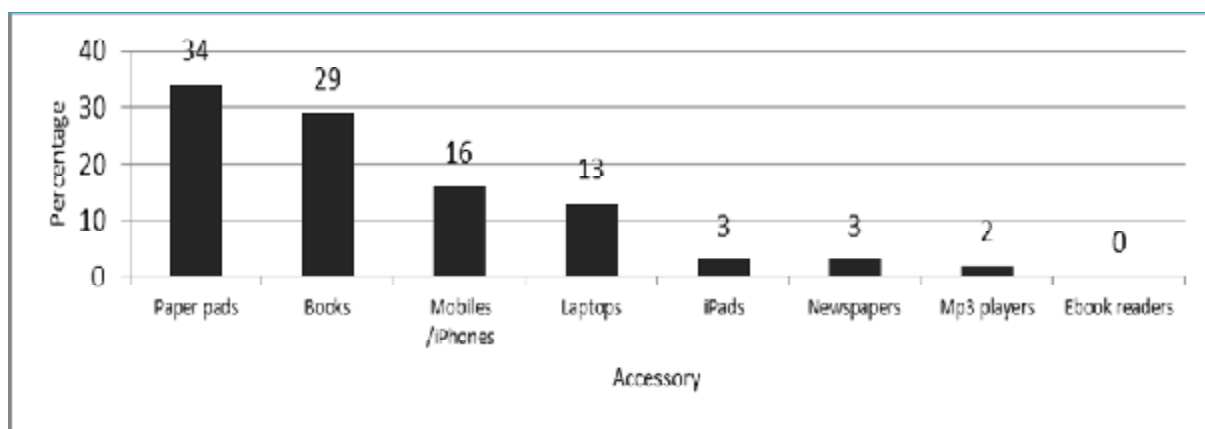


Figure 9: Percentage spread of study aids across the sites

Study aids that were not technological devices were most commonly used such as paper pads and books. These constituted 63% of all the study aids counted. Despite Wi-Fi being available, students seemed to prefer the tried and tested ways that they knew best. This suggests that it cannot be better access to technology which makes students choose to study in informal learning spaces.

# Discussion

## Research question one: Students' study patterns

Results showed that students often visit informal learning spaces for under one hour or for over four hours. Waxman (2006) labelled "*patrons who often sit and stay for hours as campers*", (p. 47). Of those studying, 26% normally stayed for over four hours which indicates the informal learning space is their main study base. In contrast, 39% of students did not normally visit the informal learning space they were in for more than one hour. This perhaps supports Hagerstrand's (1973) time-space prism concept that people look to fill in gaps between scheduled activities.

Laurier (2008) found that commuters allocated time en route to work to go to a coffee shop to prepare for the day ahead. Similarly, some students schedule in time between lectures to prepare for activities later that day. Lefever and Bashir (2011) included a category of "*come here to fill up time between classes etc*" (p. 13) when they conducted a questionnaire about students' use of space at Bradford University. 44% chose this category in the Atrium, more so than any other category (p. 13). Similarly, from observations at Sheffield, it was noticeable that many students came to the informal learning spaces for a short time to read a book. The term 'espressos' is proposed for these students who use informal learning spaces for a short period of time.

From the unstructured observations at Sheffield it was clear that many students met up with friends throughout the mornings to study together, sometimes quietly, other

times working collaboratively together, especially in the Gallery. This very much supports Bickford and Wrights (2007) emphasis on the importance of student study communities. This is an important aspect of university life which has been neglected in research.

The questionnaire results highlighted that the Gallery was by far the most popular study site with 40% of students claiming to study there at least once a week. Lefever and Bashir (2011) found that at Bradford University, students identified themselves with particular informal learning spaces, "*feeling a social belonging, often through groups*" (p. 1.). Students used informal learning spaces for different purposes such as the top floor of Student Central for studying and the bottom floor for socialising. There were similarities at Sheffield, with 'group study' most commonly selected in the Gallery, 'socialising' most regularly picked in Coffee Revolution and 'buying food and drink' chosen most frequently in the Information Commons Cafe. This shows that students construct distinct identities for different informal learning spaces on campus. Francisco (2007) claimed that students were drawn to the Steam Cafe at MIT, because of the magnetism effect of other students being there. This effect was evident at the Gallery with friends joining one another throughout the morning to work collaboratively together.

