

A gradual student is what you end up mentioning at places like Hopkins. Officially known as graduate students, but I prefer gradual because of the time it takes to finish. If lucky, very lucky, three years, but more likely four to five years from enrollment, sometimes more, to the Big Dance (graduation).

A graduate student, in the language of places like Hopkins, is a student who has gotten his or her undergraduate degree and has been admitted to the PhD program or some other degree program in some department of the School, the Department of Epidemiology in my case.

Typically, for a department such as mine, students have two to three years of work experience in some health related field before admission. Departments vary. For example, in biostatistics, students may be enrolled straight out of undergraduate school. That was my case at the University of Minnesota.

Gradual students are like kids. Like your own kids, every gradual student is different. It is not just mentoring regarding courses and dissertation but about love lives gone wrong, illness, sick parents, and failing grades.

Over the years I have had a student run over by a bus, a student who had both breasts removed, a student who had an ovary removed because of a tumor, a student who died of brain cancer, and a student who became paraplegic in a biking accident.

The hardest part in the chase to the Big Dance is coming up with a dissertation topic. It has to be something the student wants to do and also has to past muster with the student's mentor.

A topic that seems interesting and doable can blow up for any number of reasons. As a rule you can bank on one or two busts before a catch.

I routinely warn students about busts, but they always think they will be different. Rarely the case.

There are rites of passage in pursuit of the Big Dance. The first is a written exam before a student can enter the dissertation phase of training.

One night me and mine are sitting on the deck having a drink when the phone rings. It is a gradual student. She is beside herself. In tears. Incoherent. I cannot get anything out of her except tears and sobbing. I think the worst. Maybe she has been raped.

Finally I get her to quiet down to tell me the reason for the tears. She did not pass her written exam. "That's all!" I say to myself with relief.

She retook the exam, passed, and went on to the Big Dance a few years later.

A rite of passage is the preliminary oral exam. There is not a student who does not dread that exam. Exams have four or five faculty members, one of whom is the student's advisor, but the others can be anybody; from the student's department, from another department, or from the medical school.

Every student remembers their exam.

Mine involved an old salt from the Mayo Clinic, Joe Berkson, one of the developers of the Minnesota Multiphasic Personality Inventory, Paul Meehl, Richard McHugh, my advisor, my under graduate advisor, and my professional father, Pete Berman, sitting as a guest, nonvoting member.

The exam started gentle enough with baby questions. I started to relax and thought that this is not so bad.

Then, about midway in, Berkson and Meehl get into an argument. I relaxed even more thinking as long as they are arguing they will ignore me. Correct, until Berkson turned to me to ask what my views were on the issue they were arguing about.

I stuttered and stumbled as the questions kept coming. Eventually it got so I could not remember my name.

About then I looked over at my professional father. He looked ashen. I say to myself "I tried to warn you years back when you offered me a fellowship." Now it was clear that not only was I going down but I was taking my professional father with me. I was sick.

The exam rambled on. Finally the grilling was over and I was excused so the committee could deliberate my fate.

The waiting is part of the ritual. I paced the hall.

Finally I was called back.

"Congratulations. You passed".

"I what?"

"You passed".

I did not believe it.

I should have been elated but I was depressed. It took about two weeks to recover.

There is another rite of passage: the final oral exam. That comes when a student has finished the dissertation and is ready for the Big Dance.

Typically the student presents his/her work in an open seminar. After that the student and the student's committee retire to a room for the examination. Generally the exam is a piece of cake. The student is king or queen of the hill knowing more about the topic than any of the examiners. There are people who do not pass their preliminary exam but that does not happen with final exams.

After that it is the Big Dance. Graduation when people robe up and march into an auditorium. Faculty first in the robes and hoods of the institution where they got their degrees. Then the students, absent a hood (they get that when their name is called and handed their diploma). I have marched when I had students graduate.

Faculty sit on a stage facing the audience. You have to look professorial. No nodding off. No laptops. No cell phones. Just look alert and smart.

