Chapter 1

Doing and Understanding: Use of Case Studies for Health Informatics Education and Training

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EXECUTIVE SUMMARY

This chapter provides an introduction to the pedagogy of using the case method particularly for instruction in the health informatics context. The thoughts and insights shared in this chapter are inspired by basic theories, published methods, and lessons learned from the authors’ collective experiences. They illustrate the case teaching experience by engaging the reader in an exercise to highlight the basic phases of the case method process and challenges of the process. The case referenced in this exercise (provided in the Appendix to this chapter) has been used on multiple occasions by authors of this chapter, and they draw on their experiences in using this case to illustrate points throughout the exercise. The authors close the chapter by providing the reader with strategies and considerations in using the case method.

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INTRODUCTION

I hear and I forget, I see and I remember, I do and I understand—Confucius (Chinese philosopher and reformer, 551–479 BC).

The effective practice of health informatics requires a systems approach to reach solutions to complex, real-life situations in everyday work. The practice of health informatics is faced with complexities of multijurisdictional, multidisciplinary, multicultural partner-based approaches to problem solving. This practice context can be simulated in the academic setting through the use of case studies.

Case studies provide a learner-centered, interactive and dynamic environment that stimulates class discussion, and they allow participants to think innovatively and collaboratively develop complex solutions within the boundaries of a classroom (Barnes, Christensen, & Hansen, 1994). However, instruction by using case studies also has its challenges related to participant engagement, group dynamics, cultural perspective, case propriety, and ensuring crucial learning messages are effectively articulated. These challenges are not addressed merely by providing cases as a resource. Thus, some guidance is based on past studies of the case method and practical experience is needed.

This chapter will reflect past research involving the case method as well as experiential and reflective health informatics case-study experience. This chapter will hopefully help readers develop a more complete understanding of content related to the health informatics case, but also the case analysis process and mechanics of the case method of instruction.

BACKGROUND: WHAT IS CASE-BASED TEACHING?

Cases are factually based, complex stories written to stimulate classroom discussion, collaborative analysis, and problem solving. Case teaching involves interactive, student-centered exploration of realistic and specific situations with a focus on resolving questions that often have no right answer. Case-based teaching differs from Problem-Based Learning (PBL), which is often used in medical education; PBL has a known answer and the decision pathway to that answer is vital (e.g., specific diagnosis or treatment) (Schneider, 2006).

Case teaching is an effective method for student practice of competencies difficult to teach by using traditional lecture approach. Figure 1 provides a comparison of the case method to the lecture method. Cases complement classroom lectures and allow students to improve mastery of theories and their application, enhance decision-making skills, and improve critical, analytical, and reasoning skills.