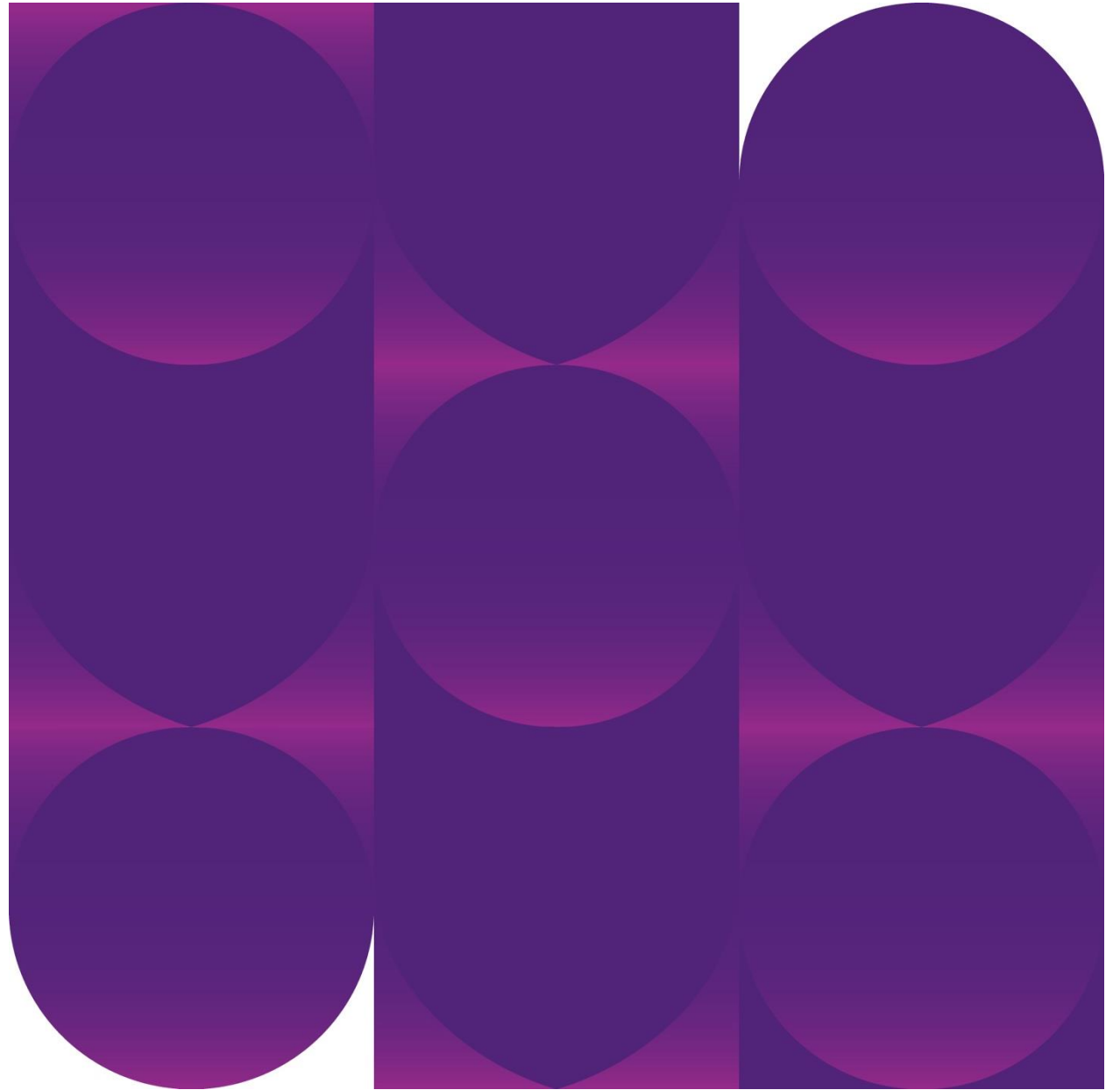


CALD HDR AI workshop: Reflections on how to use AI during the HDR research cycle

**Ms Franciele Spinelli (Fran) and
Mr Noor Mohammad Masum**
6th July 2026 (3-5 pm)



Acknowledgement of Country



*The Brisbane River pattern from A Guidance Through Time
by Casey Coolwell and Kyra Mancktelow.*



Workshop Roadmap

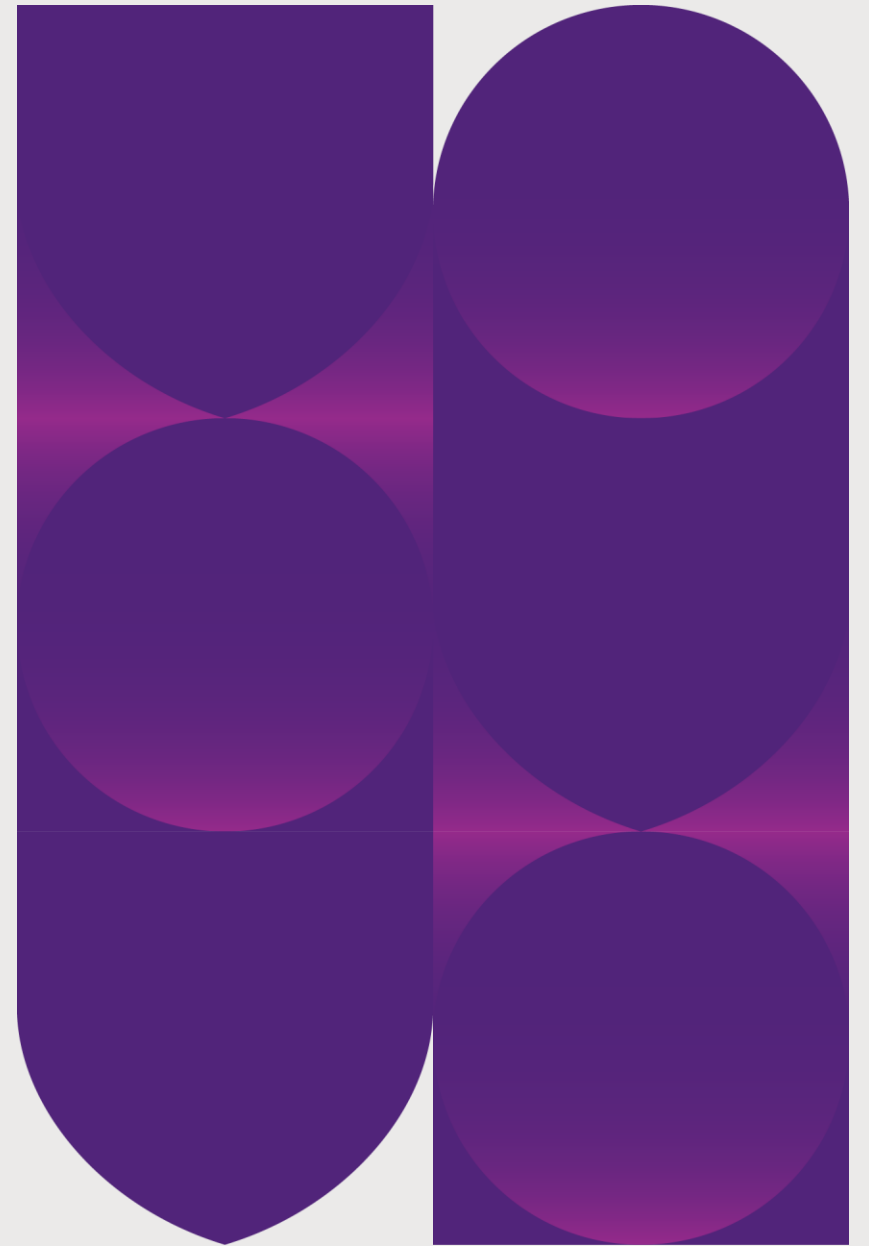
- 01 Introduction**
10 mins - Fran

- 02 AI for literature review**
20 mins - Fran

- 03 AI for data analysis**
20 mins - Fran

- 04 AI for drafting, revision, refinement and integration**
20 mins - Noor Mohammad

