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# Psychological safety and Safety-II paradigm for faculty development

Ikuo Shimizu[1], Shuh Shing Lee[2], Ardi Findyartini[3], Kiyoshi Shikino[4], Yoshikazu Asada[5] & Hiroshi Nishigori[6]

*[1]Center for Medical Education and Clinical Training, Shinshu University Hospital, Matsumoto, Japan; [2]Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore, Singapore; [3]Department of Medical Education & Medical Education Center-Indonesia Medical Education & Research Institute, Faculty of Medicine Universitas Indonesia; [4]Department of General Medicine, Chiba University Hospital, Chiba, Japan; [5]Center for Information, Jichi Medical University, Shimotsuke, Japan; [6]Center for Medical Education, Nagoya University, Nagoya, Japan*

## I. INTRODUCTION

After the "To err is human" report in 1999, health care systems have become aware of the serious consequences of failures in health care and have sought to reduce them by enhancing patient safety education. The current medical educators consider that errors are inevitable in clinical practice and think of learning from these errors to improve the quality of the practice and maintain the safety of health care services. This effort on quality improvement and patient safety is now regarded as part of patient safety education. One example is the Morbidity and Mortality conference, a continuous professional development opportunity that had sprung from the efforts of learners to improve practice through the examination of medical errors and unfavourable outcomes. Openness to discussion and study of errors, with a realisation that “errors must not be accepted as a person’s fault”, is central to their message.

To err is human, as is the educators. Educators plan and implement various educational practices, but they sometimes fail to achieve the expected outcomes. We educators sometimes find that our educational practices fail to deliver the intended results or have unexpected adverse outcomes, and we consider such outcomes to be failures. Therefore, it is crucial for faculty to acknowledge the failure and try to make further improvements. In addition to educators’ reflections, they are involved in an institutional opportunity to reflect on practices as a form of faculty development. Faculty development includes initiatives designed to improve the performance of faculty members in teaching, research and administration. However, failures in educational practices are often difficult to be recognised and disclosed to colleagues and learners. Admitting and revealing failure is often difficult for clinicians, and it is no different for educational practitioners. Such educators can be called "problem" educators, just as learners who have difficulty improving their competence appropriately can be called "problem" learners. (Steinert, 2013). Thus, there is a scarce opportunity for educators to recognise and share their failed experiences. Such an attitude of neglect will have a negative impact not only on the quality of educational practices but also on the student-faculty relationship in the long run. It is nothing but a tragedy in medical education to allow faculty to become "problem" educators.

Therefore, the present article states theoretical background to understand how to learn from failure, especially the obstacles for educators, and propose a framework for taking hints from the recent patient safety education.


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## II. WHY TRADITIONAL SAFETY PARADIGM DOES NOT WORK FOR REFLECTION

Reflecting on experience is crucial for all educators because it enhances learning from practice. When they reflect on unsuccessful educational practices, educators recognise and analyse what they actually did, what happened during or after their practices, and how to improve their practices in the future.

However, learning through self-reflection requires learning strategies, motivation, and awareness of failure (metacognition). While faculty development can provide the strategies, it becomes an environment without motivation and awareness of failure if it lacks psychological safety. Motivation is required for connecting learning with real-life experiences. Educators can facilitate effective self-regulation by thinking critically about their practice and providing attributional reflection (Ryan & Deci, 2000). In particular, extrinsic motivation does not lead to self-reflection; intrinsic motivation is a necessary condition. Even though faculty development provides extrinsic opportunities, it is difficult for "problem" educators without intrinsic motivation to sufficiently reflect on their failures.

Also, there are concerns about whether the psychological safety of educators is ensured when they are asked to improve their educational practices. Firstly, it is burdensome for participants to accept negative results about their practices. If such an evaluation process does not ensure psychological safety, required for self-directed learning (Edmondson, 2014), it will be difficult for the participants to improve their practices. Psychological evidence also shows that people who have fewer teaching competencies tend to overestimate their skills, which might be another risk to hinder the attitude to reflect educational practices. Secondly, a concern about psychological safety lies that some "problem" educators are not even aware of their failures. This phenomenon does not happen in "problem" learners, especially in undergraduate education. While learners often realise they have a problem through some form of summative assessment, educators need to engage in reflection themselves. However, an environment with psychological safety can promote proactive behaviours like self-reflection (Lin, 2007).