You have to do something to pass the time. My thing was doing gender counts of graduates.

One of the biggest demographic changes happened under my nose. When I came to Hopkins in 1980, 75% of graduating classes were male. By the time my last students graduated it was the other way around.

Figuring out if a graduate is male or female is not easy with everybody dressed in robes and mortar boards on their heads.

Names are useless with 3/4th of the students from other countries with first names, at least to your ear, that could be a male or female.

You might think you can tell by their hair, but with caps and hair as long now for men as for women, you soon abandon that measure. Forget the hair.

Look at the shoes! If they have heels check female. Ditto if they are flat and open toed. For all others check male.

	Student	Dissertation	Year
1.	Penelope Keyl	Prognostic importance of idiopathic mitral valve prolapse	1987
2.	Kay Dickersin	Publication and the meta-analysis of clinical trials	1989
3.	Steven Goodman	Evidence and clinical trials	1989
4.	Kai-Li Liaw	Human papillomavirus and cervical neoplasia: A population based case-control study	1994
5.	Camara Jones	Methods for comparing distributions. development and application exploring "race- associated" differences in the systolic blood pressure	1994
6.	Marcy Winget	Selected issues related to the conduct, reporting, and analysis of phase I trials	1996

Gradual students Dissertation topic and year graduated

	Student	Dissertation	Year
7.	Susan Vitale	Development of a questionnaire to measure vision-targeted health-related quality of life in persons with refractive error	1998
8.	Kera Weiserbs	The relationship between visual impairment and mortality	1998
9.	Mark Danese	Mild thyroid failure: Using literature-based models to facilitate decision-making for clinical practice and clinical trial design	1999
10.	Daniel Reshef	Evaluation of generalized arteriolar narrowing expressed as central retinal artery/vein equivalents ratio (CRAVER), using ECG synchronized retinal photography	1999
11.	Barbara Martin	Evaluating general and disease-specific quality of life: Measures in a clinical trial for cytomegalovirus retinitis	1999
12.	Janet Holbrook	Measures of cytomegalovirus retinitis in clinical trials: Risk factors and associations with vision	1999
13.	Michael Davidson	The influence of granulocyte colony stimulating factor on bacterial infections and viral load in acquired immunodeficiency syndrome	2000
14.	Antariksha Kiri	The principles and practices of treatment effects monitoring committees	2000
15.	Maria Deloria Knoll	The effect of vitamin A and/or zinc supplementation on the immune response to heptavalent pneumococcal conjugate vaccine in HIV positive and HIV negative IV drug users	2000

	Student	Dissertation	Year
16.	Aynur Ünalp- Arida	Presentation vs. publication of primary results in clinical trials	2000
17.	Paivi Miskala	Perceptions of visual functioning and eye care practices in adults with and without amblyopia: A cross-sectional comparison	2002
18.	Shangqian (Dan) Qi	Use of digital analysis to detect fraud in clinical trials	2004
19.	Pamela Scott	Medical device approvals: An assessment of the level of evidence	2004
20.	Christine Szekely	Non-steroidal anti-inflammatory drugs and Alzheimer's disease	2005
21.	Jennifer Thorne	Visual acuity loss among patients with AIDS and cytomegalovirus retinitis in the era of highly active antiretroviral therapy	2005
22.	Ann Ervin	Streamlining IRB review of multicenter research: The role of medical and public health institutions	2006
23.	Claudia Woo Shinoff	The identification of subgroup analyses in clinical trials	2006
24.	Hsu-Tai (Simon) Liu	The effects of prescription drug user fee act on drug approvals, labeling changes, and withdrawals	2006
25.	Lea Drye	Examining the relationship between education and cognitive decline	2008

	Student	Dissertation	Year
26.	Dolly Chang	The detection of glaucoma using pupillography	2013
27.	Gillian Gresham	Wearable activity monitors for assessing outcomes in cancer clinical trials	2017