

# Failing My Statistics Test

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The third semester I was in the States, I was taking my third statistics course about the design of experiments in psychology and Education. We were supposed to take 3 interm-test (a test per month) and a final exam. My Instructor, Dr Feldt, a well-known scholar in statistics, gave us a statistics textbook as a reference book, and we were supposed to take notes in class while he was explaining how to solve statistics problems. A month had passed and it was time to take our first in-term. Although I was taking notes in class and I used to review every lesson I took right after getting home from class, I spent the whole weekend reviewing the material, reading my notes carefully and re-studying the sample problems given by Dr Feldt.

When we got our test papers back, I was chocked to find out that I got 9 out of 25 (36%). What was worse was that my score was the lowest in class. I took my paper home and spent the whole night crying and crying and crying. All my life I was an "A" student and getting 36% on a test was even more than a surprise or even a chock.

Being an autonomous learner, and being honest with myself, I thought crying would not help me improve my score. Dropping the course would not help either. I did not blame my instructor for my giving me a very low score, did not beg my instructor for more marks, did not beg him to give me an extra assignment to imrove my grade, did not ask him to taking into consideration that I was 8000 miles away from

home, or the fact that I was a foreign student who came from an education setting and educational background different from that of American students'. Instead, I sat down and tried to diagnose my weaknesses. I started to read the questions and go through my answers to find out why I made mistakes in solving the statistical problems on the test. I also went to Dr Feldt and asked him to show me my mistakes. He did. This way I could pinpoint my weakness and in brief, they were as follows: (1) I confused the statistical symbols as they were not standardized. I took 3 statistics courses with three different instructors, and different statistical symbols were used in each course and by each instructors. The same statistical symbol meant different things in each course. So when I solved the problems on the test, I used what the symbols meant in my second statistics course not what they stood for in Dr Feldt's course. (2) My notes were incomplete. I could not catch every single detail while Dr Feldt was teaching and solving problems on the board. I used to sit in the back. (3) Dr Feldt gave only one problem as an assignment and this was not enough for me to master the designs we were studying and to be able to solve any problem on the test. (4) The textbook was difficult and it did not have sufficient and detailed explanations about each type of experimental design, its language was difficult, concepts were very advanced and what Dr Feldt was giving information that was a little different from what was in the book.

"It is not important to get a 9, but what is more important is not to get another 9 on the second interm ", I thought to myself. So I went home and set a new plan for studying statistics. The plan consisted of the following: (1) I went through my statistics books for the 3 courses, and on a

sheet of paper with 3 columns, I made a list of all the statistical symbols used for the same concept and how it is represented in each book. (2) Every time I had a statistics class, I'd either compared my notes with some of my classmates' or went to Dr Felt to take a look at them and see if I missed any important point. (3) I went to the library and looked for additional books on design of experiments but unfortunately I could find any. So I went to Dr Felt and asked him to recommend some books and asked for extra problems for practice. He lent me a couple of his books, which I photocopied in full and returned to him. (4) I build a daily schedule for studying statistics.

I started to re-study all the lessons that I had taken right from the beginning. Every day I focused on one design. I would study my notes, read the sample problems given by Dr Feldt, study the chapters on that design in the three new books and then sit to solve the extra problems. If I had a problem, I would go and ask Dr Feldt for help. I studied day and night and over weekends as I needed to raise my grade on the second interm. As a graduate student, I was not supposed to fail a course or even get a C. This meant that I would be expelled from the program and it would be the end of studies and would go home as a failure. That was unacceptable to and could not even visualize it. My task was so difficult and very time consuming at a time when I was taking other courses and each of my instructor was demanding. I had two options: either to hang on and struggle or to drop the course and re-take it the following semester. But Who guarantees that I would not run into similar problems then? Dropping the course also meant that I would be delayed in my program would not be able to register for other course for which design of experiments

was a prerequisite. However, I'd go for the second option if I were only failing the course for sure or even passing it with a C. Fortunately the deadline for dropping the course was a couple of days after the second interm. So I decided to sit for the second interm to see how much I've improved over a month of intensive studying. I told Dr Felt about my intention and he agreed to it.

I sat for the second interm and Dr Feld was nice enough to grade my paper first to help me make my final decision: either continue or drop the course. To my surprise I got 15 out of 25 which meant 6 points more than the first interm. Although my grade was still lower than what I am used to getting, I was happy because I made some progress and my studying plan was working and proved to be effective. My experience with the GRE taught that improvement does not happen over night, over a week or over a month. It is study but slow. It requires patience and perseverance over a prolonged period of time. But there is light at the end of the tunnel. So I decided to stay.

The following month I continued to follow my study strategy and that month was not as demanding as the previous month, because I did not have to re-study the first part. That meant that I had more time to re-study the lessons I was taking and going over the additional problems a few more times for more mastery. The third interm I got 19 out of 25 and on the final exam my score was one of the top 5 in my class which had more than 50 students. Dr Feldt was extremely impressed and he told me that even American students do not exert the same effort and do not improve as much as I did. He was always proud of me.

Dr Feldt wrote the statistics questions for my comprehensive exams and was one of my thesis committee members. From "Design of Experiments" I learnt more about failure and success than any other course. My feelings of inadequacy in that course laid the foundation for the amount of effort I need to put forth and types of skills I need to develop, which in turn laid the foundation for the competent researcher I am today. It made me realize how much potential and will-power a student has and what determination can do. Whenever I go to Iowa, I stop by Dr Feldt's office (which he still has) to say hi. Dr Feldt has retired a few years ago and whenever I need a consultation I always contact him by e-mail.