

Peer Teaching Evaluation of Dr. Janki Bhimani

Raju Rangaswami

Dear Peer Teaching Evaluation Committee:

I evaluated Prof. Janki Bhimani's fully online CIS 5346 (Storage Systems) course during Fall 2023. Prof. Bhimani provided me with a collection of five videos covering different topics of a single module of her course, and an "Overview" video that introduces the module. She used these videos in her online course as a means of instruction. The videos were screen captures of a slide deck presentation with Prof. Bhimani's embedded video so you could see her speaking and her expressions during the lecture. My observations in this evaluation are based on these videos since there was no in-person component to this course. I summarize the student survey responses towards the end of this report.

This is a graduate level course that is focused on the area of Storage Systems. In the module overview video, Prof. Bhimani provided an introductory overview about a variety of topics relevant to flash-based SSDs ranging from internal device architecture and internal operations to media properties, garbage collection, and wear-leveling requirements. Towards the end of the Overview video, Prof. Bhimani had a TODO discussion which guided students about the tasks they needed to accomplish in the course related to the module which included reading specific material, watching the video lectures, and completing Quiz and Discussion activities. After watching the Overview video, I was well-informed about the module and student tasks.

The individual lecture videos covering each of these areas were well-designed with clear text and graphics in the slide-decks. The slide content was well-prepared and well-organized as well. Prof. Bhimani's voice and enunciation in the lecture videos was clear, her elaboration of concepts was clear, her energy was high throughout, and it was clear that she was not only passionate but also knowledgeable about the subject matter.

While all the video lectures were similar in their quality and clarity of content, I will discuss two of the video lecture that I reviewed in this report to serve as concrete examples of the teaching outcome.

The first video lecture related to the overview of flash-based SSDs which included a comparison with the established hard disk drive technology, the predecessor of SSDs. Prof. Bhimani covered the benefits and the challenges with the newer flash-based SSD technology. Her coverage was comprehensive and balanced in that it gave the students the right lens to understand and evaluate this new storage technology.

Another video lecture about the architecture of flash-based SSDs covered the entire gamut of know-how related to how SSDs are built from low-level physics (electrons/transistors/gates) to high-level computer architecture (chips/controllers). Prof. Bhimani covered these concepts in a progressive manner building

upon previously presented concepts incrementally. The presentation was easy to understand and her live annotations over the slide content helped orient the attention of the student.

In the remaining videos, a common thread that I observed is that Prof. Bhimani does not limit herself to simply presenting the material contained in the slide. She brings perspective from both a technology trajectory standpoint, provides a critical review of the basis for technological evolution, and weaves these into the lecture in a natural manner that enhances the learning quotient for the student.

Finally, comments from the student survey indicated that students thought Prof. Bhimani was “very prepared” and “knows a lot about her ... course material”, and that she “gave detailed lectures which makes learning the content easier”. The comments also point out that Prof. Bhimani “communicates well .. and is helpful”. The ratings from the students ranged from “Excellent” to “Exceptional”.

In summary, I think Prof. Bhimani is a very good teacher. She has an instinct for pedagogy and abundant knowledge of the subject matter. I believe that she will be an asset to the education program of our School.



Raju Rangaswami



Peer Evaluation of Teaching, Spring Semester 2021

Evaluator: Masoud Milani

A handwritten signature in black ink, which appears to read "Masoud Milani", is written over a horizontal line.

I did not have the opportunity to observe Dr. Janki Bhimani in the classroom because this semester she is only teaching fully online courses with no face-to-face components. She provided me with access to four of lecture videos for her data structures course – one video covered sorting techniques and three videos together made up a module on recursion and backtracking. The following is my review of those lecture videos and summary of an online student survey that was conducted by the school administration.

The lecture on sorting techniques first described selection sort, bubble sort and insertion sort using UNO Cards and then developed step by step algorithm and pseudo code for each method.

The recursion and backtracking module included a short introductory video describing the module's objectives and students' to-do list their reading assignment, a lecture video on recursion that described recursive solutions for factorial and binary search problems and a lecture video on backtracking that developed solution for n-queens problem.

All lectures contained a good mix of examples, algorithms and pseudo codes, as well as discussions of time and space complexities. They were clear, easy to understand and well-organized in terms of presentation, time-management, and the use of the online whiteboard.

12 students participated in the online student survey. In the survey, 5 (41.67%) students ranked Professor Bhimani as an exceptional teacher, 4 (33.33%) students ranked her as an excellent teacher and 3 (25%) students ranked her as a good teacher (on a scale of: Exceptional, Excellent, Good, Fair, Poor). 2 students ranked her in the top 1%, 6 students ranked her in the top 5%, 1 student ranked her in the top 10%, 2 students ranked her in the top 20% and 1 student ranked her in the top 50% of all professors they have had at FIU. Student written comments were overwhelmingly positive and included statements such as: "extremely knowledgeable," "excellent at explaining the theory behind the algorithm in a way students will remember," "the professor clearly understands the material she is teaching," "she wants you to learn and understand the concepts" and "great explanation of concepts." Students generally did not list any deficiencies. 3 students wanted a more detailed introduction to C++ programming language and one student requested additional TA support.

