**Summative Lab Report Assessment**

**Qualitative Lab Report**

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Abstract

According to precious studies the two main teaching approaches used in higher education have been autonomous and collaborative learning. The aim of this study is to discover what factors contribute to autonomous and collaborative learning in higher education. Through purposive sampling, which included 1:1 semi-structured interview as a technique of data collection, six people from a university in the Northeast of England were recruited to participate in the study. Two themes—Self-directed and Contributing ideas —appeared to be important factors that influence autonomous and collaborative learning which was found using thematic analysis (Braun & Clarke, 2006) across the entire dataset. The findings of this study were examined in relation to previous studies, and they might be applied in the real world to understand the variables that influence autonomous and collaborative learning as well as to enhance our understanding of this important topic.

Introduction

Self-determination theory (Ryan and Deci 2000) is a general explanation of human motivation, personality, and wellbeing. An individual's capacity to make decisions and run their own life is referred to as self-determination. When you are self-determined, you feel more in charge than usual. Additionally, self-determination theory believes that all people, regardless of culture or developmental stage, share some fundamental and universal psychological needs, including the desire for autonomy, competence, and relatedness. These needs must be met for people to function in a healthy, meaningful way. It is essential to have a background understanding on self-determination theory as it helps to understand what factors influence our behavior and decisions. However, the focus of this report will be factors influence autonomous and collaborative learning in higher education

Autonomous learning is known as independent learning it suggests learners to hold the power to manage and control their learning activities. In a recent study, the primary finding of the study was that students felt free to conduct research and complete assignments whenever they preferred without being forced to do so. This resulted in improved autonomous learning and provided students with the opportunity to express their creativity. The student's personal goals and responsibilities will ultimately determine how they choose to work and if it is effective (Eko Aprianto, Oikurema Purwati, Syafi'ul Anam, 2020). Another study revealed that a student's stated need for support had an impact on autonomous learning. The students who were more autonomous motivation and less controlled motivation felt extra need of support. However, this had little effect on the students' academic accomplishments, which were what students valued the most (Baeten, Dochy 2012). The key finding of an online course showed that autonomous learning is pushed and increased more since it doesn’t take place in a traditional classroom. The learner has a perception of their own role since they don’t have a higher member of staff around them when learning, this, therefore, encourages learner centred activities since there's no staff in person, which then provides routine for autonomy. (Mısır, H., Koban Koç, D., & Koç, S.E 2018). However, previous research has demonstrated the encouragement of autonomous learning in students but, there have been no factors or elements looked up on as to why students might prefer independent learning.

A method of teaching and learning called "collaborative learning" involves groups of students working together to solve problems and finish tasks (Laal & Laal, 2012). A study was conducted and the purpose of a study was to look into the processes that occurred when people worked in teams in collaborative learning environments in order to accomplish a common goal. The results suggested that "both interpersonal and socio cognitive processes" must be taken into consideration and that both have important roles. Team learning behaviours were defined as actions that ensure all members of the group are working toward the same objectives and are on the same page. Understanding the impact of social and cognitive aspects can help us choose how and when to use collaborative learning, among other practical and theoretical applications. (Piet Van Den Bossche, Wim H. Gijselaers, Mien Segers, Paul A. Kirschner published October 2006). According to another findings of recent study, collaborative learning can support cognitive learning and creativity. However, organising and executing collaborative learning in their classes is a challenge for lecturers. This, in turn, necessitates the development of practical guidelines for maximising the advantages of collaborative learning for both students and professors and lecturers. (Miranda Suzanna Angelique De Hei, Jan Willem Strijbos, Ellen Sjoer & Wilfried Admiraal). However, as a result of data collection, the study does not provide participants reasonings. By using a qualitative research approach, participants will have the chance to share the elements that are important for supporting their independent and group learning in higher education. Participants can better understand the study's goals by using 1:1 semi-structured interview, and the information gained will be more beneficial in identifying the components that can improve both independent and group learning. The goal of this project is to discover "what elements contribute to autonomous and collaborative learning," and the use of this methodology will support in that goal.