# Research question two: What are the factors shaping students' use of informal learning spaces?

### *The importance of the atmosphere*

The background atmosphere was considered the main positive of studying in informal learning spaces, as well as the main negative. Many previous studies have highlighted the importance of the background atmosphere in informal learning spaces such as (Bodnar, 2009; Chism, 2007; Fister, 2009; Montgomery, 2008; Vondracek, 2007; Waxman et al, 2007). In libraries, Fister (2009) claimed that "*good lighting, comfortable furniture and warm colours*" (p. 1) were amongst the most important design features, whilst in cafes Waxman et al (2007) claimed that "*the atmosphere, opportunities to socialise and the convenience*" (p. 427) were all of great importance.

Bryant et al (2009) was sceptical about cafes as study spaces, claiming "*they do not always promote an atmosphere which is conducive to learning*" (p. 10). However, it was evident in this study that many students were studying in informal learning spaces whilst also feeling relaxed, with 38% claiming to have such feelings.

Waxman (2006) also looked into the behaviour of customers at coffee bars and found that "*people were content to sit alone yet, despite the lack of verbal interaction, felt that they had a social outing*" (p.50). Indeed, Laurier (2008) claimed that commuters felt energised and motivated by being around others in coffee bars. This was also the case with students using informal learning spaces for their studies at Sheffield. Being

around others and taking in the atmosphere seemed to inspire students to work effectively. Although other studies have mentioned that students find environmental factors important in their chose of study location such as (Bennett, 2006; Chism, 2007; Fister, 2009; Vondracek, 2007) they have not noted that students draw energy and inspiration from the atmosphere itself.

## Sheltering and the creation of territories

Part of the research included making floor plans of each site, showing how regularly students used each of the tables. By studying the distribution of students at each site, it was clear that sheltered locations were popular. These are locations "*with architectural elements that offer a physical structure on at least one side*" (Waxman, 2006, p. 45). For example, in Coffee Revolution, individuals tended to sit in positions against the walls and windows to have personal space between themselves and others. Brown and O'Hara (2003) found that commuters on trains used props such as bags and coats to create boundaries between themselves and others, whilst Cox (2011) highlighted that students similarly liked to be able to spread their belongings out in lecture theatres so that they had a comfortable amount of personal space.

 In addition to finding sheltered spaces to study it was apparent that students preferred being away from tables which were in spaces close to the regular movement of people. Montgomery (2008) highlighted that how people navigated seminar rooms and museums influenced their perceptions of them. However, there

is very little research about how the regular movement of students across libraries influences students' use of the space.

As well as sheltered locations being important, having furniture which could be reconfigured to suit different study needs was seen as essential. For example, in the Gallery students appreciated being able to easily pull tables and chairs together to accommodate large group sizes. When students were asked what the positives were of studying in informal learning spaces, 'informality' was the second most popular response. This supports literature such as (Bennett, 2006; Bodnar, 2009; Brown and O'Hara, 2003 ; Cox, 2011; Lewis, 2009; Lippincott, 2007; Vondracek, 2007), which highlights that people like to be able to spread their belongings out and reconfigure furniture to suit their needs and feel at ease.

## Technology, a commercial cloud not a reality!

Recent literature such as Bryant et al (2009) and Lippincott (2010) points to a utopian notion in which all students at universities go around with portable, technological devices such as laptops and iPads and are constantly alternating between different virtual communities. However, these findings highlighted that books and paper pads were the most common study aids, with only 13% of students counted across the three sites having laptops, compared to 29% having books. Brown and O'Hara (2003) highlighted how on trains, commuters adapted their activities to do tasks such as reading briefing papers, which was easy to do on the move. The same is the case

with informal learning spaces at the University of Sheffield, with students finding it easier to take a book with them to read over lunchtime rather than their laptop.

This challenges the view held by some librarians that all students want to use modern technological devices because many students still prefer traditional methods of learning such as reading and making notes from textbooks. This finding supports research such as that by Cox (2011) which highlighted that in lectures at the University of Sheffield, taking notes down by hand was still much more common than using electronic devices. Indeed, amongst the current discourse of making libraries into "*one stop shops*" Massis (2010, p. 162), with the latest technological innovations (Lippincott, 2007), it may be important to consider whether many students do not prefer studying in traditional ways. Indeed, when studying some students like to escape technology. Others may not be able to afford the latest mobile gadgets.