In summary, my observations, as well as students' opinions, confirm that Dr. Bhimani is an outstanding teacher who has clearly mastered the art of teaching.

Self-Teaching Evaluation – COP 3530 Data Structure (Effort Intensive Course)

-Janki Bhimani

Objective –

The study aims to comprehensively assess the learning experience and progress of participants in a C++ programming course across multiple modules. Through a series of inquiries, the survey covers key aspects such as identifying the pillars essential for effective learning, evaluating time management in completing module tasks, gauging confidence in C++ programming skills, and understanding participants' preferences for learning content. Additionally, participants are asked about the challenges they faced in understanding specific topics, their ability to design algorithms, and the time spent on different modules. The survey concludes by exploring the overall impact of the course on participants' learning, the inclusivity of teaching video lectures, and their satisfaction, along with reflections on the most challenging module and the potential benefits for future courses. The objective is to obtain a holistic understanding of the participants' experiences, challenges, and perceptions throughout the course in each module and keep improving continually.

Sample Questions –

1. **Key Pillars of Effective Learning:**
 - "What are the key pillars which will help you get the most out of this class? (may pick more than one)"
2. **Time Management and Module Understanding:**
 - "Did you have enough time for all the items in the to-do list of this Module?"
 - "How much time did you spend to finish the ToDo items of this Module?"
3. **Challenges and Confidence in Learning:**
 - "Which topic did you find the toughest?"
 - "Are you confident that you will be able to program well in C++ for your coding assignments and projects of this course?"
4. **Learning Preferences:**
 - "What form of content did you find most useful to learn?"
5. **Algorithmic Understanding and Application:**
 - "Can you design your own algorithms from your own logic to solve problems using the concepts of this Module?"
 - "Can you write a pseudo-code on your own from an algorithm?"
 - "Can you write a C++ code on your own from the pseudo-code?"
6. **Overall Reflection on Learning:**
 - "Did you make progress towards the teaching pillars of this course?"

- "Do you think the scores you got on your assignments, quizzes, and projects reflect evidence of your learning?"
7. **Inclusivity of Teaching:**
- "Did the course have inclusive teaching video lectures that helped you to learn better?"
8. **Course Satisfaction and Future Outlook:**
- "Overall, are you happy about taking this course in C++ and do you think this will help you to excel in upcoming courses such as Operating System?"

Summary of Responses –

The survey results illuminate a diverse array of strategies employed by instructor to enhance their learning experience in the class. Key success pillars, including a preference for hands-on experience, teaching to learn, and prioritizing understanding over memorization, emerge as crucial factors. The time allocated to tasks in each module varied, with most students investing approximately 6 hours. Effective time management is evident, as a majority reported having ample time for the to-do list, displaying a range of time investment. Notably, the practice of watching videos more than once for better comprehension and quiz results was not widespread. Participants exhibited confidence in writing pseudo-code for algorithms and translating it into C++ code, maintaining high levels of programming proficiency throughout the modules.

Delving into the Data Structures course, certain topics posed consistent challenges for students. The Vector Container and Pointers were notably identified as difficult, indicating a shared struggle. Exploring searching and sorting algorithms revealed Heap Sort, Binary Search, and Bubble Sort as particularly challenging. While participants demonstrated conceptual understanding, mastering specific sorting methodologies presented persistent challenges. In the domain of algorithms and data structures, some students found topics like queues, priority queues, and linked lists more demanding. However, confidence in programming skills remained robust for the majority. Instances were noted in backtracking, recursion, and problem-solving where specific tasks, such as those involving Sudoku or N Queens, were perceived as more demanding. The survey underscores the necessity for tailored teaching methods to address these challenges and emphasizes the ongoing support required to bolster confidence in C++ proficiency.

The responses to the survey questions provide valuable insights into participants' experiences in the C++ programming course. The majority acknowledge progress toward teaching pillars, appreciating the professor's clear teaching style and opportunities for clarification. While concerns about project toughness exist, the value of peer interactions is evident. The impact of the COVID-19 pandemic on participation and collaboration is recognized during certain semesters. The implemented feedback system receives positive acknowledgment, fostering a healthy learning environment. Some students actively engage in self-directed learning, using textbooks and online resources to enhance understanding. Diverse approaches to learning, including hands-on coding and varied preferences, are highlighted. Overall, participants express satisfaction, finding joy in coding assignments and appreciating the instructor's responsiveness, emphasizing the importance of clear communication and interactive learning methods for a positive and effective learning experience in the course.