Methods

Research Approach

For this study a qualitative research and a 1:1 semi structured interview was conducted, which lasted for about 8-10 minutes. During the interviews, the participants opinions were collected on Collaborative and Autonomous learning. The method of collection was done through an interview in which the participants views were recorded on a recording device. The collected data was then assessed on the basis of the thematic analysis ( Braun & Clarke 2006 ), to develop a deeper understanding of the data collected.

Participants

The purposive sampling technique was used in which all the participants were selected from a targeted group of students who have completed their higher education. There were 6 participants in total for this study aged between 18-20 in which 5 females and 1 male took part. All the participants are pursuing Psychology in a University in the North-East of England.

Any personal details which are not essential for this research have been agreed to be kept confidential.

Procedure

The interview was conducted in a public setting of a classroom with several other students present. A recording device was placed on a round table where both the participant and interviewer sat. An ethical approval from the research ethics community from the department of health and life science at the university of Northumbria in Newcastle was obtained before the study was started. All the participants were informed on the basics of the study, the purpose of the study and their privacy in regards of this in the form of an information sheet, which they were required to sign as a proof of written consent to the usage of their recorded voices and data collected. The signing of this form commenced the interview where they were all required to answer a total of 10 questions with a few follow up questions. At the end of the interview the participants were provided with a debrief sheet containing contact details in case they want to withdraw their responses.

Materials

The interview was prescheduled (see appendix 1) participants were given questions like, “what motivates you while working or studying alone?”, with follow up questions to better understand the responses with questions like, ‘how’ and ‘why’. Along with this the entire interview was recorded and transcribed to use thematic analysis (Braun & Clarke 2006) on the data set.

Procedure of analysis

The recorded audio of the interview was then transcribed, and the six steps of thematic analysis (Braun & Clarke 2006) were applied to the dataset, after familiarizing with the data the transcriptions were coded, the researchers found patterns and divided them into themes, the themes were then discussed. After this a thematic map was made consisting of 2 sub themes – Self Directed and Contributing Ideas, the 2 themes were defined based on which the report was produced.

Results & Discussion

The aim for the current study was to investigate, what factors contribute to autonomous and collaborative learning in higher education. The analysis of the thematic map dataset shows 2 major factors contributing to autonomous learning and collaborative learning, that were Self Directed and Contributing Ideas.

Fig 1: Thematic map of the factors that contribute to autonomous and collaborative learning.

SELF DIRECTED –

This theme suggests participants opinions on autonomous learning, they believe self-directed learning really helps them to grasp knowledge faster. Participants emphasised on self-study and mind mapping when asked their views on autonomous learning. As stated by the participants they feel more studious while studying in their comfort environment, ac on their own time and pace. Music has been one of the biggest factors in autonomous learning as, the participants find a comfort in music, and it also calms down their thoughts down which helps the participants to concentrate better while enjoying studies.

“I guess music motivates me to get work done as it distracts me from the other surroundings which would stop me from working. I guess music definitely helps to keep my boring work more interesting”. (Participant 1)

“I like to tidy my room and put some music on then make some food and study ”. (Participant 2)

According to the research, teens' performance on reading comprehension tasks significantly improved when music was playing in the background. This result was shown to be more pronounced when Indian classical music was playing, demonstrating the significance and function of culture. Therefore, it is suggested that playing liked, preferred, and culturally contexts music in the background while the task at hand is being performed will improve cognitive performance, especially in a reading comprehension task (Ashmita M. & Elizabeth T. 2020)

Mind mapping is one of the most common techniques used by higher education students, according to the views of the participants using mind maps and flash cards not only helps them to understand the topics well but also helps them with learning and remembering it. The participants also use different types of entertainment as a mode of study like listening to podcasts, watching documentaries or reading articles. Self-directed studying motivates them to focus better without them getting distracted easily it also builds up their confidence.

