

Perceptions of Home Science Teachers on the Use of Discussion-Based Pedagogy in Online Teaching

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Abstract-

The education system underwent an unprecedented transformation as a result of the COVID-19 pandemic, which hastened the transition to online instruction. This teaching approach became a practical way of ensuring students' continuous access to education. In this regard, improving the quality of the teaching-learning process requires an understanding of how educators view digital pedagogical tools. Discussion-based pedagogy is one such tool that, in spite of the lack of a physical classroom setting, enables students to actively participate, exchange ideas, and gain a deeper understanding. This study explores how home science teachers' perceptions the use of discussion-based pedagogy in online classes. In particular, it seems into (1) how using discussions improves students' critical thinking and comprehension of the material, and (2) what factors affect how effective discussions are in an online teaching learning process. Structured questionnaires and online classroom observations were used to gather data. According to the findings, home science teachers perceive discussion as an effective teaching method that stimulates student engagement, interaction, and the sharing of ideas. However, reliable internet access and the capacity to quickly resolve technical issues are prerequisites for effectiveness of discussion-based pedagogy. The study highlights how essential it is to provide teachers with sufficient support in order to optimally utilise the use of discussion as an interactive tool in online pedagogy.

Keywords: Home science, discussion-based pedagogy, online instruction, teachers' perspectives, and student involvement

Introduction

Around the world, the COVID-19 pandemic has had a significant impact on societies, necessitating a rapid shift to online platforms in a number of sectors, most notably education. To maintain continuation in the teaching and learning processes, educators had to quickly adjust to this sudden change by embracing digital tools and methodologies. This shift presented particular difficulties in the field of home science education, where hands-on learning and interactive discussions are essential. In an effort to capture the lively atmosphere of real classrooms in online classrooms, the teachers needed to explore new ground. The use of discussion-based pedagogy, a way of teaching that encourages critical thinking, cooperative learning, and more participation by students, was essential to this effort. It has been realised that discussion-based pedagogy, which is defined by structured discussions and reflective exchanges that are available has proven successful in encouraging active learning. A study

conducted in Taiwan highlighted the potential of online discussion forums in enhancing teacher professional development and collaborative learning among educators (Chiu & Li, 2011). These results highlight the flexible discussion-oriented educational techniques are in a variety of learning environments, including online settings.

However, a number of variables, such as technological accessibility, digital literacy, and the flexibility of both teachers and students, affect how well this pedagogical approach works in virtual classrooms. It is essential to comprehend how educators view these dynamics because their views may guide the creation of more potent online teaching techniques. The main objective of the research is to take a closer look at the experiences of Home Science teachers, studying their attitudes towards the usage of discussion-based pedagogy in online teaching. The paper is aimed at understanding the gains, difficulties, and influencing factors that are related to the chosen method, and the research tries to provide some insights to the wider discussion on the development of teaching practices in the new age of the digital medium through this approach.

Online Teaching

Ko & Rossen (2004) defined, online teaching as a means of conducting a course partially or entirely through the internet. It is suggested that the teacher follows the following seven principles for online teaching to be successful: (1) enhance student participation, (2) promote student cooperation, (3) encourage active learning, (4) give prompt feedback, (5) emphasize time on task, (5) communicate high expectations, (7) Respect for a variety of abilities and learning styles (Stern, n.d). Online learning refers to the new format of learning delivery that allows technological tools such as computers and the internet to bridge the transfer of learning materials (Carliner, 2004). Some of the researches reveal that students in online classes report that they (1) have greater control over their learning (Sloboda, 2005), (2) experience high levels of interactivity with other students, and (3) can construct new knowledge (Eastmond, 1998).

Discussion-based pedagogy

Discussion-based pedagogy has emerged as a pivotal instructional strategy in online education, particularly in disciplines like Home Science that emphasize interactive and applied learning. This approach fosters critical thinking, collaborative learning, and deeper engagement among students, even in virtual environments. The integration of online discussions facilitates both synchronous and asynchronous interactions, allowing students to articulate their thoughts, reflect on diverse perspectives, and construct knowledge collectively. Such platforms not only mirror the dynamics of face-to-face classrooms but also offer unique advantages, including flexibility and the opportunity for more thoughtful, in-depth exchanges. Research data shows that well-organized online discussions are very effective and bring a lot to the table in learning. Take the example of an experiment carried out in a mix of embryology course that has shown that student-teacher led online discussions had positive effect on students' academic achievement, particularly the tasks relying on the use of cognitive skills (Liu et al., 2022). Additionally, inquiry done on dental education has elucidated that students who actively

participated in online discussions and received teacher's help were really the people who had their critical thinking skills and engagement levels significantly improved (Kim et al., 2022).

These findings highlight the importance of intentional design and facilitation in online discussions. Educators play a crucial role in scaffolding discussions, posing thought-provoking questions, and fostering an inclusive environment that encourages all students to contribute meaningfully. In the context of Home Science education, leveraging discussion-based pedagogy in online settings can bridge the gap between theoretical concepts and practical applications, thereby enriching the overall learning experience.