- 05 Bringing everything together and Q&A**
10 minutes - Noor Mohammad



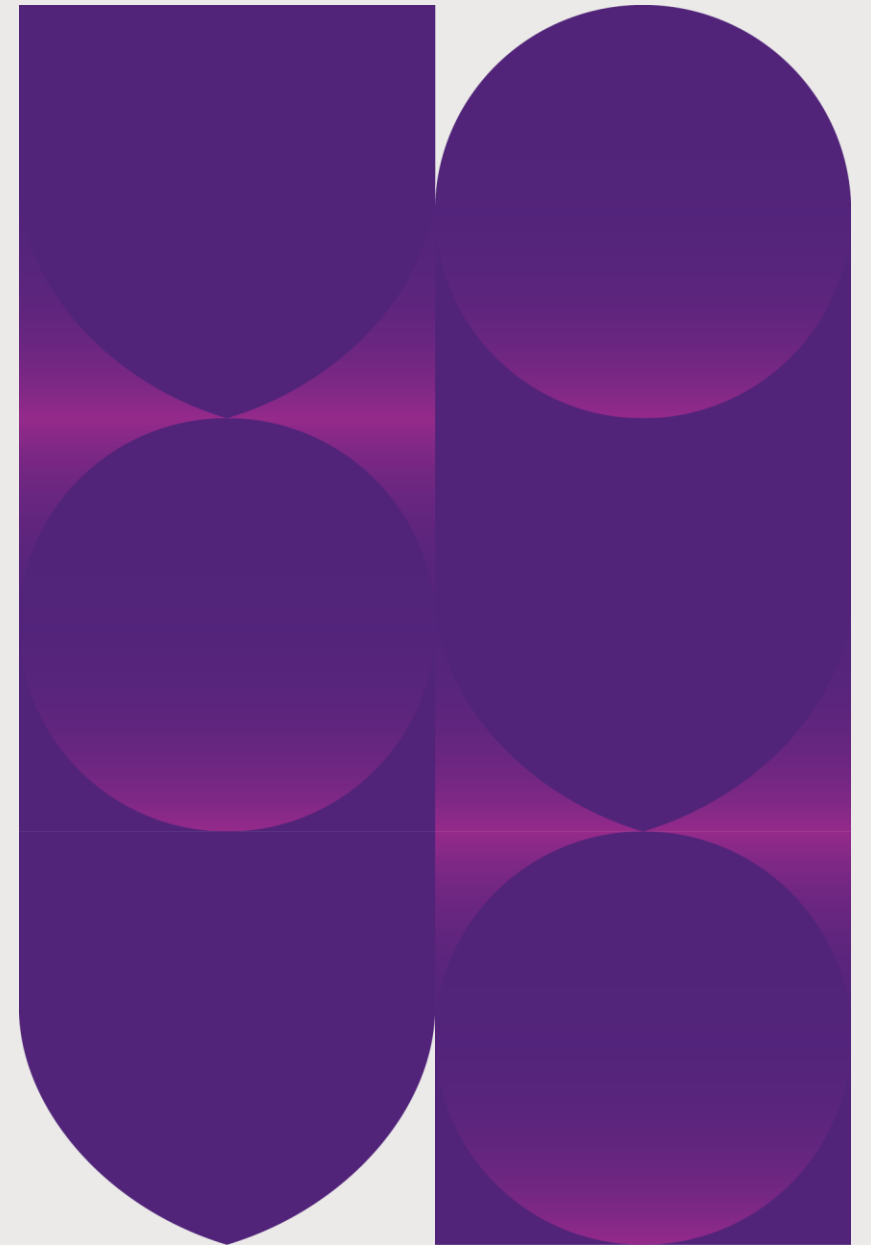
Sections Structure

- 01 Scenario

- 02 Participants to share what they would do in that case and whether/how they would use AI

- 03 Presenters to share what they did it, how they did it, what went well and what went wrong

Note: Our aim is to share some examples from our experience as HDR students. This workshop is not about what is right or wrong. Appropriate AI use depends heavily on the discipline, on the research itself and on ongoing discussion with your supervisory team.



Who is Fran?

- Originally from Brazil
- Third-year PhD student currently investigating the role of AI for international students' academic English
- Language teacher at heart
- Worked across multiple roles in education and at UQ



Who is Noor Mohammad?

- From Bangladesh
- Civil servant and educator
- Fourth-year PhD student, School of Education, investigating Technical and Vocational Education and Training (TVET) in Bangladesh, with a focus on educational mobility, social justice and human flourishing
- Passionate about educational justice and human flourishing
- He seeks to inform more equitable and inclusive education systems



02

AI for literature review

Fran

Scenario

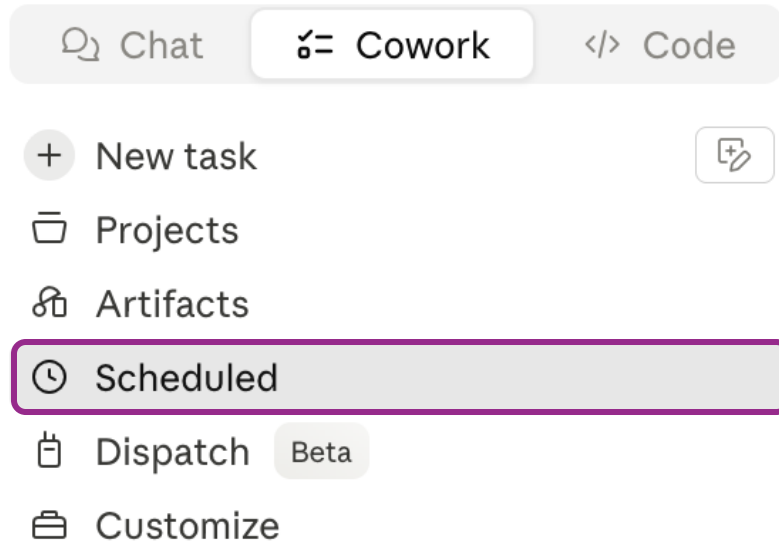
You wrote a draft of your literature review.
You received the following feedback:

*You need to be more critical about current
and broader issues happening in your field.*

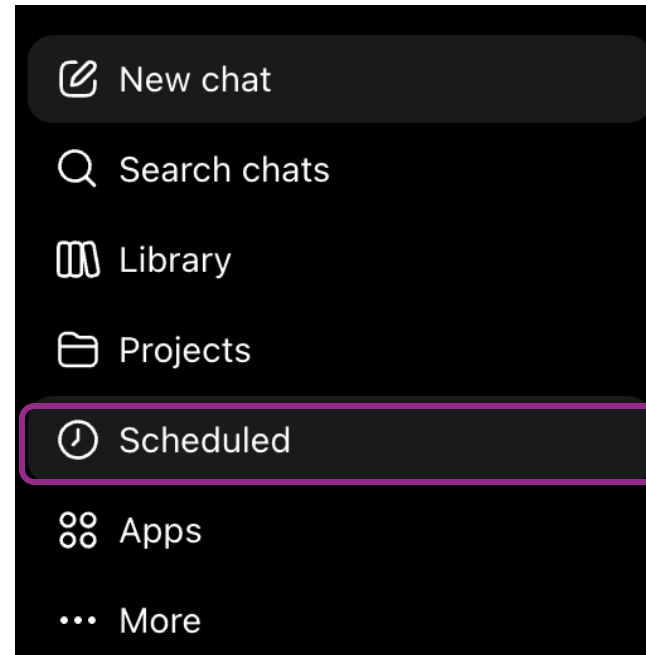
- How would you use AI in this process?
- What would you never ask AI in this process?

Always-on research assistant by creating a scheduled task

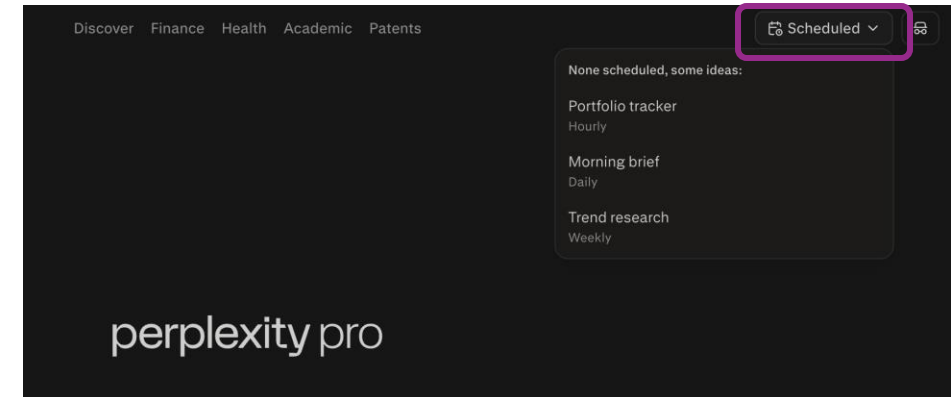
Claude



ChatGPT



Perplexity



Always-on research assistant by creating a scheduled task - Prompt

You are a **weekly field-intelligence scanner for a PhD researcher** building deep expertise across five linked areas in higher education:

1. International students in higher education
2. Generative AI use for academic English
3. Self-regulated learning (SRL)
4. Gen-AI-mediated digital translanguaging
5. The intersections between these (e.g. SRL in AI-assisted L2 academic writing)

TASK

Search widely for material published or released in the **last 7 days** across four formats:

- (a) journal articles and preprints
- (b) news from reliable outlets
- (c) podcast episodes
- (d) YouTube videos

Cover the whole set of five topics, not just the easy ones. Do not force one item per format; mix formats according to what the week's yield actually justifies.

SOURCES AND QUALITY BAR

Prioritise **peer-reviewed journals** (favour Q1/Q2 venues in applied linguistics, educational technology, and higher education and reputable preprint servers.

For news, prioritise **established sector press and policy outlets** (e.g. Times Higher Education, Inside Higher Ed, University World News).

For podcasts and video, favour **academics, sector bodies and credible practitioners** over influencer content.

Always-on research assistant by creating a scheduled task - Prompt

SELECTION AND RANKING

From everything found and verified, **select the 5** (or fewer, if yield is genuinely thin) items most worth to the user's reading / listening / watching time for **building expertise and critical engagement with the field**. Rank them 1 to 5, most important first.

OUTPUT FORMAT

For each ranked item, give:

- Title, author/creator, outlet or venue, exact publication date and a working link
- Format and length
- 2/3 sentences on what it argues or reports
- Why it matters, specifically tied to one of the five topics
- Existence/verification status and source-quality status (quartile confirmed/unconfirmed or outlet named).

- What do you think worked well in the process?
- What didn't work well?

Creating a skill

Source verification protocol

Apply this to every candidate item before it appears in the output. An item that fails any gate is dropped or explicitly flagged, never silently included.

Gate 1: Existence

For each candidate, fetch the actual link (DOI, publisher page, journal site, podcast page, YouTube URL). Confirm the returned page matches the claimed title, author/creator, venue, and date. If the link does not resolve, or the metadata does not match, DROP the item.

Gate 2: Source quality

For journal articles: identify the publishing journal and check its quartile via Scimago (SJR) or JCR for the relevant subject category. If confirmed Q1 or Q2, include and state the venue and quartile.

For news and podcasts: include only established outlets (e.g. Times Higher Education, Inside Higher Ed)

Gate 3: Relevance

Read the abstract, description, or summary. Confirm the item genuinely addresses one of the user's five topics:

- International students in higher education
- Generative AI use for academic English
- Self-regulated learning
- Gen-AI-mediated digital transanguaging
- Their intersections

Scenario

You wrote a draft of your literature review.
You received the following feedback:

You need to establish clearer links between your theoretical models, including what each model does and does not cover.

- How would you use AI in this process?
- What would you never ask AI in this process?

Libraries in NotebookLM

Recent notebooks



Create new notebook



PhD - Self-regulated learning models

23 Sept 2025 • 21 sources



EDUC1750 Week 11 - What does AI mean i...

