

Teaching Philosophy, Shuo Yu

Management information systems (MIS) is a discipline across computer science, business, and management, among others. I develop my three-fold teaching philosophy based on its multidisciplinary nature. First, guide students to understand and master the facts and principles in MIS as building blocks. Second, help students develop critical thinking skills on the facts and principles in MIS, so that they can see the links and differences among them and stand at a higher point to appreciate information systems as part of a business. Third, help students apply the facts and principles in real business contexts to build information systems and achieve specific goals.

Facts and principles are the building blocks for the discipline. One cannot build skyscrapers without bricks. In the MIS discipline, such fundamentals include programming languages, database management systems, computer networks, information system designs, web mining and data mining, etc. Those topics are highly practice-driven. Thus, besides lectures, I also focus on hands-on experience with lab sessions, such as coding, establishing computer networks, performing database queries, etc. Such practice enhances students' understanding on the facts and principles, and also helps identify their questions and confusing points. Individual practice is preferred; group discussions can be supplementary if the practice has a collaborative nature.

Critical thinking is crucial for the MIS discipline from a managerial view. The real world never acts as is written in textbooks. As information systems are used in business contexts, students need to analyze the business as a whole with critical thinking, and identify the role of information technologies. Case studies from Harvard Business Review are helpful to promote critical thinking. Students are given cases and highly engaged in group discussions as well as role playing as different roles, such as CEO, CTO, technician, accountant, customer, etc., and analyzing why a particular information system succeeded/failed. By comparing and contrasting, students are trained to have a holistic view of the various components of information systems, and the role of information systems in a business. Reflective reports are useful tools to assess students' participation in this activity.

Last but not least, the ultimate goal of the MIS program is to apply all the facts, principles, and critical thinking in realistic business contexts. Students form groups to work on projects with local businesses. They visit the firms to identify problems in the business procedures, such as inaccurate accounting and inefficient inventory management, and design information systems to help resolve the issues. They need to provide the design from the back-end database to the front-end web entrance, as well as intermediate interfaces with the other running systems in the business. Business case competitions are held at the end with the business managers as judges. This practice is a comprehensive test on the students' ability on analyzing problems, finding solutions, implementing systems, and presenting results. Students also learn how to work and communicate as a team, which is critical as employees.

To conclude, my teaching philosophy follows a three-step paradigm: facts/principles, critical thinking, and realistic application. I believe that problem-solving is the core of the MIS discipline, and this paradigm fits in our ultimate goal of the MIS program.