Research Questions-

This study focussed on exploring the perceptions of teachers on the use of online discussion for their teaching-learning process. By understanding this issue, this study led to a basic consideration for teachers in adopting online discussions in their online classroom teaching. The research questions which were administered in this study-

Why do Home Science teachers consider discussion-based pedagogy as an essential component of online teaching?

How do Home Science teachers plan and facilitate effective online discussions during online teaching?

What are the key factors influencing the effectiveness of discussion-based pedagogy in online Home Science classes?

In what ways does the use of online discussions promote students' critical thinking and conceptual understanding in Home Science subjects?

The research questions offer a precise framework for investigating how home science teachers view discussion-based pedagogy in online classrooms. Participants views will support the identification of important elements, difficulties, and adjustment in curriculum transactions to enhance critical thinking and student engagement during online teaching learning process. Deeper understanding in the delivery of useful, skill-based subjects like Home Science during online teaching will be guided by this systematic study.

Methodology-

In this study, the researcher explored the perceptions of schoolteachers about the use of online discussions. It's a qualitative study in which a structured questionnaire based on the above-mentioned research questions was employed for collecting data to be the procedure for conducting this research. For data collection questionnaires and observation of online classes were done to study the perceptions of the teachers about the use of discussion as a pedagogical tool. According to Best& Kahn (1993), a questionnaire administered personally to groups of individuals has many advantages. The person administering the instruments has an opportunity to establish rapport, explain the purpose of the study, and explain the meaning of items that may not be clear. The researcher carefully planned the questionnaire to obtain appropriate responses from the schoolteachers. The questionnaire contained open-ended questions. Open-ended questions produce unexpected results, which make the research more original and

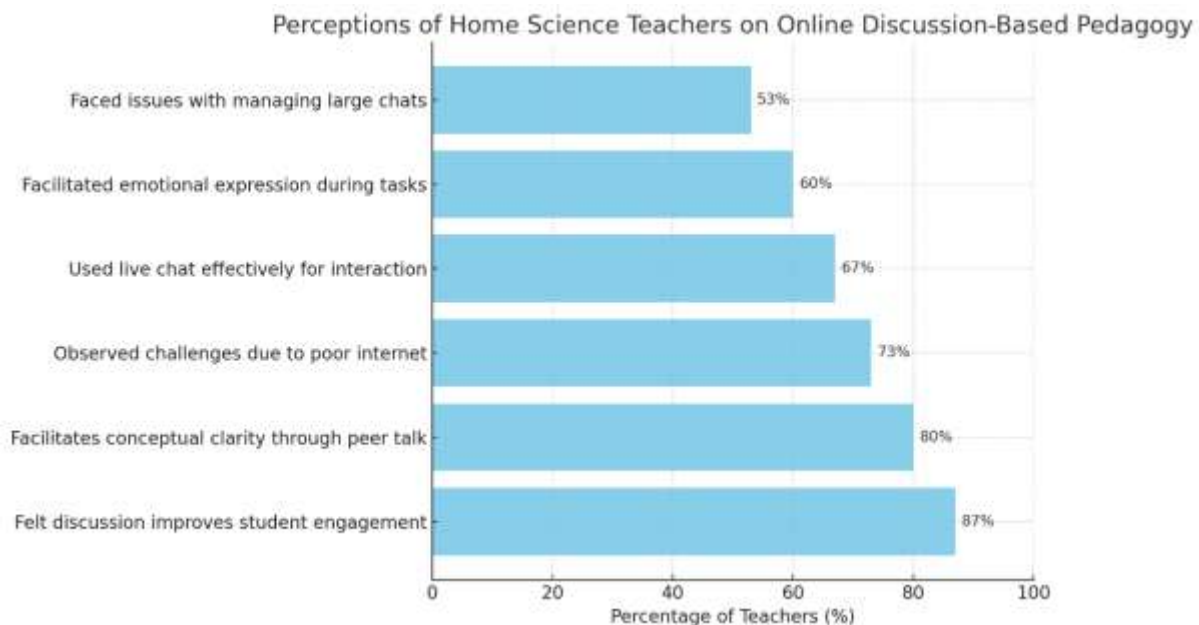
valuable. The questionnaire was carefully planned to obtain responses via mail. When the questionnaire is used as a tool, most of the time, respondents tend to reply in a socially desirable manner i.e., they may not express based on their beliefs only or disclose their actual classroom practices. However, in actual classroom practice, their inherent behavior may get reflected through the kind of approaches used by them as well as the interaction that they have with the students. Therefore, online classroom observation was also done of each participant teacher. The research that are qualitative in nature tends to employ purposive sampling to meet its goal of inquiry (Hamied, 2017). Thus, purposive sampling was done from the teachers who use discussion in their online teaching-learning process during the time of data collection also including reasons for teachers' participation and willingness. 15 teachers were selected for the data collection through structured questionnaire from the elementary classes, 5 teachers each from class-VI, VII & VIII. Data were collected through virtual classroom observations and open-ended questionnaires. The researchers did one virtual/online classroom observation of each participant's teachers, therefore a total of 06 online classes were observed.

