The Last Year of Your Graduate School Experience:
Advice from a Major Professor

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ABSTRACT Most graduate students are unaware of the procedures and expectations during the last year of their graduate program and, especially, not from the faculty perspective. The timeline I describe in this article begins with what needs to be done almost a year before finishing and ends with what happens after you, the graduate student, pass the final defense exam. Recommendations include how to organize your thoughts before you start to write, how to work with your committee, as well as some dos and don’ts at your defense exam. Lastly, I discuss some of the emotional aspects of what you and your major professor might experience during this year. My advice is for Ph.D. students, but much of it is also applicable to Masters students.

My objective is to help graduate students recognize from the major professor’s point-of-view what is required of them in the last year of their Ph.D. program. Many graduate students are unaware of roles and responsibilities of the major professor and committee during the time a student is finishing. Most faculty (if not all) have been in your position, having written a dissertation, so they understand the enormous situation you are facing. I suggest that you read this advice approximately one year before you plan to graduate.

Many Ph.D. graduate students write and defend a dissertation as part of fulfilling the requirements for graduation. In today’s electronic world, graduate students may have not “written” very much during their education. So when it comes time to compose a very important scientific document, many graduate students (even at the Ph.D. level) are not prepared for this venture.

Even though my advice is for Ph.D. students majoring in science, I believe it is also applicable to students writing a Master’s thesis as well as nonscience majors. I know that I am not the first to write a paper on “How to Write a Dissertation.” Just “Google” those words and you get numerous hits. What makes my discussion different is I include some of the “off the record” feelings and views of a major professor. This is a demanding, draining, and emotional merry-go-round occasion for both of you.

So, let’s visit the last year of your graduate school experience and include the perspective of the major professor. My suggestions are based on more than 25 years at the University of Florida, having finished numerous M.S. and Ph.D. students of my own and serving on countless committees for other graduate students.

The Year Ahead1

First, politely remind your major professor that you want to graduate in a year, which will ensure her cooperation as you try to meet your deadlines. To you it may seem a long time in the future, but this may be when you find out that she is planning on a year’s sabbatical to South Africa! What timing! This proactive discussion gives you and your major professor time to prepare for the year ahead.

Steps for the upcoming year include: start writing, get sections reviewed and approved by your major professor and/or committee members, submit the completed dissertation to the graduate school for editorial review, make all graduate school editorial changes, make hard copies and deliver them to the committee and/or post the dissertation on a website, discuss with the committee any changes necessary before your exam, pass the defense exam, make changes recommended by committee, get the signature page signed, submit to graduate school for last submission, and finally get hooded when you cross the stage at graduation. Oh, and don’t forget the cost. You may not have to take out a loan, but it is going to cost money to finish.

It’s Getting Closer

Read, read, read. The best way to write is to read. And I don’t mean websites. Reading a website is not the same as reading a book or journal article. Do you know where the library is on campus? How many times have you gone to the library, selected a book, and sat down and read? Do you remember the last time you checked out a book? My advice is for you to select a few dissertations to read from cover to cover (not just the abstract). Pick a few that are similar to your work. Select a few written by former graduate students of your major professor, and choose a few that are outlined analogous to the way that you want to present your research. Read them in an active mode, meaning that you should analyze how the chapters/sections are titled and

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organized, and how the figures and tables are presented. You should do this well before you start to write.

Write down all your ideas about your research, including the “whys”, the “hows”, and the “where.” Hopefully, you have been keeping very good notes as you progressed to this stage of your graduate career, so writing these items down should not take you long.

**Start Your Writing**

Start to write by constructing an outline of your dissertation. This outline should be approved by your major professor and, in some cases, by your committee. If approved a while ago, present it to your committee again to remind them. You want to give them an idea of what you are proposing. After your major professor has had time to look at the outline, sit down with her and discuss it in detail. The last thing you want is major changes during the writing stages. The major professor or committee is likely to suggest changes, so make them as graciously and efficiently as possible. Don’t get upset when you are asked to move a section or table to, for example, the Appendix, as it is often necessary to shorten and focus the main part of the dissertation.

