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Learn from the Mistake and Gain by Experience

Space exploration recently has developed to certain level. In order to figure out the secrets from outer space, scientists have invested plenty of time and money to seek the way out for human beings. Although the scientists have a great process, the cost is too high that people pay more than what they thought. Challenger shuttle and Columbia shuttle supposed to bring people to the new generation. Yet, both of them crashed because of the technical issue, moreover, the flawed decision-process. We can learn from the mistakes in the cases of Challenger and Columbia, trying not to let the situation happen again.

Based on Gitlin (2019), In 1986, Challenger became a fireball after launch and seven team members were killed including a teacher because of the O-ring issue. After eighteen years later, Columbia shuttle also crashed when they tried to re-enter the Earth's atmosphere, it crashed because of a hole at left wing of the shuttle. However, the technical issue is only part of the reason, the conversation between engineer and management has more impact on disasters. According to Forrest, before Challenger launched, the engineers of Thiokol, which is the company that helps to design the shuttle components, had found the problem of O-ring and reported it to their management. Yet, this warning was not passed to the final decision-maker. Just like the case of Columbia, the flawed decision-process has become a part of NASA. In my personal perspective, if they can work harder on information transparency and admit the mistake, those crews might still alive and shared the space experience with us.

Information transparency is significant that could help solve the problem more efficiently. For example, running a company, when an executive of the company needs to make the important decision, this executive has to know everything about the background before do it. If someone at the lower level did not report the detail to management only because the information seems no harmful, this action might cost high price. In Challenger case, the level 3

management did not report the O-ring problem to the upper level management, because they wanted to launch the shuttle on time and they chose to treat the problem did not exist. This action took all crews' life. Take me as another example, when I used to work with a team project, our team did not accomplish the goal that company set for our team because one of the team members did not make well transit of information. As a result, it costed company had to pay more than three million dollars. Therefore, information transparency does not only help teamwork efficiently but also preventing the extra cost.

Mistake is a group of backstage driving force for people move forward, and admitting the mistake is more important than the other matter, especially in science realm. For instance, my major is material engineering, I usually struggled with solving the equation because I refused to recognize my solution was incorrect. If I did, that means I have to start it again and spending more time. However, I might not solve the problem if I insist that I am doing correctly. The situation I have met is similar to Challenger case, which is delaying the launch time if the management admit the mistake. One of tiny mistakes could lead a catastrophe. For example, the O-ring of Challenger case. Based on the NSPE, which is National Society of Professional Engineers, the code of ethics for engineers indicated that "Engineers shall advise their clients or employers when they believe a project will not be successful" (NSPE, 2019) and "Engineers shall acknowledge their errors and shall not distort or alter the facts" (NSPE, 2019). Comparing the code of ethics with both Challenger and Columbia cases, you can easy identify that those engineers and management did not follow the code. To be more specific, both cases is worth to be the textbook that help the engineers in the future would understand why does the code of ethics is important to be followed.

To recap, people could stop the problem before it came true. In the cases of Challenger and Columbia disasters, human beings had already paid the price for it. Therefore, we need to prevent the same situation happen again. Building a working atmosphere that information could be seen by every co-worker is significant to help decision-makers go through details. Moreover, although admitting the mistake is hard to do, it still needs to be done. Because any flaw could contribute to disaster. Most importantly, learning from the experience might be the best approach to support people make decisions.

References

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