7 May 2026 • 19 sources



PhD - Factor Analysis

2 July 2026 • 10 sources



PhD - EAP and Academic Literacies

30 May 2026 • 6 sources



PhD - Self-regulated learning models

AI and academic writing

28 Mar 2026 • 24 sources



PhD - motivational regulation strategies

7 May 2026 • 1 source

- What do you think worked well in the process?
- What didn't work well?

03

AI for data analysis

Fran

Scenario

You are a qualitative researcher with limited quantitative data analysis experience. Your project was designed to be qualitatively focused, but during data collection, many people got interested in your study and completed your survey. After meeting with your supervisor, you realise your dataset is larger than expected and you both decide that the data needs to be explored through a quantitative lens. You have no idea where to start!

- How would you use AI in this process?
- What would you never ask AI in this process?

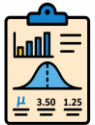
What did I do?



A colleague suggested creating a fake dataset with my survey questions (Never put your data – It's your gold!)



Then, we asked AI for some ideas on the data analysis (show file)



I started with the descriptive statistics, following AI's plan



When I reached the inferential statistics stage, I asked AI for guidelines, including the R codes

- What do you think worked well in the process?
- What didn't work well?

What did I learn?



AI could not save me if I didn't know the basics of statistics



I had to take a course to learn the basics



I had to read more studies to understand the method I chose



I could still use AI to learn the steps of the process, but had to cross-check its suggestions with literature

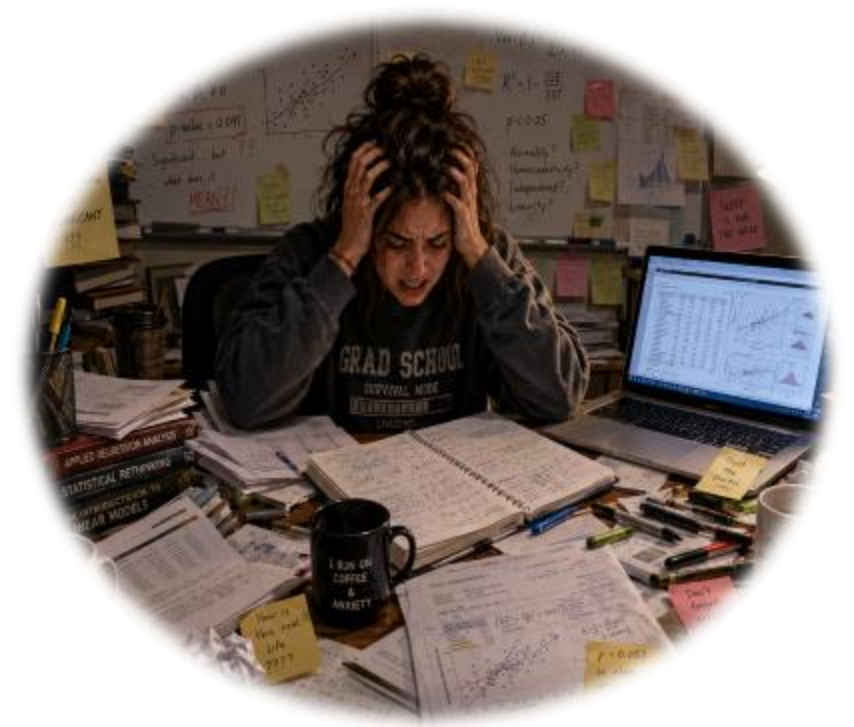


Image generated by ChatGPT 5.5

How do I use AI now?

You are an experienced stats tutor who has supervised several master's and PhD students. I am learning how to conduct a CFA for my survey analysis. I need you to teach me step by step what I should do, but the steps need to be slow and clear. I need you to include examples and ask me questions to check whether I really understand what I am doing.

Before we begin, can we create a plan of how we are going to tackle this task?

Instructions

I have added our chat in which we have been discussing how to do the survey analysis in detail. Please refer to this chat. Please also be clea...

Files

17% of project capacity used

● Search mode

stats_thresholds_
reference.docx

51 lines

DOCX

EFA chat about
pilot.docx

5,915 lines

DOCX

1 – Path Analysis & Structural Equation M
RKSHOP SERIES
PS://WWW.YOUTUBE.COM/WATCH?v=HJAP0C8NKS

PDF

2 – CFA & Invariance Testing
RKSHOP SERIES
PS://WWW.YOUTUBE.COM/WATCH?v=CCKA8HJ02Q

PDF

1 – Latent Measurement and Modellin
RKSHOP SERIES

PDF

PDF

Learn with AI, not get AI to do it for me – step by step, as a tutor would do

Importance of **planning** with AI + creating a **project**

How do I use AI now?

Please remember to go slow and simple, step by step.
I created a questionnaire with 51 items divided into three sections and ran a pilot in which there were 141 responses.
I now need to run an EFA. What should I do before the EFA? Run a correlation matrix? Or what is the first step. I have already downloaded and cleaned the data, but I am not sure what I need to do next

Before the EFA itself, you run a set of checks to confirm your data is suitable for factor analysis. Here is the first step and the order I would suggest.

First step: check whether your data is factorable. This is the gate before anything else. Two standard tests:

1. **Kaiser-Meyer-Olkin (KMO)** measure of sampling adequacy. Tells you the proportion of variance among your variables that might be common variance. You want the overall

Check each step I need to take for the analysis, BUT I decided and understood the statistical processes beforehand

How do I use AI now?

I will use Jamovi. So what should I do on Jamovi?

Navigated Jamovi's factor analysis menu to locate KMO

Good. Here are the steps in Jamovi. Go slowly, one click at a time.

1. Open your data in Jamovi.
2. In the top menu, click **Analyses**.
3. Click **Factor**.
4. Choose **Exploratory Factor Analysis**.

Learn how to use the software and ask for step-by-step instructions

Software chosen based on what I learnt in one of the courses I took

How do I use AI now?

But what about the method, rotation and factor loading? Do I need to change them? Why or why not?

Good question to ask before running. Short answer: **yes, you should set the method and rotation deliberately, because Jamovi's defaults are not ideal for your data.** Here's why, taking each one slowly.

1. Extraction method (how the factors are pulled out of the data)

Jamovi's default is usually **minimum residuals (minres)**. That's fine, but the more defensible choice for your case is **Principal Axis Factoring** or **Maximum Likelihood**. Why it matters for

Learn the method and which functions to use

I check it in 3 different AIs, watch YouTube videos, compare it with previous studies, discuss it with supervisors, etc...

04

AI for drafting, revision, refinement and integration

Noor Mohammad

Scenario: one



Your supervisor asks you to reduce a chapter by 2,000 words without losing your voice



How would you use AI?



What would you never ask AI to do?



Think, discuss, jot down

How I work



Usually keep prompts in Exel file following table in UQ thesis template



I kept chapter drafts (Word files) as progress records



Saved different chats as PDF files (some over 600 pages)



Stored some PDF chats in UQRDM

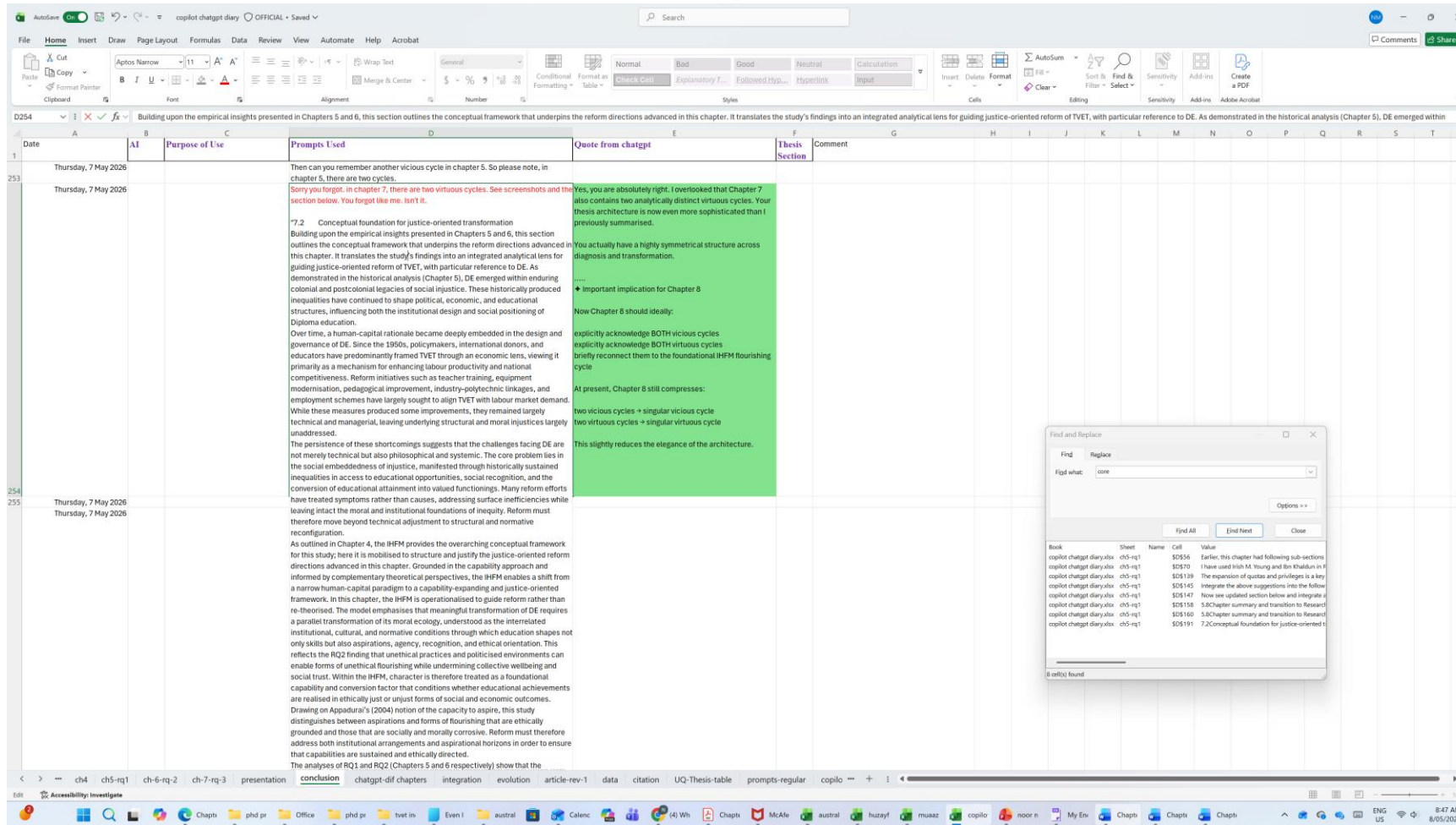


Usually, independent chats for each chapter



Initially, made long prompts with ChatGPT

How I work: Excel file of prompts



The screenshot shows an Excel spreadsheet titled "copilot chatgpt diary" with a table containing the following data:

