Reflection Report of conducting the research that includes the following:

· Assess the effectiveness of the application of the research methods on meeting the research aims.

Quantitative methods that focus on data and numerical statistics have been applied to identify patterns and generalize results to a large group of people and are suitable for analyzing big data that can predict and generalize results to extract meaningful insights and distribute them to as many people as possible, obtain them quickly, and analyze them using appropriate data analysis software.

The reason for choosing quantitative methods is because we want to analyze the big data that helped the main objective of this research, which is to measure the size of the problem and its effects on the environment and to find the best ways to reduce the risks of lithium-ion batteries through recycling processes in order to reduce damage to the environment.

· Discuss alternative research methodologies and what was the experience gained by you.

Qualitative research methods that focus on understanding past experiences and qualitative interpretations of individuals or groups. It is used to collect descriptive data such as interviews, observations, and open-ended surveys. It provides in-depth insights about exploring new topics, allowing for greater understanding and unexpected results. In terms of experience, this is good because the person needs to develop himself in all fields, and thus the person does not face any difficulty while doing other research without the need for observers to give notes. This is a new and more complex experience because it requires general and comprehensive knowledge on new topics.

· Based on the lessons learnt, suggest future improvements, and research consideration and then show how you recommend these actions based on your personal reflection.

We must know that the subject of lithium-ion batteries is a long subject and requires many years to delve into the most complex and sensitive topics such as the nature of the work of batteries. Perhaps we should have conducted some interviews with some scientists and engineers who work in the field of recycling and explain each process and what we extract from materials by this method and what it is. The most successful operations and what percentage of the materials are extracted. Also, if we go to the recycling plants and see the operations, it can be useful in proposing new solutions that support the subject of research more.