“I use flashcards for an exam or quizzes, stuff like that. Or sometimes I’d watch a documentary or read something that I'm interested in”. (Participant 1)

“I like, like reading up from a textbook and making notes, and kind of summarizing those notes later so making them smaller and smaller like a flashcards type of thing ”. (Participant 2)

According to the analysis and discussion's findings, mind mapping can be applied as a method to develop metacognitive skills through learning because it has a major impact on the outcomes of a metacognitive skills test, as seen by improved metacognitive skills findings. Based on the importance of mind mapping for the metacognitive skills revealed in this study, mind mapping is applied as a syntax in the education model.( Astriani, D., Susilo, H., Suwono, H., Lukiati, B., & Purnomo, A. R. 2020).

Therefore, it concludes that Self-directed learning can create opportunities to be more independent, as self-directed learning boost up the confidence. Listening to music and techniques of mind mapping inspires the participants towards autonomous learning.

Contributing Ideas –

The theme ‘contributing ideas’ is one of the main factors that participants believe collaboration with other can strengthen their own learning experiences. In the opinion of the participants, everyone collaborating onto a topic can bring up different and unique ideas which can reinforce their work to be exceptional. Participants also believed that working in a group setting opens the opportunity to expand their social circle.

“I mean in a group setting it does helps me better because it makes me feel more confident when I am writing because I am not writing it all by myself and struggling with it, I can actually ask somebody”. (Participant 1)

“Yeah, they can offer ideas which I might not have thought of, and I can offer them ideas which they might have not thought of”. (Participant 2)

Collaborative Learning creates higher level cognitive abilities (Webb, N.M., 1982). Students are dedicated to their studies. The most productive kind of collaboration is between students working together. One student listens while the other partner discusses the research subject when students work in pairs. By putting their ideas down on paper, talking about them, getting instant feedback, and answering inquiries and comments, they both gain valuable problem-solving abilities (Johnson, D.W., 1971; Peterson, P.L. & Swing, S.R., 1985) Group members' high levels of interaction and dependence enhance deep rather than shallow learning (Entwistle, N. & Tait, H., 1993).

As stated by the participants, doing team work also reduces pressure on just one person as the workload can be divided amongst different group members. Participants also feel, for a collaborative work they can distribute the task to other members who are more skilful in a specific job.

“I guess with like stuff like this doing research things it would be harder to do it by yourself and with a group you can like give out the workload”. (Participant 1)

“I think in certain contexts working in a team really helps, like areas you’re not really expert in, people can contribute things I wouldn’t have thought of, um yeah”. (Participant 2)

The final point suggests that the benefits are greatest when there is a close to equitable share of cognitive labour since communicating at a similar frequency was connected with greater team benefits. The majority of remarks that we read from the complete transcripts revealed the identification or position of targets. Thus, if team members were speaking at similar rates, it suggests that they were working at equal levels. It follows that teams with similar efforts were restricted by the additional cognitive demand and communication requirements for one of the participants, whereas pairs of people who put in similar efforts had larger collaborative benefits (Allison A. Brennan & James T. Enns., 2015)

The process of collaboration with others can be beneficial as, people can contribute to a work with various ideas, share and divide the workload as well as team member can help each other out while problem solving becomes easier.

Strengths and Limitations

To begin with, the strength of this study was that the interview was in person and 1:1 which helped us to gain deeper knowledge because, online questionaries can be off topic and basic. Secondly the participants were recently graduated from high school and so they had a better and recent experience of the topic for the study.

However, there were a few limitations to this study as well. The interview was scheduled in a public space therefore the participants could be little conscious while answering to the questions also, the strength of the participants were limited so the conclusion of the study could differ.

Suggestions for further research

For any further studies on this topic, the researchers should conduct the study on participants with different field of occupation, apart from that the study could be conducted in a private setting where the participants could be more vocal and open in regards to their experience and thoughts.

Conclusion

To conclude, the aim of this study was to comprehend the factors that influence autonomous and collaborative learning in higher education. 2 Themes were discovered through this research, Self-directed for Autonomous learning and Contributing ideas for Collaborative learning. This study’s data could also be used to support future research in this area, for instance it can help us to better understand if collaborative or autonomous studies can help school students in academics.