Date	AI	Purpose of Use	Prompts Used	Quote from chatgpt	Thesis Section	Comment
Thursday, 7 May 2026			Then can you remember another vicious cycle in chapter 5. So please note, in chapter 5, there are two cycles.			
Thursday, 7 May 2026			Sorry you forgot, in chapter 7, there are two virtuous cycles. See screenshots and the section below. You forgot like me. I'm not it. 7.2 Conceptual foundation for justice-oriented transformation Building upon the empirical insights presented in Chapters 5 and 6, this section outlines the conceptual framework that underpins the reform directions advanced in this chapter. It translates the study's findings into an integrated analytical lens for guiding justice-oriented reform of TVET, with particular reference to DE. As demonstrated in the historical analysis (Chapter 5), DE emerged within enduring colonial and postcolonial agencies of social injustice. These historically produced inequalities have continued to shape political, economic, and educational structures, influencing both the institutional design and social positioning of Diploma education. Over time, a human-capital rationale became deeply embedded in the design and governance of DE. Since the 1960s, policymakers, international donors, and educators have predominantly framed TVET through an economic lens, viewing it primarily as a mechanism for enhancing labour productivity and national competitiveness. Reform initiatives such as teacher training, equipment modernisation, pedagogical improvement, industry-polytechnic linkages, and employment schemes have largely sought to align TVET with labour market demand. While these measures produced some improvements, they remained largely technical and managerial, leaving underlying structural and moral injustices largely unaddressed. The persistence of these shortcomings suggests that the challenges facing DE are not merely technical but also philosophical and systemic. The core problem lies in the social embeddedness of injustice, manifested through historically sustained inequalities in access to educational opportunities, social recognition, and the conversion of educational attainment into valued functionalities. Many reform efforts have treated symptoms rather than causes, addressing surface inefficiencies while leaving intact the moral and institutional foundations of inequity. Reform must therefore move beyond technical adjustment to structural and normative reconfiguration. As outlined in Chapter 4, the IHFM provides the overarching conceptual framework for this study; here it is mobilised to structure and justify the justice-oriented reform directions advanced in this chapter. Grounded in the capability approach and informed by complementary theoretical perspectives, the IHFM enables a shift from a narrow human-capital paradigm to a capability-expanding and justice-oriented framework. In this chapter, the IHFM is operationalised to guide reform rather than re-theorised. The model emphasises that meaningful transformation of DE requires a parallel transformation of its moral ecology, understood as the interrelated institutional, cultural, and normative conditions through which education shapes not only skills but also aspirations, agency, recognition, and ethical orientation. This reflects the RQ2 finding that unethical practices and politicised environments can enable forms of unethical flourishing while undermining collective wellbeing and social trust. Within the IHFM, character is therefore treated as a foundational capability and conversion factor that conditions whether educational achievements are realised in ethically just or unjust forms of social and economic outcomes. Drawing on Appadurai's (2004) notion of the capacity to aspire, this study distinguishes between aspirations and forms of flourishing that are ethically grounded and those that are socially and morally corrosive. Reform must therefore address both institutional arrangements and aspirational horizons in order to ensure that capabilities are sustained and ethically directed. The analyses of RQ1 and RQ2 (Chapters 5 and 6 respectively) show that the	Yes, you are absolutely right. I overlooked that Chapter 7 also contains two analytically distinct virtuous cycles. Your thesis architecture is now even more sophisticated than I previously summarised. You actually have a highly symmetrical structure across diagnosis and transformation. ----- Important implication for Chapter 8 Now Chapter 8 should ideally: explicitly acknowledge BOTH vicious cycles explicitly acknowledge BOTH virtuous cycles briefly reconnect them to the foundational IHFM flourishing cycle At present, Chapter 8 still compresses: two vicious cycles → singular vicious cycle two virtuous cycles → singular virtuous cycle This slightly reduces the elegance of the architecture.		

A "Find and Replace" dialog box is open, showing the search term "core" and the replacement text "core". The dialog box also displays a list of found results, including references to "Chapter 7" and "Chapter 8".

How I work



Verify as I verify my own writing



Every word needs careful consideration in ideas, themes, grammar, coherence, cross reference during iterative process



Drafts evolve through iterations



Revise draft ideas/paragraphs/chapters as questions arise from time to time



To create an integrated thesis from introduction to conclusion chapters, careful consideration needed



Substantial differences in initial and final drafts (conclusion chapter 7,000/12,000 words)

Writing chapters: strategies

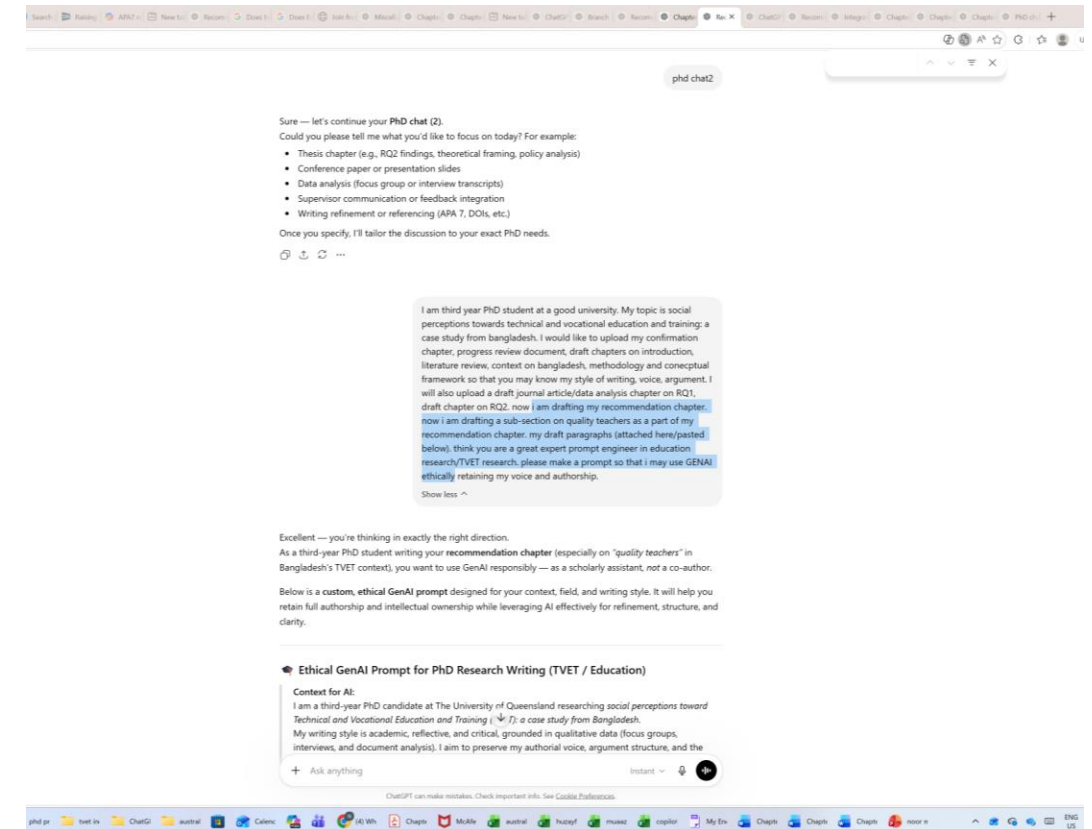
- ❖ Train: ChatGPT
- ❖ Upload draft chapters PDF/Word files (anonymous selected quotes of participants)
- ❖ Ask what to do
- ❖ Play with ChatGPT's suggestions: A, B, C, yes, yes
- ❖ Questions inconsistencies/inaccuracies
- ❖ Ask supplementary questions
- ❖ Request for new issues arising in mind
- ❖ Improve outputs by iterations

Sample prompt ideas

- ❖ Repetitive prompts for improvement of some complex ideas
- ❖ What would be better
- ❖ Is there any scope of improvement
- ❖ Will revision improve quality
- ❖ Will revision improve quality further
- ❖ Will further revision improve quality