Analysis of Data-

Data were analysed using grounded theory and various themes were identified which were expressed by the participants in their questionnaires and also triangulated with the observations of online classes of the participant teachers. The grounded theory method offers a flexible set of inductive strategies for collecting and analysing the qualitative data. The data was analysed thematically using a method that included familiarising the data, coding, producing ideas, connecting themes, and writing them up. Thematic analysis is done to identify, evaluate, and make a theme expressed by participants (Galloway & Jenkins, 2005). The themes and codes evolved after using data from both tools i.e., online classroom observation and the responses from the questionnaire. Various categories that had evolved concerning importance, effectiveness, planning, students' engagement, thinking challenges, etc.

Findings-

One of the areas explored in this study is the opinions of Home Science teachers about the use of discussion-based learning strategies in the virtual classroom. The researchers gathered qualitative data via the participant observation approach and conducted interviews with the teachers one by one. The majority of the teachers (i.e. 87 %) confirmed that such kinds of discussions are very useful not only for their learners' engagement and understanding of a topic (both practical and conceptual levels). The survey conducted among the teachers also stresses the point in feedback that instructors made, students benefited by getting questions answered, more concept explanations, and real-time interactions among others which together resulted in a student-centered learning environment.



One teacher explained, “During discussions, student-teacher and student-student interactions help in constructing concepts; sometimes misunderstandings related to the topic also get reflected, which we (teachers) can then address.” Another added, “Discussion allows us to involve students in the teaching-learning process and makes them feel comfortable once they start participating.”

Teachers mainly worked as enablers, allowing students to conduct the conversation and critical thinking. The discovery was that teachers tended to be start of participation by asking specific students to answer via live chat or verbal prompts and these strategies kept students engaged. The method actually reflects the results of the study of Macknight (2000, as cited in Rinekso & Muslim, 2020) in which he argued that live conversations enable students to express deep understanding and to create new knowledge. 67% teachers believed that online or live chats or discussion were effective for curriculum transaction.

Furthermore, discussion platforms fostered collaboration in tasks and group activities. Students were more motivated and involved in certain lessons because they were able to discuss assignments and negotiate responsibilities in real time. This is consistent with the findings of Tuan (2011), who discovered that task negotiation improves student-lecturer rapport and achievement. In the same way, online discussions enhance student collaboration in task completion, according to Omar et al. (2012).

It's significant to note that approximately 73% of teachers mentioned technological difficulties, which are prevalent in developing nations and include slow internet connectivity, delayed responses, and system breakdowns. These restrictions frequently disrupted the conversation and reduced involvement. Jose and Abidin (2016, as cited in Rinekso & Muslim, 2020) also discovered that technical issues and slow internet made it difficult to participate effectively in online learning environments.

Regardless these obstacles, 60 % of teachers saw online discussions as an effective teaching tool that promoted social and emotional bonds between students and between students and teachers in addition to academic engagement. Synchronous discussions also offer crucial social support in online learning, as noted by Hrastinski (2008). Recent research supports this

conclusion by emphasising that, when properly designed, online discussion forums foster peer collaboration and critical thinking (Ramadani & Leka, 2021; Gaur et al., 2022).

Conclusion-

This research focuses on views of Home Science teachers on the efficacy of discussion-based pedagogy in online mode of teaching. Results indicate that the majority of teachers perceived online discussion as a powerful pedagogical tool that has contributed to the quality of engagement, clarity of concepts, and activeness of students -- quite critical for a subject like Home Science which is combination of practical skills and theoretical knowledge. Teachers reported that discussion allowed students to express their point of view, query, and clarify doubts, creating a supportive and interactive atmosphere.

But the research also highlights some lingering challenges, including unreliable internet connection, overload of messages in live chats and occasional confusion over the purpose of the discussion. These technical and communication challenges interrupted the learning dialogue and, in some instances, even prevented the learning objectives from being met. As Richardson (2007) pointed out, and Macknight reiterated (2000, as cited in Rineksa & Muslim, 2020), meaningful online discussions require well-structured facilitation and sound technology infrastructure to foster students' cognitive and communicative growth.

It is important to address infrastructure constraints, encourage scaffolding strategies, and give teachers specialised training on virtual discussion moderating in order to promote the use of discussion-based pedagogy in home science. During online discussion, poor internet connection, a lot of piled-up chats, and misunderstanding of the objectives or the question asked become obstacles.

But still with the help of discussion. This study confirms that by promoting critical thinking, teamwork, and emotional expression, online discussions can significantly enhance Home Science teaching when they are skilfully led. Teachers can design dynamic online learning environments that foster academic development and critical life skills by incorporating discussion-based pedagogy.

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