Attend any workshops offered by the graduate school or department on how to format or submit your dissertation. In many cases, the editors who will review your work are the same ones leading the workshop. If workshops are not offered at your school, then schedule an appointment to meet with someone from the editing department. This will save you a tremendous amount of time in the long run. It is much better to write in their format now than to rewrite your work in those final, hectic days.

Write two pages a day. In 30 days you will have 60 pages written! In 60 days you will have 120 pages done. Writing is similar to losing weight. Don’t expect to lose 5 pounds in 1 day (and keep it off); so don’t expect to write 50 pages in 1 day (and have it make sense)! Also, save your work every half hour or at least every time you step away from your computer. Back up your work on separate files, drives, (better on multiple computers) and websites on a daily basis. Mentally picture a worst case scenario and guard against it. Because my students have followed this advice over the years, no one has lost data (at least they have not admitted to it) to computer-related failures. However, one graduate student I knew lost her thesis data because her house burned down! Luckily she gave me copies as back-up.

Don’t expect to be able to write for 12 hours every day for a month. This is unrealistic and could damage your health. The quality of what you write is directly proportional to the number of hours you spend writing. Many times I have asked my graduate students what time in the wee hours of the morning they wrote a certain section because it made little sense.

Write as if you are writing to a blind person. This means that you have to be very descriptive without being wordy. A blind person has intelligence, so don’t write “down” to him or her. Just explain what you need to in plain and concise English.

Even if you are an excellent writer, it takes approximately 4 months from beginning to end to write a dissertation of average length. Have someone (girlfriend, boyfriend, spouse) read and provide feedback on what you have written before you give it to your major professor. It is not your major professor’s responsibility to correct your grammar and it slows down the process of reading your dissertation for scientific content. Remember, your major professor was not an English major (if she was, good for you). In my case, I read the first draft for organization of thoughts, scientific content, format for submission to the graduate school, and for many students—grammar. How many drafts are necessary? Even for my best students it often takes three drafts before the dissertation is acceptable.

The dissertation must be submitted to the graduate school for editorial review at most universities by midsemester, so don’t begin to write your dissertation the semester in which you want to graduate. Also, your major professor may have to submit a letter indicating that she has read the dissertation and that it is ready for editorial review. Therefore, your major professor needs time—a minimum of 2 weeks in most situations—to read it and suggest changes. So, you must have it finished even before the mid-point of the semester.

Again, depending on your graduate school schedule, there are usually three submission dates for the dissertation. The first submission is when the graduate school reviews your dissertation and sends you and your major professor a list of changes that need to be made. The second date is toward the end of the semester, when you submit your dissertation as a PDF file. The third date is the final submission. You have defended your dissertation (and of course you passed your exam), you have made the required changes, and now you need to email or drop off an electronic copy at your graduate school office. Many students ask me if these dates are set in concrete. Yes, but even concrete has cracks. Therefore, your graduate school may approve an extension, but usually for only 24 hours.

Now let’s look at the supporting roles of your major professor and the committee as you make your way to the finish line.

**Crew Chief (Major Professor)**

I refer to the faculty chair of your Ph.D. committee as the major professor. However, some universities may refer to this person as the chair of your committee, your supervisory professor, or your Ph.D. advisor. No matter the title of the person, this faculty member is ultimately responsible for getting you through the process of writing and defending your research. Normally, this is the last person to sign your dissertation. Good communication is a must with your major professor, and should be on a regular and professional basis as colleagues. Meetings do not always need to be formal office appointments; informal or impromptu encounters are encouraged, too.