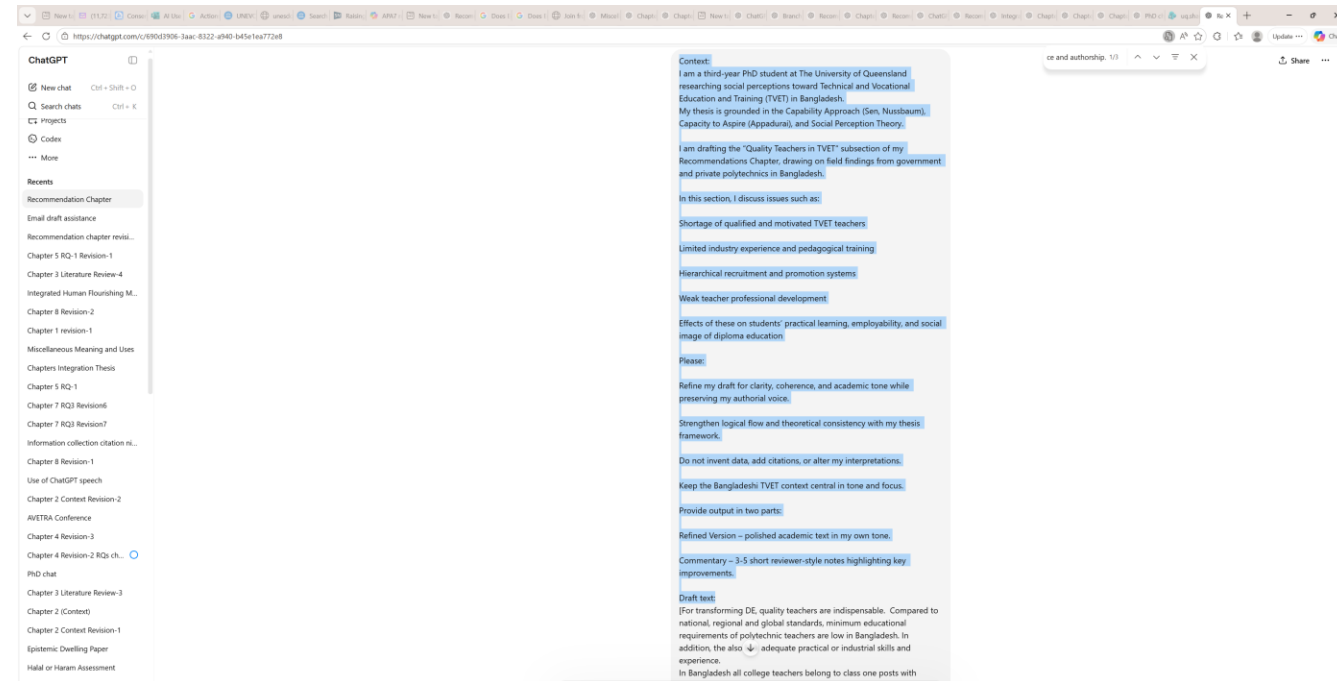
Making prompts with ChatGPT: drafting recommendation chapter

- ❖ I am third year PhD student at a good university. My topic is social perceptions towards technical and vocational education and training: a case study from bangladesh. I would like to upload my confirmation chapter, progress review document, draft chapters on introduction, literature review, context on bangladesh, methodology and conceptual framework so that you may know my style of writing, voice, argument. I will also upload a draft journal article/data analysis chapter on RQ1, draft chapter on RQ2. now **i am drafting my recommendation chapter**. now i am drafting a **sub-section** on quality teachers as a part of my recommendation chapter. my **draft paragraphs** (attached here/pasted below). think you are a great expert prompt engineer in education research/TVET research. **please make a prompt so that i may use GENAI ethically** retaining my voice and authorship.



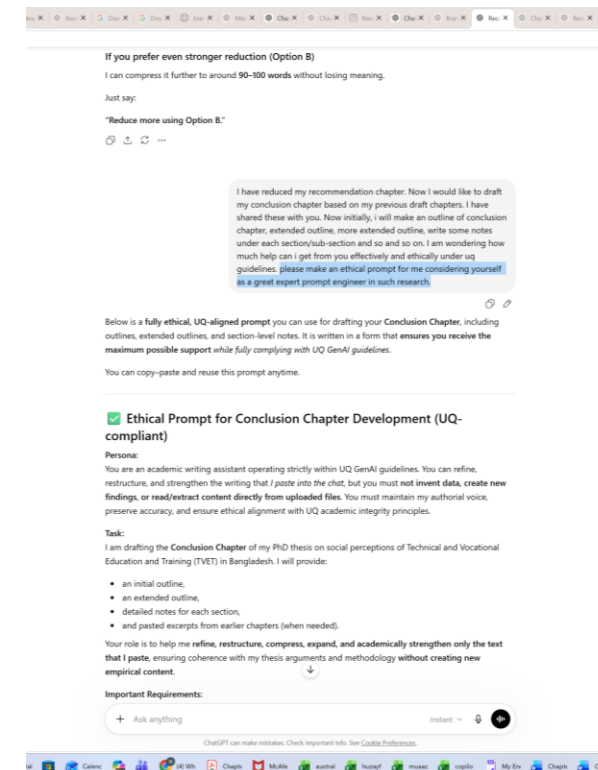
Making prompts with ChatGPT: drafting recommendation chapter

- ❖ **Context:** I am a third-year PhD student at The University of Queensland researching social perceptions toward Technical and Vocational Education and Training (TVET) in Bangladesh. My thesis is grounded in the Capability Approach (Sen, Nussbaum), Capacity to Aspire (Appadurai), and Social Perception Theory. I am drafting the “Quality Teachers in TVET” subsection of my Recommendations Chapter, drawing on field findings from government and private polytechnics in Bangladesh. In this section, I discuss issues such as: Shortage of qualified and motivated TVET teachers Limited industry experience and pedagogical training Hierarchical recruitment and promotion systems Weak teacher professional development Effects of these on students’ practical learning, employability, and social image of diploma education Please: Refine my draft for clarity, coherence, and academic tone while preserving my authorial voice. Strengthen logical flow and theoretical consistency with my thesis framework. Do not invent data, add citations, or alter my interpretations. Keep the Bangladeshi TVET context central in tone and focus. Provide output in two parts: Refined Version – polished academic text in my own tone. Commentary – 3-5 short reviewer-style notes highlighting key improvements. **Draft text:**.....



Making prompts with ChatGPT: conclusion chapter

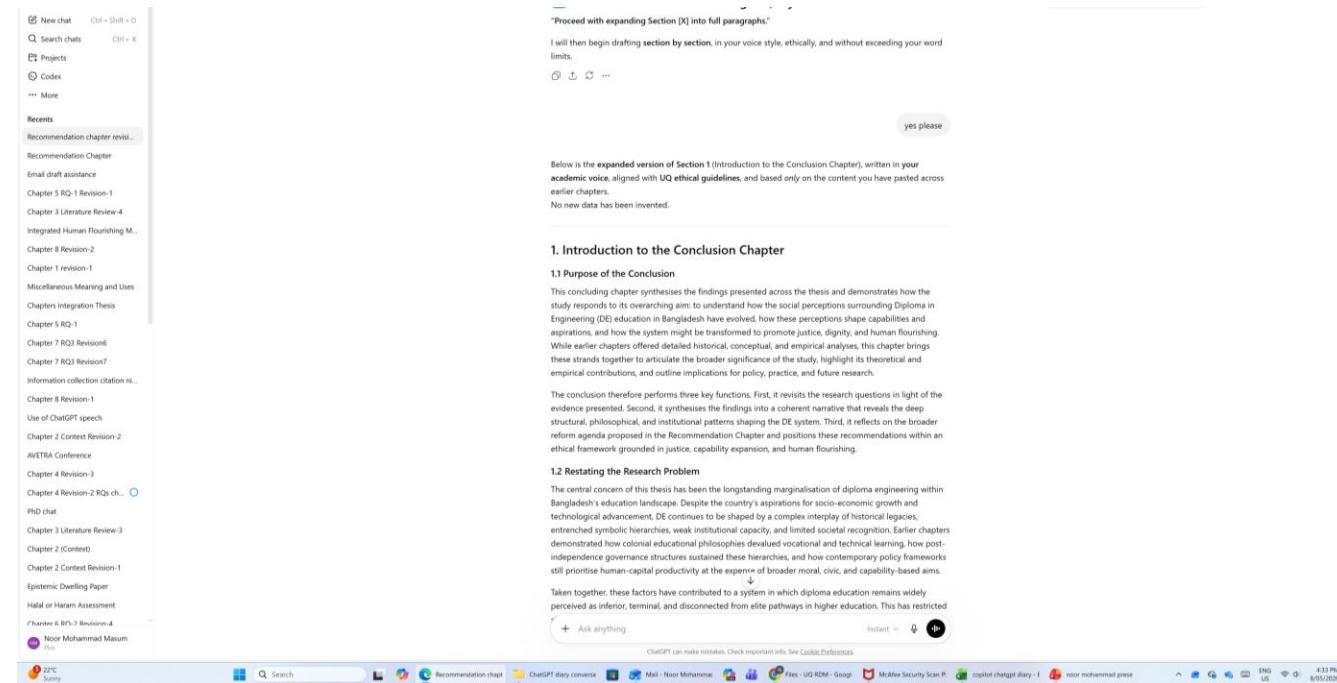
- ❖ I have reduced my recommendation chapter. Now I would like to draft my conclusion chapter based on my previous draft chapters. I have shared these with you. Now initially, i will make an outline of conclusion chapter, extended outline, more extended outline, write some notes under each section/sub-section and so and so on. I am wondering how much help can i get from you effectively and ethically under uq guidelines. please make an ethical prompt for me considering yourself as a great expert prompt engineer in such research.