## III. USE OF SAFETY-II PARADIGM FOR EDUCATORS" PSYCHOLOGICAL SAFETY

In order to overcome these obstacles against the suitable faculty development environment to learn from the failed educational practices, the authors consider psychological safety and suggest shifting our perspective of failure by drawing on the quality improvement strategies. Defining an ideal practice as successful and others that are not (i.e. failures) is derived from the traditional safety management paradigm called Safety-I (Hollnagel, 2014). In contrast to the traditional paradigm, the use of the new paradigm has recently been proposed and become prominent. This paradigm (Safety-II) presupposes that there will always be a gap between the results intended by the practitioners and the actual results. Deviation from the plan itself is not considered a failure. Instead, we can consider such gaps as adaptations and analyse why they occurred and how they worked. The analysis will bring about continuous improvement in a more constructive way.

Safety-II paradigm can provide educators with a new insight that an unexpected result of educational practices can be recognised as a more neutral form rather than "failure". This perspective would help ensure psychological safety and make it easier to bring about self-directed learning. Also, this paradigm can provide a new perspective on implementing educational theories or methods in the context of health professions education. Educators should always pay attention to gaps between what we anticipate and what actually happens; it is essential to establish a causal relationship by reflecting on such gaps.

We keep two things in mind for reflecting on the practices according to the Safety-II paradigm. First, we should describe the outcome of the practice objectively as an actual result rather than a failure. This perspective brings to faculty development the results of education that did not work (i.e., failures) and the unexpectedly good accomplishments. As a result, it will help focus on the original outcome of education and promote self-reflection. Second, the results should be contrasted with expected results at a glance. Then we can discuss the causes lying between expected results and actual results and what to be improved. Adjustments are made to achieve the desired outcome under expected and unexpected conditions. Safety-II approach might significantly contribute to the evaluation of the practice, by considering unexpected outcomes rather than only failures. Therefore, analysing educational programs from a Safety-II-based perspective will make it easier to find the adjustments that were actually made and enable educators to perform resiliently. It would be not easy to achieve by simply pointing out deviations from ideal practice based on Safety-I. This perspective will allow educators to become more aware of resilience in their educational practices. Furthermore, as educators discover the gaps between planned and actual results from Safety-II, they will be motivated to compare them, thus leading to a critical analysis and continuous improvement of their educational practices.


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## IV. CONCLUSION

The Safety-II paradigm has the potential to move us away from simply judging failed practices, analysing them from a more constructive perspective, and helping us acquire pragmatic improvements. Then it can help both learners and educators better cope with the complexity of medical education. Furthermore, we can expect to obtain the same outcome as the continuous improvement process; we believe this suggestion will help make our reflection valid and inspire us to professional development. Therefore, it would be further highlighted as a seed for future analytical strategies because it has potential value in the field.

## Notes on Contributors

Ikuo Shimizu reviewed literature and took the lead in writing and editing the manuscript.

Shuh Shing Lee contributed to the theoretical ideas for this manuscript.

Ardi Findyartini contributed to the theoretical ideas for this manuscript.

Kiyoshi Shikino contributed to the concept and aided the development of the manuscript.

Yoshikazu Asada contributed to the concept and aided the development of the manuscript.

Hiroshi Nishigori advised and provided feedback on the manuscript, aided the development of the manuscript.

All authors discussed and contributed to the final manuscript.

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## Declaration of Interest

The authors have no conflict of interest to declare.

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*Ikuo Shimizu
Center for Medical Education and Clinical Training,
Shinshu University Hospital,
3-1-1 Asahi, Matsumoto,
Nagano, 390-8621, Japan
Email: ishimizu@shinshu-u.ac.jp


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