Although you may feel differently, your major professor is human. Thus, this person is also going through a “demanding, exhausting, but stimulating” period. Your major professor is probably married with children and possibly grandchildren. She teaches graduate/undergraduate class(es), has other graduate students, serves on several graduate students committees within and external to the
department, serves on department, university, national, and international committees related to numerous responsibilities, writes research grants and, of course, publishes. These seem like too many obligations, but you want your professor to be involved with considerable responsibilities. It means that your advisor is respected for her expertise. But all of these time-consuming responsibilities can take a toll on the individual. Therefore, there will be times when you believe the major professor is unreasonable in her requests. This behavior may be a result of the individual “burning the candle at both ends”—trying to help you finish and still cover all the other responsibilities. By being considerate of your major professor’s situation, the two of you will remain colleagues and friends for many years to come.

Pit Crew (Ph.D. Supervisory Committee)

Next to your major professor, your committee is important. You must keep in contact with your committee members during your graduate career and it is very important as you write your dissertation. Nothing bothers a committee member more than suddenly being notified that the final exam is scheduled and they have not seen you since the day you walked into their office asking if you would serve on their committee! The faculty member feels that she has not made any contribution to the student’s research.

It is essential to give your committee members 2 weeks at a minimum to read your dissertation. If possible, give them two weekends to read it. Also, ask them their preferred format. If hardcopies are needed, be sure to give yourself enough time to get them made. If possible, obtain access to a high speed, laser-type printer and don’t try to print out a lengthy dissertation on an inkjet printer. Putting your work on a website is becoming more common, but print out a lengthy dissertation on an inkjet printer. Putting yourself enough time to get them made. If possible, obtain access to a high speed, laser-type printer and don’t try to print out a lengthy dissertation on an inkjet printer. Putting your work on a website is becoming more common, but some committee members may still want a hardcopy.

Near the end of the review period, make an appointment to visit each committee member to get an idea of his or her reaction to your dissertation. Hopefully, they will agree to this meeting (some faculty may not meet with you but prefer to discuss any concerns they have at your defense). If numerous major changes are needed, postpone your exam. It is better to postpone your exam several weeks than to fail the defense and have to wait usually a minimum of 6 months to retake it.

Scheduling your final exam with the committee may be difficult. On a Ph.D. committee there are normally five members, all with busy schedules. Therefore, you may have to plan the exam weeks and possibly months in advance. Communicate with your committee to get dates of their availability as soon as you have a general idea of when you expect to take the exam. Also, be aware that if you need to postpone your exam, it may not be easy to reschedule. Therefore, ask your major professor for her advice on when would be a realistic time to take the exam.

The Race (Writing Your Dissertation)

There is no required length for a dissertation or chapters/sections within the dissertation. Some chapters/sections can be very short (<5 pages), whereas others can be very long (>75 pages). A dissertation (everything included from the dedication to the biographical sketch) that is too short (<50 pages) might raise an eyebrow in some sciences, unless you are an exceptionally efficient writer. Your mentor knows your research and should have an idea of approximately how many pages it should take to present your work. Often, first drafts are too long, circuitous, and wordy. To shorten it, you might have to move some sections, figures, and tables to the Appendix, or omit them entirely. Don’t feel that all the information you gathered must be included in your final work.

There are two ways to write a dissertation: (1) chapters or (2) traditional dissertation by sections. You must make a decision before you start to write because it is very difficult to “change cars in the middle of a race.”

Many students prefer to write in chapters because they believe that each chapter will be a paper published without any revisions to the chapter. I have very rarely supervised a student who has been able to take a chapter out of the dissertation and immediately submit it for publication. Why? Every publisher has their own format to submit a manuscript. So, even in the best case, minor changes to the chapter must be made.

Writing in chapters does not decrease the amount of work, and might actually increase the amount of writing. Writing your dissertation in chapters should be done only if every chapter is independent of the other chapters. For example, you could write chapters if you did distinct experiments that you can only discuss by separating each one into its own section. Every chapter within the body of the dissertation must “stand by itself.” The reader does not have to read one chapter to understand the others.