## The Model of Zengagement

To highlight how essential it is that librarians consider the background atmosphere more so than other distractions such as technology a new model is proposed. It is called 'The Model of Zengagement', with the 'Zen' meaning that the student is in a relaxed frame of mind for studying, whilst the 'Gagement' describes how students absorb what is going on in the background surroundings, which in turn stimulates their studies.
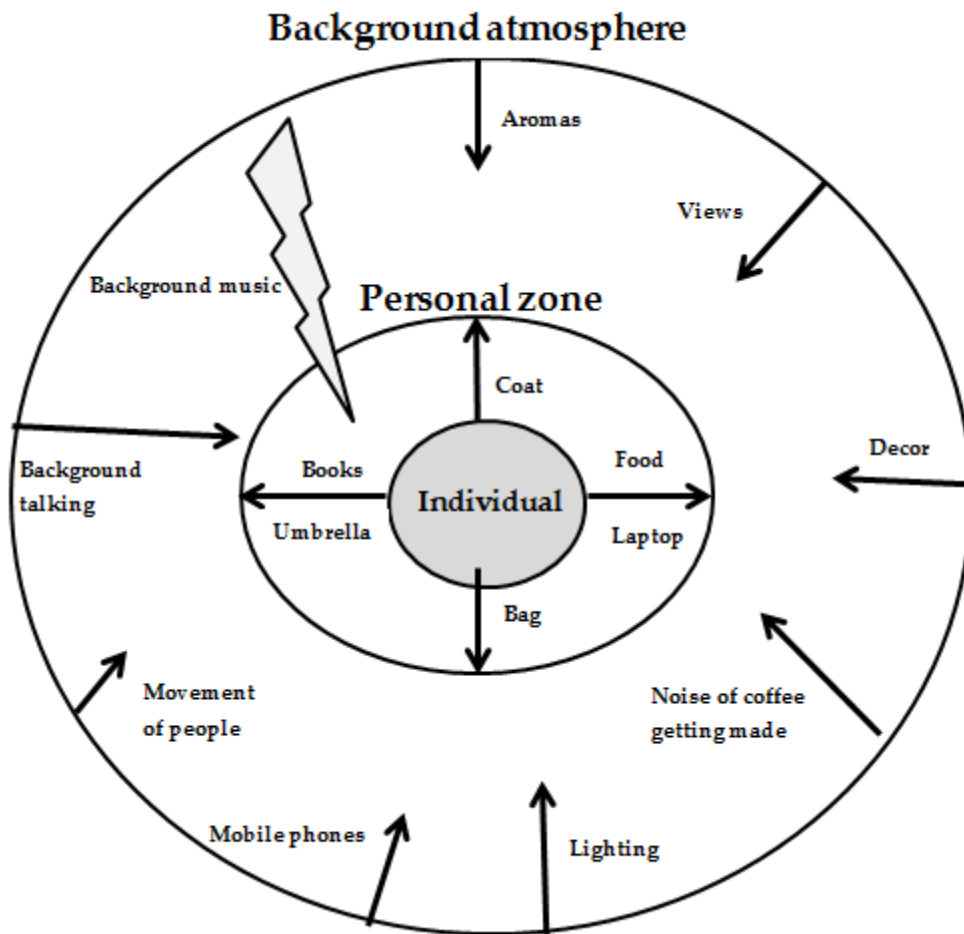
**Figure 10: The Model of Zengagement**

The personal zone is the space which is the students' own territory. The size of this zone can be made larger by students spreading out belongings such as coats and sitting in sheltered locations. The background atmosphere refers to the space outside of a students' personal zone. The different length arrows indicate how students can focus in and out of different stimuli to the degree that is optimum for stimulating their studies. For example, if a student liked the views outside they could draw inspiration from it. If it was the smell of coffee they really liked, they could focus on this more instead.

However, the bolt shows that sometimes stimuli can get out of a students' control, making the atmosphere uncomfortable. Noise, distracting students is an example of this. The extent to which stimuli impact on students' studies varies greatly. Whilst some students find a stimuli engaging, others find the same stimuli overhelming. Thus there is much variation between what atmospheres students work best in.

# Conclusion

The key finding from this study was how important students regarded the background atmosphere in their choice of informal learning space. Many found being in a relaxed atmosphere stimulated them to work productively, whilst others worked best with very little background stimuli. From this the 'Model of Zengagement' was proposed. Another finding was that having access to technological devices was not regarded as important by students as some theorists such as Lippincott (2007) and Martell (2007) have suggested. Many students were content making notes from textbooks, with there being little evidence that students are constantly occupying multiple virtual spaces.

