

MISTAKES: PREVENT OR PREPARE?

Meera Rada Krishnan

*Pre-university Department, Sunway College Johor Bahru
No. 3, Jalan Austin Heights Utama, Taman Mount Austin,
81100 Johor Bahru, Johor , Malaysia.*

Email: meerak@sunway.edu.my

Tel: +6 07 359 6880, Fax: +6 07 359 6881

Abstract

The heart of a dynamic and holistic learning culture is fuelled primarily by innovation in teaching, making learning a voyage of discovery for the learner and the educator. However, it is undeniable that in our current education environment, there is an increasing focus on quality control, performance indicators and competitiveness, resulting in innovation being stifled out of fear of making mistakes impacting performance and perception (Zimmermann, 2011). Learning in order to gain knowledge holds the key to understanding. Paradoxically, unlearning allows new learning to take hold and inadvertently broadens students' application skills of prior knowledge (Lee, 2002). The objective of this study is to evaluate the impact of allowing students to learn constructively from their mistakes on enhancing students' self- confidence and ultimately inspiring them to become more daring and critical thinkers. A study was conducted on 42 pre-university level students to assess their improvement in terms of response time and correct answers when given the opportunity to use common mistakes as a learning tool. Preliminary analysis of the results show almost 86% of students show considerable improvement in response time while 81% demonstrated better understanding of key concepts. This indicated that students who were allowed to prepare themselves using mistakes clearly were able to better apply their conceptual knowledge at a substantially faster rate, compared to those who were constrained by the fear of making mistakes.

Keywords: Unlearning, mistakes, efficient teachers

1.0 INTRODUCTION

Over the years there has been an explicit shift in the goals of teaching from molding students' knowledge based on purely theoretical facts to focusing on the development of deeper understandings of major concepts. Although this transition to teaching towards deep conceptual understanding sounds deceptively simple, it presents a host of significant challenges (Tanner, 2012). According to Hildebrand (1971) who developed a scheme on methods followed by effective teachers which was later modified by a team of researchers from Stanford University, one of the potent things done by effective teachers is to make material memorable and not just understandable. This included providing constructive feedback to students who

make mistakes and allowing them to develop alternative answers to their 'wrong' answers rather than merely providing the correct answer. Undeniably, students also learn much more effectively with the proper feedback on why the errors were most likely made, which will assist them in developing better critical thinking skills as well as educate them on not making those errors again. Learning is accelerated by 'doing', however, by not understanding the processes leading to the errors being made, students will merely be repeating wrong processes in alternative manners (Van Houten, 1984).

1.1 Understanding versus Knowing

Knowledge is an important factor in learning. However, sometimes, we must allow mistakes or rather student's error in conceptualizing their knowledge on a subject to take place in order to allow understanding and newer learning to commence (Lee, V. 2002). Due to the importance of assessments in education today, there is rarely much emphasis on whether students truly understand a concept or just know what they are taught about it. Students are so focused on marks as a validation of 'knowing' their subject matter, that they neglect conceptual understanding. This in turn considerably impairs their ability to 'think out of the box' and apply knowledge in the correct context. Alarmingly, the negative consequences of a mistake are further compounded to disastrous proportions by attempts to cover up the mistake, rather than facing and learning from it (Berman, 2006).

2.0 METHOD

Forty-two students from the Cambridge GCE A-Level and Monash University Foundation Year programs of Sunway College Johor Bahru were given a set of questions comprising of conceptual and application based questions. The time taken for them to complete the questions was noted and their answers were checked. Students were then given another opportunity to identify their errors and do 'corrections'. Partial credit was given to those who correctly identified their mistake and rectified it based on their understanding.

3.0 RESULTS

Over time, the response time and number of mistakes lessened as students became more confident in giving alternative answers which were based on their application skills rather than purely theoretical knowledge from the textbook. 86% of the students studied showed improvement in their speed of completing questions for the subsequent test while 81% of them had improved in terms of number of correct responses given.

4.0 DISCUSSION & CONCLUSION

This study showed that making mistakes is a crucial element in increasing students' self-confidence to become better critical thinkers. Students are better prepared and educators can also strategize better to fill in learning gaps (Jackson, 2013). Learning and understanding can therefore be encouraged if students feel comfortable enough in their classroom to make mistakes. Innovation is no longer stifled, as students stop covering up their mistakes and instead evolve to attempt the question from a different perspective (Berman, 2006). Once educators are able to accept mistakes as a part of the learning process (Dhaugaard, 2013), the transition of students into becoming more adaptable learners will be improved, and they will be ready to explore the various application possibilities a subject offers.

REFERENCES

- Berman, W. (2006). When will they ever learn? Learning and teaching from mistakes in the clinical context. *Clinical Law review*, 13, 115-141.
- Dhaugaard. (2013). Mistakes: Why making them is crucial for learning-Part 2. Retrieved from <http://www.mulberry.org/mistakes-why-making-them-is-crucial-for-learning-part-2/>
- Guskey, T. (2003). How classroom assessments improve learning. *Educational Leadership*, 60, 6-11.
- Hildebrand, M. (1971). Evaluating University Teaching. Retrieved from <https://teachingcommons.stanford.edu/resources/teaching/planning-your-approach/characteristics-effective-teachers>
- Jackson, K (2013). Learning from Mistakes: A Different Approach to Partial Credit. Retrieved from <http://www.facultyfocus.com/articles/educational-assessment/learning-from-mistakes-a-different-approach-to-partial-credit/>
- Tanner, K. (2012). Approaches to biology teaching and learning: understanding the wrong answers-teaching toward conceptual change. *Cell Biology Education*, 4, 112-117.
- Van Houten. (1984). *What to Do When Students Make Mistakes*. Retrieved from http://wps.prenhall.com/wps/media/objects/2357/2414567/Volume_medialib/Teaching/tl4b.pdf
- Zimmermann, S. (2011). How to make better mistakes? Retrieved from <http://www.srhe.ac.uk/conference2013/abstracts/0246.pdf>