

Study Room Facilities: Influencing Factors of Studying Continuity

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Abstract: This paper focuses on finding the effect of study rooms on students' studying continuity. Taken place in schools, the research wants to focus on the students as the main body of study. Schools provide students study rooms to promote their study quality. This quality can be reflected on the studying continuity. To discover the facilities and factors in the study rooms that promote students' studying, the research is developed in three aspects. We conducted site analysis, observation, and questionnaire to understand the influence of facility on students' studying. The result aims to find a better way for students to concentrate.

1. Introduction

We choose schools as the urban space to study. The users of the schools include teachers, students, non-teaching staff, and many other people. Considering main activity happening in school is learning, we choose seniors students they are the group that represents this activity the best. From observation, we realize that senior students have many special rights, separated study rooms being one of those. The study room is an example of the school supporting the students' studying, and facilities in the study rooms are different from regular classrooms. In this research, we are looking for the effect of facilities in different schools on students' studying continuity.

2. Aim and Objectives

2.1 Aim

Four schools are examined during the research. This research focuses on the differences of facilities in study rooms and the effects of the study rooms on senior students' studying quality. Studying quality will be researched through site analysis, observation, and questionnaire and reflected on the continuity of students' studying.

2.2 Objectives

Obj 1: To Analyze the Distinction Between Similar Facilities and The Contextual Background.

Since We Are in Different Schools, We Deem That the Schools' Study Room Facilities May Affect Students' Behavior. Aiming To Explore the Distinction Between Facilities in Schools' Study Rooms, We Consider Site Analysis a Significant Approach to Making Assumptions and Investigating Contextual Backgrounds Such as The Initial Purpose of Facilities, And the Influence Facilities Bring.

Obj 2: To Observe the Factors Affecting the Studying Continuity of Seniors in Study Rooms.

We Design an Observation to Compare the Students' Behaviors in Study Rooms and A Questionnaire to Advocate Our Assumptions and Inquiry the Students' Opinions and Thoughts Further.

Obj 3: To Compare and Contrast the Differences in Students' Studying Continuity in Different Study Rooms at Different Schools.

Comparing The Results Collected In Three Approaches, We Will Make Conclusions Based On These Data And Confirm Our Assumptions.

3. Site Analysis

We designed a site analysis to observe the facilities in a different site and explored various facilities' functions and the influence they bring:

3.1 Yantai

The school in Yantai has around 20 people in one study room with a regulation requiring all students to be in the room during study hall. The permission must be obtained before leaving the room and must take a hall pass when outside the study room. Hall passes of different uses are designed, like restroom, nurse, etcetera. Inappropriate use of electronics is prohibited. The arrangement of the room reflects the idea of invisible power: all desks are placed along the walls, so when students are working, their screens will be toward the middle where the supervisor is sitting. This arrangement allows the supervisor to supervise the students while the students may not know whether they are being watched. The study room is open to all students, but they can only use the room during a scheduled study hall block; school only allows juniors and seniors to take study halls; this shows the discrimination toward younger students.

3.2 Changzhou

The Changzhou school has a study room with around 30 students. The students should stay quiet and keep their phones away when they are in the room; they are not allowed to chat with each other neither. The study room in Changzhou also shows the use of invisible power; the idea is shown through the windows beside the corridor. It enables the teachers to supervise students and check if students are using devices properly. The school provides individual desks to students to make sure their study on their own which may be more efficient, and only seniors are allowed to use the study room.

3.3 Guangzhou

The school in Guangzhou has a number of 50 students in one study room. Students must keep quiet in the room or teachers will drive the student who breaks the rule out. Food and drink are not allowed; students cannot lean over the desks nor chatting with others; phones are not allowed in the room. The windows do not have curtains which allows teachers from outside to always supervise students; this also shows the idea of invisible power. A teacher will be sitting in the front of the classroom, and CCTV cameras exist in the room also shows the idea of invisible power.

3.4 Chongqing

The number of students in a study room is around 20 in the school in Chongqing. Students should be quiet in the room and phones are not allowed during study hall. Students cannot chat when studying and they cannot close the door of the study room. The use of other electronic devices should be appropriate and usage of these devices not relating to study is not allowed. Teachers are sitting at the back of the room and every study room is equipped with surveillance cameras. Each grade is in a different study room. During Covid, every student should sit apart from each other to keep social distance.