Other findings included evidence of distinct sub groups of students using informal learning spaces. Waxman's (2006) notion of "*campers*" (p. 47) spending hours in one space was confirmed, but there are also 'espressos' who used informal learning spaces for short durations of time. This supports the concept of time – space prisms developed by Hagerstrand (1973) in which people look to fill in gaps between scheduled events. The idea of magnetism proposed by Francisco (2007) was evident

as students were attracted to informal learning spaces where others were doing similar activities to them. Being able to study together collaboratively with friends in an informal setting was an important reason for students using informal learning spaces, which backs research such as that by Lefever and Bashir (2011) and Bickford and Wright (2007).

Research such as Brown and O'Hara (2003) and Waxman (2006) was confirmed with students preferring to sit in sheltered locations. Having the freedom to spread belongings out and reconfigure furniture was also important. Students avoided sitting close to where there was the regular movement of people. Little research has been done about this though apart from Montgomery's (2008) article about how people's perceptions are influenced by how they navigate space.

## Implications for library services

University libraries might wish to pay more attention to the atmosphere the library creates. Many modern libraries have wide open spaces, but it is questionable whether this is optimal to promote study. Whilst libraries regularly have multiple study spaces, more can be done to ensure that students have their own personal space. Creating more original library environments such as having enchanting corners for students to escape to is beneficial. The research suggests that libraries need to make sure they offer spaces for students who enjoy studying in a relaxed atmosphere without any distractions. The fact that paper pads and books were the

most commonly used study accessories shows that students do not always want to use the latest technology.

The 'Model of Zengagement' highlighted that background stimuli can both enhance and inhibit students' study performance. One of the inhibitors is often the movement of students across spaces. Those studying in the Gallery purposely chose tables away from any doors. When developing library environments that should be taken into consideration.

Students enjoy self-governing informal learning spaces themselves without restrictions being imposed. This is why groups of friends often worked collaboratively together in the Gallery. It is suggestive of the idea that students govern spaces themselves in university libraries. Oldenburg and Brissett (1982) highlighted that in 'third places' people intuitively knew how to behave. In the same way if library spaces create the right atmosphere, there would not be the need for surveillance.

Students enjoy being able to fit their visits to informal learning spaces around their own lifestyle. As the results of this study showed, there were both many 'espressos' using spaces for short bursts of time and "campers" Waxman (2006, p. 47) who studied for long durations. Although libraries have introduced ideas for 'espressos' such as short term use computers, more can be done to make libraries homely. TV lounges and games consoles have been introduced in some libraries, but it is still a minority. Also, it is possible that it would be of value that coffee bars are embedded within libraries to recreate that homely feel, rather than being in a separate room.

Furthermore, having kitchen facilities on each floor where students can make their own drinks would go a long way to making students feel at home.

The pressure to use space efficiently may lead to the creation of generic, soulless, open commons spaces without character and fall obsessively into the mythical, technological discourse. It is important that librarians pay attention to the background atmosphere. Every sensual stimulus has an effect on this, not just the furniture and colour schemes. Librarians should see the benefit of avoiding creating soulless, institutionalised academic spaces and instead aspire to make libraries warm, friendly and homely spaces.

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# Appendix

## Informal Learning Spaces Questionnaire

**Hello! I am studying how students' use informal spaces at Sheffield University for my dissertation in Librarianship. I would greatly appreciate it if you could spare a few minutes. Your participation is voluntary and the data collected will be kept anonymous. By completing this questionnaire you are consenting to participate in this study.**

1.) What type of student are you? (please circle)    Undergraduate    Masters    PhD    Not a student

2.) Are you British? (please circle)   Yes    No

3.) Are you currently using this space for your academic studies? (Please circle)  Yes   No

4.) Which of these would you say best describes the function of this space? (please select one)

A space for…individual study    unwinding by myself    group study    socialising    buying food and drink

Other (please specify)...............................................................................................................................................

5.) How regularly do you come to this space?

Everyday    At least twice a week    Once a week    A couple of times a month    Monthly    Rarely

6.) How regularly do you study in this space?

Everyday    At least twice a week    Once a week   A couple of times a month    Monthly    Rarely    Never

7.) How long do your visits to this space tend to be?

Less than half an hour    Less than one hour    one to two hours    two to three hours    three to four hours    over four hours

8.) What would you say the pros and cons of studying in this space are?

| Pros | Cons |
|------|------|
|      |      |

9.) How does using this space tend to make you feel?

<br><br><br><br><br><br>