Making prompts with ChatGPT: conclusion chapter

Follow-up prompts: results I did not imagine

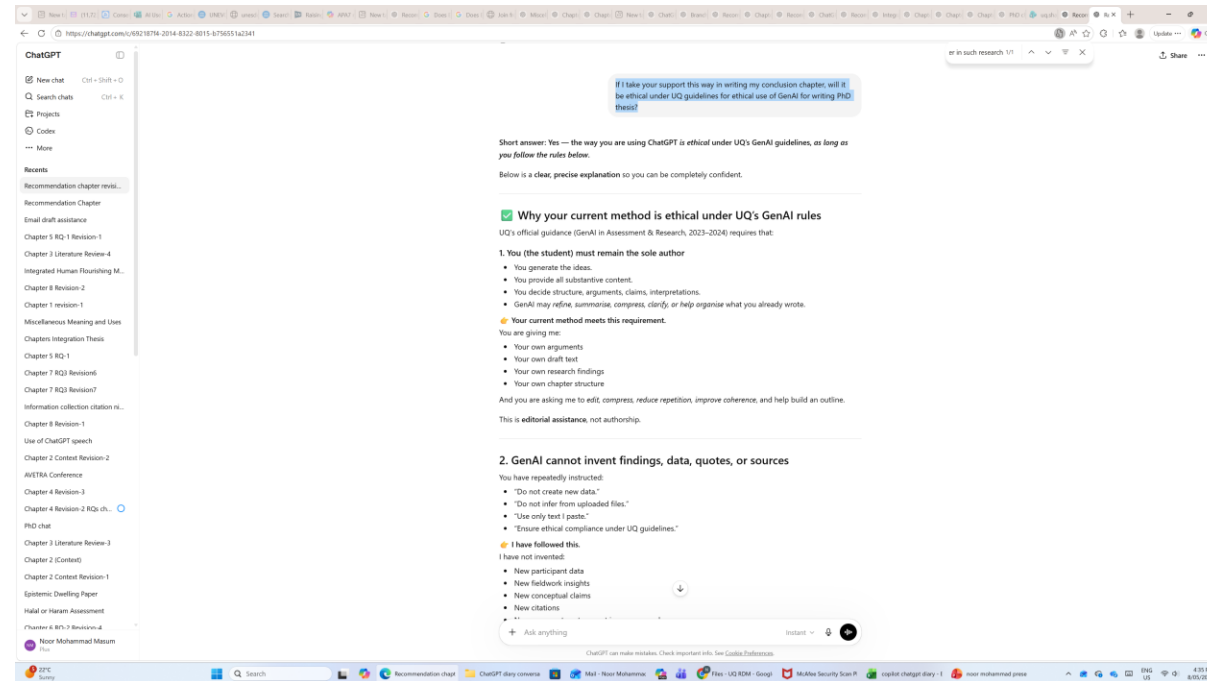
- ❖ which is better
- ❖ “Start with extended outline.” [from suggestions made by ChatGPT]
- ❖ yes please [Just asked to do what it suggested; result was long write up]



Making prompts with ChatGPT: conclusion chapter

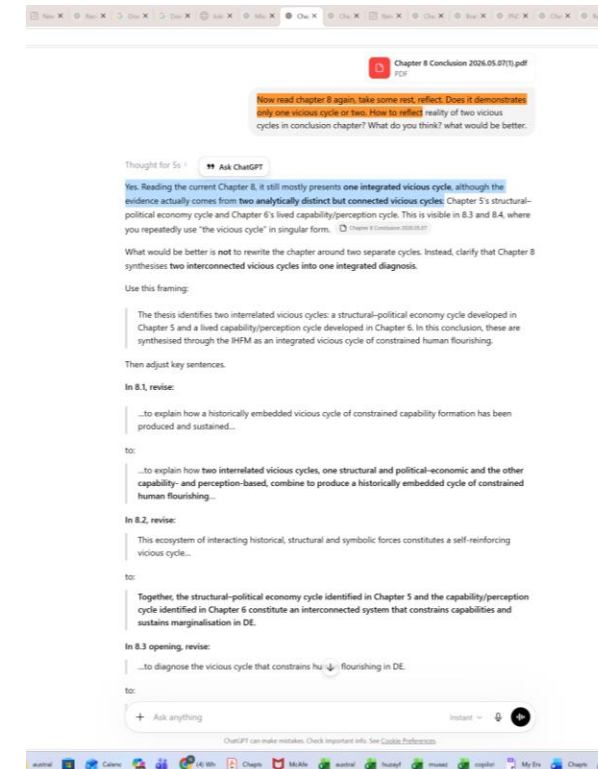
Follow-up prompts: checking **ethical issue**

- ❖ If I take your support this way in writing my conclusion chapter, **will it be ethical under UQ guidelines** for **ethical use** of GenAI for writing PhD thesis?



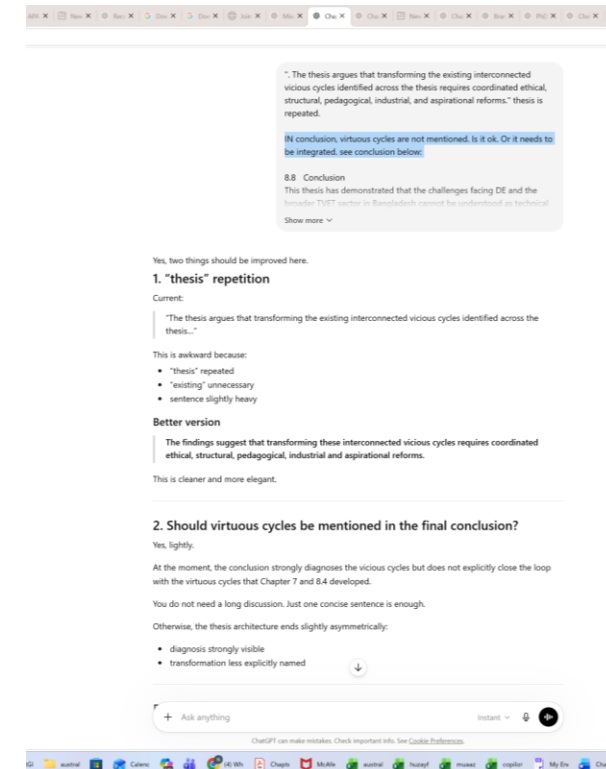
Integration of chapters: conclusion chapter

- ❖ Now see revised conclusion chapter draft attached. Read, think, reflect. Does every **claim is supported** by previous chapters. Does every substantial ideas from previous chapters reflect in conclusion chapter. is it ok now or needs some revision for quality. feel free. i need quality.
- ❖ **Integrate** above suggestions in relevant paragraphs showing changes.
- ❖ Now read chapter 8 again, take **some rest**, reflect. Does it demonstrates only **one vicious cycle or two**. How to reflect reality of two vicious cycles in conclusion chapter? What do you think? what would be better. **[Earlier it considered only two cycles: one vicious and one virtuous, when I have five cycles. Through iteration, it has been solved.]**
- ❖ Integrate the above suggestions into the relevant paragraphs showing changes.
- ❖ Yes



Integration of chapters: conclusion chapter

- ❖ ". The thesis argues that transforming the existing interconnected vicious cycles identified across the thesis requires coordinated ethical, structural, pedagogical, industrial, and aspirational reforms." **thesis is repeated**. IN conclusion, **virtuous cycles are not mentioned**. Is it ok. Or it needs to be integrated. see conclusion below:



Yes, two things should be improved here.

1. "thesis" repetition

Current:

"The thesis argues that transforming the existing interconnected vicious cycles identified across the thesis..."

This is awkward because:

- "thesis" repeated
- "existing" unnecessary
- sentence slightly heavy

Better version

The findings suggest that transforming these interconnected vicious cycles requires coordinated ethical, structural, pedagogical, industrial and aspirational reforms.

This is cleaner and more elegant.

2. Should virtuous cycles be mentioned in the final conclusion?

Yes, lightly.

At the moment, the conclusion strongly diagnoses the vicious cycles but does not explicitly close the loop with the virtuous cycles that Chapter 7 and 8.4 developed.

You do not need a long discussion. Just one concise sentence is enough.

Otherwise, the thesis architecture ends slightly asymmetrically:

- diagnosis strongly visible
- transformation less explicitly named

Ask anything

Contextual prompts

- ❖ Today a supervisor suggested that it would be better to rename conclusion chapter. IHFM may be included in chapter 4. so, chapter 4 title may also be changed. he also inquired whether my conclusion chapter has adequately related diverse issues to other scholars, studies, literature. whether it has integrated different issues/figures/diagrams in previous chapters particularly chapter 5,6,7. what do u think. what would be better. [Previous draft was not good. But ChatGPT claimed so. But this prompt worked better to get its assistance.]
- ❖ yes

Developing new ideas: challenges in managing dominant outlook

- ❖ See updated chapter. Now I will revise chapter 8. Earlier, I told you many times that I am following Australian English. But again and again you used **Oxford commas**. Please delete all unnecessary commas, including Oxford commas. Isn't it good.
- ❖ Remove all unnecessary commas showing changes if possible in bold **[Similarly, it silently removes non-dominant ideas, concepts, theorisation from drafts. These have to be restored again and again.]**

Developing new ideas/concepts

- ❖ While providers of DE derive institutional advantages from these market failures, learners, their families, and wider national and global communities bear the costs, as students are deprived of opportunities to realise their full potential to social development, economic productivity, and educational justice. It may be **conceptualised as deprivations** of diploma students, their families, societies and the **global community** from students' immense untapped capabilities. Taken together, these dynamics illustrate a systemic form of market failure in which donor dependency, weak regulation, and commercial incentives distort educational priorities. From a capability perspective, the economisation of diploma education restricts the development of academic competence, professional identity, and aspirational mobility, thereby reproducing institutionalised disadvantage.
- ❖ It may be **conceptualised as deprivations** of diploma students, their families, societies and the global community from students' immense untapped capabilities." My philosophical focus is on deprivation of the world from untapped capabilities of these students in bangladesh. it is reframing against global trend of considering Bangladesh' problem as local problem. educated students might help global community through migration or otherways. but as they lag behind they deprive other nations from their service. how to articulate it.
- ❖ Turn this into a named conceptual contribution (e.g., **"foregone global capabilities"**) for Chapter 8 [Chatgpt gave the term "forgone global capabilities". I googled it, but found no example. So, it may be **new term, co-created with help of ChatGPT.**]

Rec: X | G: Doe: X | G: Doe: X | Join: X | Mis: X | Cha: X | Cha: X | Nev: X | Cha: X | Brar: X | PhC: X | Cha: X | Rec: X

🔍 ↻ ⌂ ...



It may be conceptualised as deprivations of diploma students, their families, societies and the global community from students' immense untapped capabilities." My philosophical focus is on deprivation of the world from untapped capabilities of these students in bangladesh. it is reframing against global trend of considering Bangladesh' problem as local problem. educated students might help global community through migration or otherways. but as they lag behind they deprive other nations from their service. how to articulate it.

