

Investigating Students' Challenges and Adaptive Strategies in Scientific Research During Remote Learning

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Abstract

The COVID-19 outbreak has brought an immense impact on education leading to the implementation of remote learning in which learners are studying at home in order to regulate the spread of the virus. This has caused dire effects on students' experiences in conducting scientific research. Thus, this study was conducted to investigate the challenges and adaptive strategies of students in conducting scientific research in remote learning. A narrative inquiry research design was used. Five participants were selected from Grade 10 learners at a public junior science high school in the Division of San Pablo City through convenience sampling to gather their significant stories and experiences. A semi-structured interview guide was crafted and underwent expert validation. After securing consent forms from the participants, in-depth interviews were conducted via videoconferencing applications. Transcripts were prepared. Systematic processes of coding, categorizing, and thematizing were conducted to interpret the data. Results uncovered that students had difficulty pursuing research activities due to the unavailability of equipment and facilities. However, they tended to be practical and contextual through using local materials available at home and maximizing online resources. Doing home-experiments may expose them to possible danger but they ensured precautionary measures through proactive equipment and proper guidance. Communication among peers may be impeded but students found ways to keep its lines open. Slow progress in research tasks was evident due to limitations, however, through time management and clear goals, challenges were lessened. They felt unmotivated but they improved themselves by considering feedback from others. A lot of challenges were encountered in doing scientific research since the implementation of remote learning during the pandemic offers a new learning experience, but students were able to do adaptive strategies to reduce such challenges. Enrichment and intervention programs may be provided to still ensure meaningful experiences of students in doing scientific research even during remote learning. A plan of action is proposed based on the significant findings in order to help the school in enhancing the conduct of scientific research, thus, minimizing the challenges and creating more opportunities.

Keywords: Narrative inquiry research, challenges, adaptive strategies, scientific research, remote learning, COVID-19 pandemic, action plan