

How to prepare your PhD qualifying exam— do's and don'ts



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Why do we need a qualifying exam?

- In a Ph.D. program, the purpose of the QE is to evaluate whether a graduate student has the **essential skills** and other **necessities** to obtain the Ph.D. degree.

2013-2018

TIGP-MCB 1st time passing rate : 60%-80%

2nd time passing rate: ~ 50%

2018-2023

1st time passing rate: **84%**; 2nd time passing rate:

100%



“Five Golden Rules” of qualifying exam preparation

Golden Rule #1: Understand the qualifying exam.

- What is the **format** of the exam?
- How is your performance **assessed**?
- How much **time** does the exam usually take?

Golden Rule #2: Prepare early and systematically.

- First, review the **basics** of your field.
- Next, review the **specifics** of your field.
- Now, prepare and **initiate** your dissertation research proposal.
- Prepare for **anticipated** questions.
- Review **recent** scientific journals.
- Set up a **practice** qualifying exam.



Golden Rule #3: Know your examiners
(only for some programs).

Golden Rule #4: Reduce your stress.

- If you have prepared systematically, you are in great shape and should be **confident** that you are well prepared to succeed in your qualifying examination.
- Tip 1: Think about how you will respond to **off-the-wall** questions?
- Tip 2: Think about how you will respond to questions that **you do not know**?

- Golden Rule #5: Have an exam day plan
- Dress appropriately (well, **casual is fine**, not too eccentric).
- Ensure that you have reliable transportation to come to the exam location **on time**.
- Eat a **small meal**, even if you are not hungry. Maybe energy boost drinks.
- Get to the exam room early. Check the audio/video system and make sure your presentation ppt is ok. Make a backup copy in the **micro drive**, just in case that you can not use your own laptop. Make sure you have enough time (**at least 10~20 mins**).



The proposal

Structure of a Ph.D (non) thesis proposal

- Topic/ Thesis or outside?
- Abstract (write it last)
- Background and significance
- Research Design and Methods-
The Three Aims (not strictly formatted)
- Discussion
- References

The Do's

- ***Before writing*** (~1 month)
 - read *guide lines* carefully
 - read reviews and chose *suitable* topics
(1~3)
 - discuss with your senior lab members (or
mentor's input)
 - chose your topic and read *representative*
papers in depth

The Do's

- ***During writing*** (1~2 months)
 - arrange your time and **outline** the structure first (Intros, significance, aims, methods and alternative approaches, etc)
 - **hypothesis** driven or **curiosity** driven
 - constant **discussions** with lab mates/colleagues
 - uses reference tools (**i.e. endnote**)
 - have the **first draft ASAP**

The Dos

- **After writing** (~ 2~3 weeks)
 - revised the 1st draft and **correct** all grammar errors and **avoid** jargons or trivial details (sloppy writing reflects non-stringent scientific character)
 - send to colleagues (1~2 reliable friends) to read.
 - check **update** reference, any new published study during your writing

The Dos

- ***Before the final oral presentation*** (1~2 weeks)
 - make a good and **easy-to-understand** ppt files
(control your time to be **less than ~1hr**)
 - **practice** your presentation **N times** (your committee will interrupt to ask during your presentation)
 - write down all of the **questions/feedbacks** from the audience & think about how to address these questions.
 - **relax** and have a **good sleep** before the judgment day

The Dos

- ***During your oral presentation***
 - Have a deep breath and relax
 - Be prepared to be asked by all kinds of questions.
No one is able to address properly for all of them!
Don't get scared and then gets upset/frustrated
 - If you don't understand the question, ask the committee to repeat nicely. Don't answer promptly if you don't even understand the question
 - Control your time (your presentation should be ~ 45 minutes. Don't show off with >100 slides. Examiners get tired after 90 mins)

The Dos

- ***After your oral presentation***
 - Write down the comments from the committee and **address** them seriously
 - **Take harsh comments as constructive learning motivation (your paper reviewer is going to be 1000x more strict)**
 - Don't be discouraged if you don't pass the first time
 - Show your improvement for your 2nd examination (committee will particularly look upon for those comments they raised last time)

After you pass your exam, celebrate with family and friends. However, its not the end of your PhD, its just the beginning. Don't stretch your celebration **for days and weeks**.

The Donts

- ***Before writing***
 - **ignore** guide lines
 - read **too many** reviews and change mind once a week. Topics are either **too ambitious** or have been studied for many years.

The Donts

- ***During writing***

- **sporadic** writing with **random** schedule
- no clear structure & **incoherent** writing
(lacking significance and logic structure)
- **inconsistent** reference style or **missing** ref
- take **too long** to finish for the writing

The Donts

- **Before the final oral presentation**
 - no practice at all
 - too nervous (practice makes perfect!)
 - procrastination and work at the last minute and no sleep at all





The Donts



- **During oral presentation**
 - Speak too fast
 - Gets upset or goes blank with questions
 - Answer questions without thinking or too defensive
 - show off too much (too many slides!) and run overtime



The Donts

- **After oral presentationif you didn't pass**
 - Ignore committee's comments
 - Too depressed and evade to discuss with your mentor and the committee. Every committee member is here to help. Don't take their **critical** comments as a negative factor
 - Start a complete different non-thesis proposal (some modification based on comments from the committee sounds about right)

Common mistakes

- No **alternative approach** and additional experiments if the hypothesis does not work
- Aims **highly dependent** on the positive results of previous aims
- Plagiarism (copy & paste without any change)
- Introduction is not adherent to the study
- Not citing reference for proposal and in presentation
- Non thesis proposal: **figures with error bar and axis value, some even put P value?**
- Give proposal to the committee **the last minute**. Almost every student who gave the proposal to the committee **late** failed the first time.
- Not take committee' comments **seriously** and gave up easily for 2nd time.
- **Thesis proposal: lack any preliminary data and not enough knowledge in your own topic.**

Happy preparing your QE 😊



Bachelor



Master



PhD



Postdoc



PI



Emeritus Prof

Qualifying Exam Tips

Shared by TIGP students

Virtual QE by Experience Share

Thesis and non thesis?

How long did it take for you to prepare the QE?

The most frustration thing during the preparation?

Did you discuss with your supervisor or colleagues often?

Did you practice your talk in the lab or with you classmates?

Any tip you wish to share?

Good luck