The following are my suggestions on the organization of your dissertation.

Table of Contents

The construction of the Table of Contents depends on if you write your dissertation in the traditional way (Table 1) or in chapters (Table 2). The traditional way involves the customary abstract, introduction, literature review, description of study area, materials and methods, results and discussion, and conclusions. There are modifications to this outline. For example, literature review may be called background. Also, the results and discussion may be two sections rather than one. Under these major headings the writer can relate more details with subheadings. If you write in chapters, each chapter needs its own introduction, literature review, description of study area, materials and methods, results and discussion, and conclusions.

Abstract

Although the abstract may be the hardest section to write, it is the most important segment. It is often the most widely read and accessible part of your dissertation. Readers scan the abstract to get an idea on what information is presented within the dissertation. If the abstract generates curiosity, the reader might want to examine other sections. Write the abstract first. Then after the other sections are done, go back and re-read and re-write it.

Objectives

The objectives of your research could be a section by itself or at least a subsection. The objectives should not
be “buried” in a paragraph. The reader should not have to “find” or guess the purpose of your work. A student may ask me when he begins writing, “How many objectives should I have?” This question should have been asked when he was designing the investigation. But I normally mention that more than five (three for a M.S. study) objectives for a dissertation can be excessive. More than five increases the time writing and lengthens the dissertation. Also, the additional objectives may be redundant.

Another question students ask is, “Should I write the objectives as statements, questions, or as null hypotheses?” My response is to write them as statements: The objectives of this investigation were to (i)… (list them). The questions and null hypotheses could be incorporated into the introduction section or as a preamble to the objectives. Literature Review and References

The literature review is often the section that gets “overdone” in a dissertation. There is a natural tendency to include information about every article you have read related to your dissertation. A common mistake is to cite references such as “Smith and Jones (1985) found that”… and “an experiment conducted by Smith and Jones (1985).” The proper way to write a literature review is to develop the theme of each paragraph or section, and then incorporate relevant information from the literature. Construct the “total race car,” not the individual components.

Remember there are more articles and references than what is on the internet. There is a wealth of information published that is not available online. Many of these publications are considered to be “classics” in their discipline. Ask your major professor about articles that must be read. Another piece of advice—try to include at least one publication from each member of your committee. There are three reasons for this: (1) normally, the rationale for having a certain faculty member on your committee is because that person is an expert in that field. You should be quoting his or her research. (2) It shows that you are aware of what the faculty have published. (3) For some faculty it is an ego thing; they like to see their research cited.

Listing publications in your reference should not be a contest on how many you can cite. Remember, your committee expects that you have read and incorporated every one of the articles you have cited and referenced (see the section on the do’s and don’ts).

Body

The body includes the results and discussion (R&D)
section(s). The majority of the dissertation should be
dedicated to your work. As a “rule-of-thumb,” the R&D se-
tion should be half your dissertation. If the introduction or
literature review is longer than the R&D, you should start
to rethink your research. How well have you utilized and
discussed your data? You may need advice from your major
professor. Notice that I have not indicated the number of
pages each section should be. The obvious reason is that
the length depends on your research.

Present your results in the results section, with few
references cited. Many of your tables and figures are pre-
sent in the results. Compared with the “discussion” por-
tion, the results should be more straightforward to write.
The discussion may be the most difficult section to write
because you are “presenting and defending” your findings
and you need to dedicate a large part of your dissertation to
it. This is where you state and discuss whether your results
agree or disagree with your cited references. Go back to the
introduction where you discussed your research, especially
the whys, the hows, and the wheres of your work. Discuss
details relative to your results, including relevant
results and conclusions from other research. Usually, this
exchange of ideas is the most interesting for the reader,
but the most arduous for the author. The graduate student
may have doubts about his or her data, writing ability (gets
writer’s block and may stop writing), and/or feel that the
research is not of high standards. This is where the major
professor must support the student by convincing him that
the research was exceptional and the student must con-
tinue because he is worthy of the Ph.D. degree.