According to the results in site analysis, we suggest that a silent [1] and private space [2] is more suitable for acquiring and memorizing knowledge, and the use of invisible power can promote students' studying continuity; the use of electronic devices like phones may interrupt study continuity. During our observation, we found that the invisible power exists in all four schools, especially the utilization of surveillance facilities like CCTV, windows beside the corridor, which reflects that invisible power is exerted by four schools. According to Michel Foucault's *Discipline and Punish*, windows placed on

the corridor walls are not for pleasant, but to be “useful”, or in other word, to be watched by [3]. We assume schools consider invisible power as a positive factor on students' continuity. Consequently, schools use more invisible power to make students feel monitored to improve their efficiency and intensity. In addition, we found that the Chinese public school (the school in Guangzhou) has relatively more regulations and invisible power, comparing with three international schools in Yantai, Changzhou, and Chongqing. It is worth mentioning that all schools prohibit the use of phones in the study rooms. We deem that phones will distract senior students' attentions during study. They are more likely to spend more time on social media, games, videos, or entertainment instead of studying when a phone is allowed. Furthermore, all self-study rooms have the regulation of being quiet and no chatting. Therefore, we assumed that a quiet environment could promote students' study continuity in a study room. Students are more likely to get distracted when talking with other students, or when the surrounding is noisy. Three international schools split students into seniors, juniors, and younger students; only graduating students are allowed to use self-study rooms illustrates the invisible power exerted by regulations and discrimination towards the junior students. For instance, the school force senior to study in self-study room and do not allow the younger students to use. The younger students can only study in the library or in other spaces of the school.

4. Questionnaire

We designed a questionnaire to explore the factors affecting the studying continuity of senior students in study rooms.

We composed five different questions with specific purposes:

1. We investigated the age of our targeted group to make sure the samples we collected well represents the senior students. The range of our samples' age is from 16 to 18 years old.
2. We explored the frequency of seniors getting distracted from studying during study hall period, which can help us to know the proportion of students that got interrupted.
3. The factors promoting, and disturbing study continuity are significant as well. Therefore, we designed a multiple-choice question by listing some common factors from our own experience.
4. We asked students about whether the study room can promote their studying continuity based on their own experiences to explore their overall attitudes toward the study room.

From our founding, most senior students (35%) are interrupted once or twice every study hall block. The percentage of people who get disturbed for at least once during study hall is 82.5%. Only a few people can focus on their work during the entire self-study. At least half of the seniors (55%) are distracted by electronic devices and people. 43% of the students are interrupted by the factors like noise, emotion, and tiredness. Music is the most critical factor (70%) which promotes the persistence of students' learning. Quiet space (60%), preferred time of the day (53%) and subjects (40%) are relatively less significant but still important factors encouraging students' continuity. More than half of the students (52.5%) deem that the study room helps them concentrate on their studies.

Based on these results found, we analyzed the data. Optimal combinations for improving indoor conditions in a study room contribute to better education process [4]. A traditional relational database structure was moved to a multi-model database; provide a more detailed analysis about students' study experience [5]. The study room has a positive influence on students' mental state since their overall attitudes toward the study room are positive. However, we also found that most students are likely to get disturbed during their study hall in the self-study rooms, which indicates the positive effect of study rooms might be overrated. What is more, contrary to our expectations, electronic devices are not the only biggest distractions; other interferences are considered vital distractions, including peers, special events etc. Most people think that other students may interfere with their learning rather than promoting it. Furthermore, the students believe that material arrangement can neither help them sustain their study nor interfere it. In addition, referring to the noise factor, we suggest silent space and music can promote students' concentration to some extent; and this assumption is supported by the data. Moreover, the time of day is associated with tiredness and emotion which also influence the students'

studying. In general, we can conclude that the regulation about study hall has an overall positive effect on students' learning.