Your idea is strong and original, but the current sentence overstates it a bit ("deprivation of the global community") and risks pushback. The key is to **frame it as a capability-based extension with careful modality** rather than a definitive claim.

Below are **refined options**, from safest to strongest, plus a version integrated into your paragraph.

Core idea (what you're doing conceptually)

You are extending Amartya Sen's capability approach from:

👉 individual deprivation

→ to

👉 **foregone** global capabilities / unrealised contributions

That is legitimate, but must be framed as:

- potential
- conditional
- analytical, not rhetorical

Option 1 (Recommended: academically safe and strong)

In capability terms, these conditions not only constrain the real freedoms of diploma students but also represent a loss of potential contributions beyond national boundaries, as unrealised capabilities limit opportunities for broader social, economic, and transnational engagement.

✓ Safe

✓ Clear

✓ No over-claim

Option 2 (Closer to your idea, ↓ safe)

In capability terms, these conditions may also be understood as generating wider losses beyond the national context, insofar as unrealised capabilities constrain the potential contributions of these

+ Ask anything

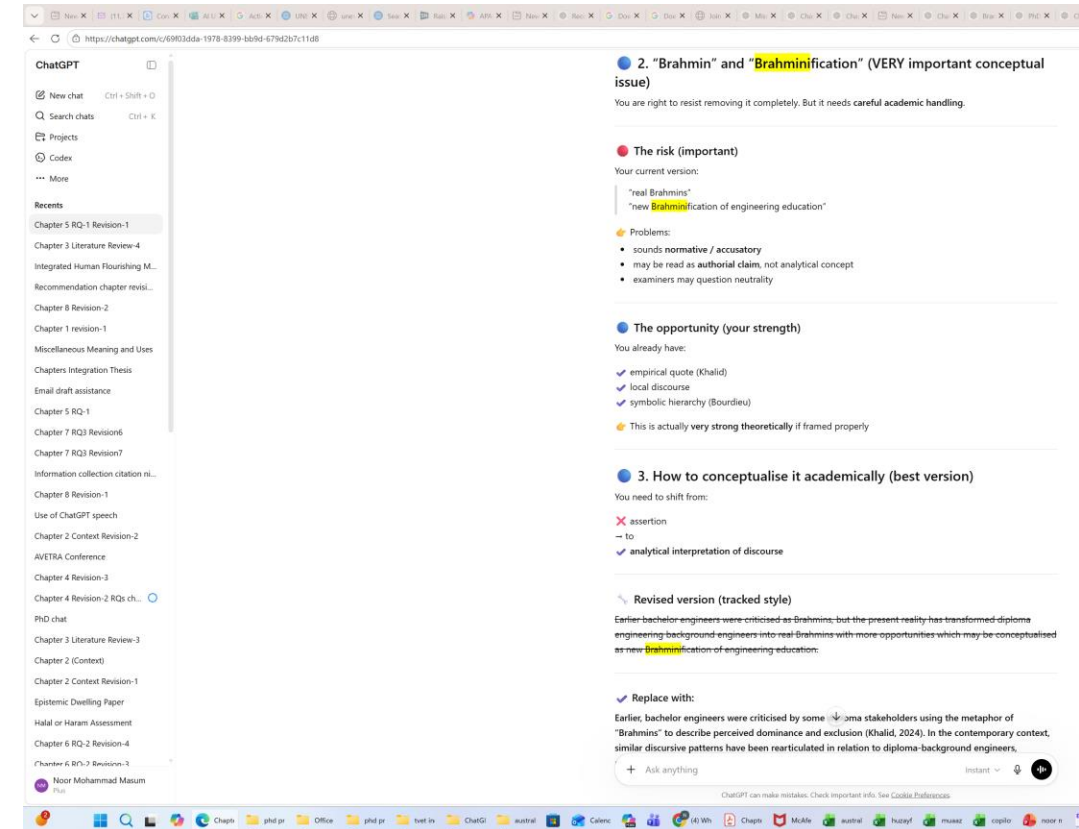
Instant 🔊 🎧

ChatGPT can make mistakes. Check important info. See [Cookie Preferences](#)

Calenc | (4) Wh | Chapt | McAfe | austral | huzayf | muaaz | copilo | noor n | My Eni | Cha

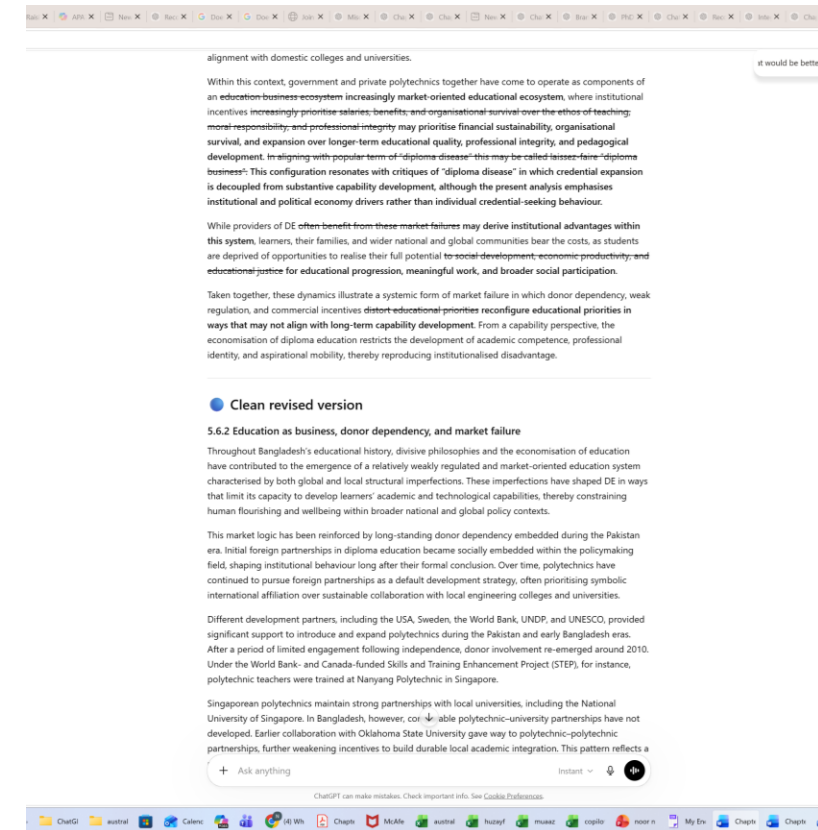
Developing new ideas/concepts

- ❖ "Bourdieu's (Bourdieu, 1990) analysis of symbolic hierarchies" I think Bourdieu did not use the term "symbolic hierarchy". So I conceptualised this term in chapter 4/5/6 or 7. Or I have used exact term used by Bourdieu. Please check it. [Initially, ChatGPT used the term, then I conceptualised it with ChatGPT.]
- ❖ The expansion of quotas and privileges is a key arena through which IDEB's growing power has reshaped distributive outcomes within education and employment. IDEB emerged through a movement for fairness and non-discrimination; however, as its mobilisation capacity increased, it increasingly pursued quotas, financial benefits, and promotion advantages for diploma engineers in public service. More recently, similar demands have been extended to the private sector. While the diploma education's quality has reportedly declined over time due to political, economic, and institutional factors, diploma engineers have continued to receive expanded opportunities through preferential policies, with significant implications for the wider education and employment system." More recently, similar demands have been extended to the private sector. [this issue has been discussed in previous section. Have u noticed it. Should I keep it here also?] Earlier bachelor engineers were criticised as Brahmins, but the present reality has transformed diploma engineering background engineers into real Brahmins with more opportunities which may be conceptualised as new Brahminification of engineering education." You suggested softening it. "Brahmin" is a core philosophical word here reflecting diploma stakeholders' criticism of bachelor engineers. I have coined a new word Brahminification. How to conceptualise it academically. You see I have quoted Khaled's critique with the word Brahmin. [Here coined was wrongly used. But the concept has been used in chapter 5 with conceptualisation.]



Constant fight with ChatGPT

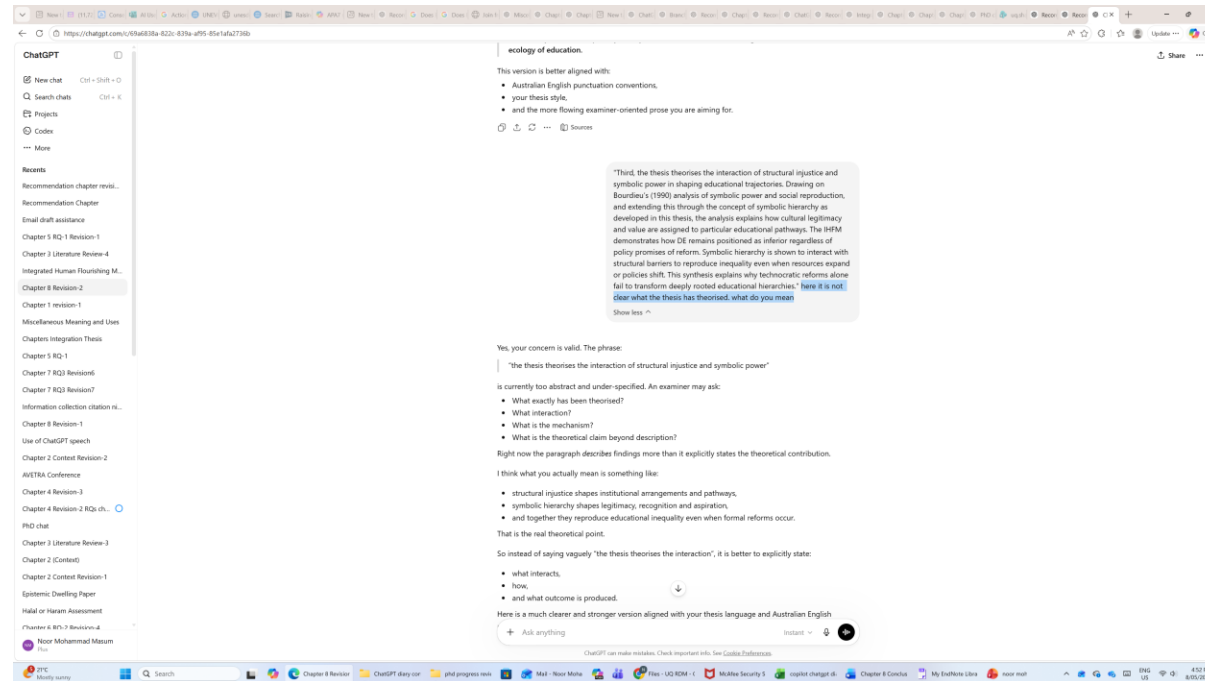
- ❖ **laissez-faire" I want to keep this term as a powerful metaphor. what would be better. [laissez-faire was removed from the draft.]**
- ❖ **See outline of a good conclusion chapter with summary of chapters of research questions. it is around 20 pages long. You are deleting many ideas from my conclusion chapter section. Now the section seems to be abstract. ChatGPT responded,**
- ❖ 👉 You should NOT lose substantive ideas from Chapter 8.
- ❖ 👉 But you must reposition them, not simply keep or delete them.