Tables and Figures

Every table and figure must be able to “stand by itself.”
This means that the reader does not have to review any of
the text within the dissertation to understand the informa-
tion presented in the table or figure. All abbreviations (even
though given in the text) must be spelled out in the table or
figure. The title must be descriptive of what information is within the table. All figure titles go below the figure. Again, the title must
clarify what information is in the figure.

The Appendix

The appendix is your friend. This is where you can put
information that does not have a “place” in the main body of
your dissertation. In the appendix you can have all your raw
data, additional tables and figures, modifications to lab pro-
cedures, a list of defined terms/abbreviations, and so forth.
It frees you from having to explain, define, use, and report
everything in the body of the dissertation. Use it wisely.

Final Lap

The Ph.D. final exam is the defense of your work. If pos-
ible, attend a friend’s exam to see what it is like. Remem-
ter to secure a room weeks in advance. Classrooms are
scheduled for classes, and thus, difficult to use. Conference
rooms are more comfortable than classrooms, but also are
hard to schedule. The room must have a writing board in
case you are asked to draw diagrams, write chemical for-
mulas, solve mathematical equations, and so forth. You will
need a laptop computer, projector, and screen and make
sure that you know how to use the equipment.

The exam goes something like this. There is small talk
among the faculty as you are waiting for the exam to offi-
cially begin (don’t worry) and one will probably arrive late.
You are asked to give your committee a few words about
your background (it is meant to get you to talk about a
subject—you—that makes you feel comfortable). It is an ice
breaker. Some students are very nervous in the beginning of
the exam (normal reaction).

Next, it is common to give a very short presentation of
your research (this is where the computer/projector comes
in). You are assuming that everyone has read every word
of your dissertation (wrong assumption). So, go over the
highlights, especially your results and discussion. But keep
it short—approximately 15 minutes is a good amount of
time—to allow time for questions during your presentation
and to avoid the appearance of “stalling” to shorten the
actual amount of time available for questions at the end.

Commonly, the Ph.D. defense exam is 3 hours long, but
this depends on the subject matter, how you have interacted
with your committee during your Ph.D. career (especially
while you were writing your dissertation), and how well the
exam is going. If it is shorter than 3 hours it may mean that
you are brilliantly correct in your answers or you commu-
nicated well with your committee before the exam so all
suggested changes and corrections have been made. If it is
longer than 3 hours, it may mean that you are not answer-
ing the questions correctly and, therefore, your committee
is not sure if your research is acceptable. They need to ask
you more questions (and take more time) to decide the sig-
nificance of your research. These questions would not have
to be asked if they were discussed before the exam.

What are the major professor’s responsibilities during
the exam? My experience has been as a referee, note taker,
moderator, and friend. Some committee members will
disagree among themselves during the exam. As a ref-
eree, the major professor needs to get them back into the
discussion of the research that is being tested. The major
professor should take notes about the changes and correc-
tions and act as moderator to make sure that the questions
asked are relative to the research. Hopefully, the major
professor is a friend of the graduate student by helping
him. For example, when the graduate student becomes
terrible in the beginning, the major professor may jump in and ask him a
“comfortable” question to calm the nerves down. The major
professor must take great care not to be tempted to answer
questions on behalf of the student.

