5S Techniques to Optimize Software and Hardware Equipment for Improving Teaching Effectiveness

Yu-Sheng Hsu[1,2], Hsin-Chiu Shih[1*], Wan-Chu Yu[1], Wen-Chin Hsu[1], Chen-Chun Kuo[1,2], Ya-Ling Wang[1,2]

[1]Kaohsiung Medical University Hospital, pharmacy department
[2]Kaohsiung Medical University, school of pharmacy

Abstract

Objective: Combining the PDCA cycle and 5S management methods (sort, strength, shine, standardize, and sustain) to improve the quality of learning and teaching effectiveness.

Methods: We analyzed the current education environment by using the 5Ws model (what, when, where, who, and why) and the strategies developed on the basis of SMART goals (specific, measurable, achievable, relevant, and time-limited). Then, we determined the necessity of optimizing teaching software and hardware equipment. Finally, the 5S management method was applied to formulate countermeasures and intervention.

Results: The tangible effectiveness (quantitative) was obtained from the results of satisfaction questionnaires filled by teaching staff and trainees to evaluate teaching performance. The goal achievement percentage was >100%. The nonformation effects (qualitative) are presented using figures comparing the hardware environment before and after the PDCA cycle. Moreover, we found that the addition of diversified teaching materials could optimize the software device.

Conclusion: Improving teaching hardware and software equipment not only increases the storage space but also promotes the work efficiency of teaching staff; the learning initiative, enthusiasm, and accessibility of teaching materials improve teaching effectiveness.

Keywords: 5S, SMART, learning effectiveness