5. Observation

According to the four forms we have done, we find that in different cities and schools, students' reactions when having self-study have a variety of variations. At the beginning of every self-study time, there is no doubt that most of the students would focus on studying, and this is also the time which most of the students are in a good mood which creates a better atmosphere. We observed and recorded students' activities every five minutes because five minutes is an appropriate interval for the change of students' behaviors. As time passed, students began to focus less and less. As the observation showed, after 20 minutes, many students began to sleep, surfed the internet, chat with a friend, or even wandered around in the classroom. Through the observation, we can imply that with more and more people stopped studying towards the middle of a study hall period. The atmosphere in the room changes, too.

Nowadays, with the development of technology, people have various ways to entertain themselves. So, if a student is not self-disciplined, many outer factors like people, noise, and material arrangement of the room will interfere the student. In all, although schools have provided students with good environments and space, as time passes, students with lower self-control or will of studying stopped focusing. Those students had also disrupted other students who want to study and wanted to make a good use of the self-study room.

Teachers' supervision had a positive effect on studying continuity, when a teacher sat in the room, more students stayed focused. The supervision is to exert the maximum influence over the students with the minimum use of resources, in this case, the teachers [6] according to Wallenstein. However, students' personal attitude on studying is more important. Generally, study continuity is better in the morning; lower continuities in the afternoons and evenings may be caused by tiredness or bad mood. Electronic devices have the biggest impact on students; students who are not focusing typically spend more time once they started watching a video or other distracting factors caused by electronics; peer distraction is also a major cause in lowering students' continuities.

6. Discussion

After collecting all data by using three approaches, we made some comparisons between their results:

Comparing the questionnaire with observation, we conclude study room gives students a positive psychological implication of encouraging continuity. Moreover, during our observation, the material arrangement of the room does not influence students' learning much. We suggest study continuity depends on individuals and their attitude towards the study.

Comparing site analysis with observation, we found that invisible power is limited by factors like different supervisors and students' self-control. The stricter the supervisor is, the more focused students will be.

Comparing site analysis with the questionnaire, we summarize that the study room's design (like regulations) fulfills most of the students' requirements for study, such as quiet space, individual work etc. For the students who are lack self-discipline, schools exert invisible power to encourage their concentration.

Overall, we believe that the seats arrangement doesn't affect students' learning continuity and the seats position in the classroom does not determine the motivation and interest of the students, while Paris Will et al. [7] believe the fact is that factors such as the motivation and interest of studying are the important factors that determine the choice of seat positions and performances. At the same time, we discovered seat position will be combined with other factors to affect student performance, such as the use of laptops. People usually think that the use of laptops will have a greater impact on the students in the back row, but there is a study that implies that this is not true. In a recent study by Wammes [8]

et al., they studied the performances as a function of seat position. Although students sitting at the back of the classroom have higher frequencies of using laptops than students sitting at the front of the classroom, this has no significant effect on academic performance although the students at the back of classroom have lower average academic scores. We also found that the use of computers may also have an impact on the surrounding students, but the conclusions of many other studies are not uniform. Based on what Aguilar-Roca et al. [9] concluded, the uses of laptop computers in class do not affect the performance of surrounding students. However, Fried [10] found that using a laptop computer would distract classmates and Sana et al. [11] found that students who directly face the laptop also get a lower score in the test indicating that the laptop may distract surrounding students' attentions.

7. Conclusion

After completing the research, we looked back to the predictions. We made three predictions: the existence of invisible power promotes senior students' studying continuities; the usage of electronic devices is the main distraction to senior students; the quiet environment can promote senior students' studying continuity. The findings from observation suggest that invisible power impacts continuity, but other factors limit the influence; electronics affect, both positively and negatively, seniors' studying. On the other side, findings from the questionnaire show that electronic devices are one of the main distractions while a quiet environment promotes studying continuity.

These findings are based on the research done according to the project and aim, including site analysis, observation of students' behaviors, and results from the questionnaire. While saying that, the results still have limitations. The limitation to this research includes but not limited to the architectural aspect not fully considered during site analysis. From the findings, a conclusion is drawn such that invisible power and electronics have limited influence on continuity. At the same time, a quiet environment provides students with a better emotional state in studying.

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