Here are some do’s and don’ts about your defense
exam:

Some dos –

• Do provide refreshments. Although not required, it is
  highly recommended as a psychological move to create
  a good ambience for the exam.
• Do show confidence, but not cockiness. Smile.
• Do look, act, and dress like a professional. You do not
  need a three piece suit or an evening dress, but dress
  appropriately for your university. You feel more profes-
sional if you dress the part.
• Do sit at the head of the table, unless told otherwise. This shows that you are in charge.
• Do your best to “be prepared,” as the Scouts say. If the exam room is unfamiliar to you, check it out ahead of time. Know how to put down the screen, use the computer and projector, and how to dim the lights. Where are the restrooms? A water fountain?
• Do know your dissertation inside and out. For example, if you are asked a question about a figure, table, reference, and so forth, you should know where it is in your dissertation.
• Do know your references. If you have cited a reference, please read it. Your committee knows the literature.
• Do thank the members of your committee for their assistance and time.

Some don’ts –
• Don’t schedule your exam too close to the drop dead submission date (at least a week ahead is best).
• Don’t be late.
• Don’t present a lot of changes to your thesis/dissertation at your exam. If you have made many changes, you should give a revised copy to your committee days (weeks) before the exam. When I receive pages of changes at the exam my reactions are: (1) why did I read the manuscript when there are so many changes to it? I have not read the latest version. (2) Are these changes all “errors” in the dissertation? and (3) the student was not very careful when writing the first time because now she or he discovered all these changes/errors.
• Don’t schedule your exam for Friday afternoon after 2 pm, and also try not to schedule your exam for 8 am Monday morning. If you must have the exam on Friday afternoon, try to schedule it no later than 2 pm (assuming the exam will last 3 hours). If you must have the exam on Monday morning, have it start no earlier than 8:30 am (9 am is better). You need time and so does your major professor to get ready. There is always something at the last minute that must be done.
• Don’t worry if you cannot answer every question. Try your best. Many times the one asking you the question cannot answer it as well! The person is just interested in your opinion on the subject.
• Don’t be late.

Getting to the Winner’s Circle
So you passed your exam (congratulations!) and it is all downhill from here—not quite. You still have to make the changes that were discussed during your exam. This is a very frustrating time because you thought it was all over when the committee decided you passed, but you still have more to do.

If possible, take at least 48 hours away from your dissertation before you start making changes. You are emotionally and probably physically exhausted. Don’t think about what you have to do. Take some time for yourself, your family, your pet, and so on to recharge your batteries. Come back to your work as refreshed as possible.

You may not have a lot of time (a few days) between your exam and getting your signed dissertation to the graduate school. Sit down with your major professor to discuss what happened during your exam. Hopefully, she took notes during the exam about the changes that need to be made. So get those notes and make sure you understand what is expected of you. What are the significant changes that may take considerable amounts of time vs. grammatical changes that can be done very quickly? This is the time that you may wish you had communicated better with your committee to minimize the number of changes.

Believe me, this is a stressful time. Your family is coming for graduation. You have a plane reservation to take you to your new city and your new position. You want to start your faculty, consulting or post-doc position, but you have not officially finished so you have not been cleared for graduation. The different deadlines for dissertation submissions are posted at least a year in advance. So, you know the time restrictions you might have at the end.

Do not leave without finishing everything! I know this is very difficult if you have a new position waiting for you that will give you the financial support you have been waiting for since starting your graduate education. But, if possible, postpone the start of your employment. Many students leave at this critical time believing that in a few short weeks they will make all the changes. What they don’t realize is that they have a job. This new job is taking up their days, leaving nights and weekends to work on the dissertation. Before they know it, the deadline has passed, again. Also, this situation does not go over well with your new supervisor who probably hired you because you had a Ph.D. But you don’t!

Epilogue
The objectives of this article were to help you—the graduate student—to understand the steps you need to take during your last year to complete your dissertation and degree. As you go through this stressful, yet exhilarating, time please remember that your major professor also is going through a demanding, exhilarating, and emotional merry-go-round.

My comments and suggestions in this article come from interactions I have had with many graduate students in my 25 years at the University of Florida. I have enjoyed observing how these individuals matured personally and intellectually through their tenure as graduate students. Finally, I am proud to say that I keep in contact with the vast majority of my former graduate students. God bless them!

References