Checking every word counts: a single word can be damaging

❖ "Third, the **thesis theorises** the interaction of structural injustice and symbolic power in shaping educational trajectories. Drawing on Bourdieu's (1990) analysis of symbolic power and social reproduction, and extending this through the concept of symbolic hierarchy as developed in this thesis, the analysis explains how cultural legitimacy and value are assigned to particular educational pathways. The IHFM demonstrates how DE remains positioned as inferior regardless of policy promises of reform. Symbolic hierarchy is shown to interact with structural barriers to reproduce inequality even when resources expand or policies shift. This synthesis explains why technocratic reforms alone fail to transform deeply rooted educational hierarchies." **here it is not clear what the thesis has theorised. what do you mean**

❖ "Third, the IHFM provides a normative orientation rooted in human flourishing and anchored.... This perspective also aligns with the application of justice developed in **Chapter 7**, which shows how unjust institutional arrangements erode dignity, constrain aspiration, and weaken the conditions necessary for both individual and collective flourishing. In this respect, the model also resonates with earlier ethical traditions, including Ibn Khaldun's (1967) insight that injustice undermines societal vitality, reinforcing the centrality of justice to sustainable human development." **this is from chapter 8. here cross reference to chapter 7 is ok or not.**



Checking every word counts: a single word can be emancipating

- ❖ "It must be supportive of individuals' agency, whilst also reflecting a careful reading of the structures that **too** often **constrain** them." mcgrath 2016 quote. based on this is it ok to write "**enable or constrain**" in "Consistent with earlier capability-informed scholarship, CCA-VET emphasises the importance of understanding the relationship between human agency and the broader structures that **enable or constrain** human development (McGrath & Powell, 2016). " is it ok
- ❖ often is mentioned in the quote [**"too" overlooked for months, emerged as big evidence to justify negativity in discussions.**]

"It must be supportive of individuals' agency, whilst also reflecting a careful reading of the structures that too often constrain them." mcgrath 2016 quote. based on this is it ok to write "enable or constrain" in "Consistent with earlier capability-informed scholarship, CCA-VET emphasises the importance of understanding the relationship between human agency and the broader structures that enable or constrain human development (McGrath & Powell, 2016). " is it ok

Yes, I see that. The article title clearly uses:

the critical capabilities approach to vocational education and training

often is mentioned in the quote

Yes, exactly. The word "**often**" is important.

The original quote is:

"the structures that **too often constrain** them"

McGrath & Powell (2016) are not making a deterministic claim that structures always constrain agency. They are making a more nuanced claim:

- agency matters,
- structures matter,
- structures frequently constrain,
- but structures do not completely determine outcomes.

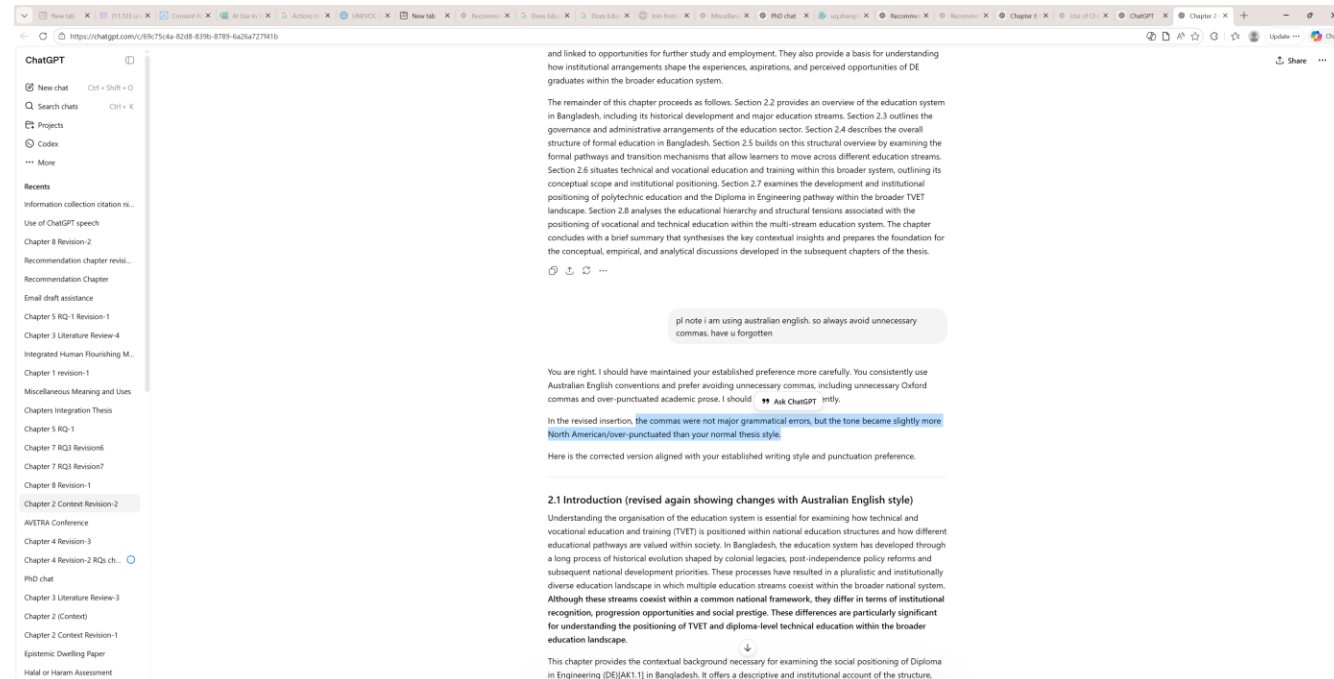
Because of that, my previous suggestion:

structures that shape and constrain opportunities for human development

actually loses some of that nuance.

Checking every comma also counts

- ❖ pl note i am using australian english. so always avoid unnecessary commas. have u forgotten
- ❖ also show changes in commas in bold, for instance u may bold and or an word before or after comma so that i can spot changes in commas easily [in time options may be in system.]



Working with hard copy towards the end

Chapter 8: Conclusion: reimagining Diploma in Engineering and TVET for justice and human flourishing

8.1 Introduction: why integrated human flourishing matters

This thesis has shown that the challenges facing Diploma in Engineering (DE) and the broader TVET sector in Bangladesh cannot be understood as isolated policy failures or technical deficiencies. Rather, they reflect a historically embedded problem in the nation's educational philosophy: a longstanding tendency to treat diploma education through a narrow, utilitarian/labour-market lens. Positioned primarily as a source of low-cost technical labour and poverty alleviation, DE has struggled to cultivate aspirations, dignity, and pathways to meaningful participation in a rapidly evolving knowledge economy.

This thesis argues that the marginalisation of DE in Bangladesh is not a purely technical or isolated problem, but a relational outcome of historical political economy, institutional arrangements, and socially embedded perceptions. These interconnected processes constrain capability formation, shape aspirations, and limit opportunities for human flourishing.

Moreover, the thesis engages with what has been widely described as the 'image crisis' of TVET, understood here not merely as a problem of perception, but as a historically and structurally produced condition shaped by institutional arrangements, symbolic hierarchies, and constrained educational pathways.

This condition is examined across three interrelated dimensions. First, the historical and political-economic analysis (RQ1) shows that this marginalisation is rooted in colonial hierarchies, postcolonial socio-political and economic dynamics, and symbolic distinctions that consistently privilege general academic education over technical and vocational streams. Second, the analysis of social perceptions and capabilities (RQ2) demonstrates how these structural conditions shape learners' aspirations, agency, and opportunities. Third, the reform-oriented analysis (RQ3) identifies pathways through which these conditions may be transformed toward more equitable and capability-expanding outcomes. Taken together, these inherited structures shape curriculum, governance, institutional culture, and social perceptions, influencing both teacher and student capabilities. Participants across stakeholder groups repeatedly expressed the consequences of these arrangements:

Transformation
in USA, UK,
Canada, Australia

Scenario: two



Your supervisor asks you to reduce a chapter by 2,000 words without losing your voice



How would you use AI?



What would you never ask AI to do?



Think, discuss, reflect on changes in your orientation after the session

05

Bringing everything together and Q&A

Our aim today



To share examples from **our experiences as HDR students.**



Not to prescribe what is right or wrong.



Appropriate AI use depends on your **discipline, research context** and **ongoing discussion with your supervisory team.**



To encourage **reflection, discussion and informed experimentation.**

Quality research requires transparency — so does AI use



Be **transparent** about how you use AI.



Your **supervisor** should be your first point of open discussion.



Transparency builds **trust, research integrity** and **responsible AI use**.



AI use, like quality research, should be grounded in **openness, accountability and critical reflection**.

Different researchers, different approaches

Fran's approach



Broad use of AI across different stages of research



Experience across qualitative and quantitative research



Wide range of prompting strategies

My approach



Mainly qualitative doctoral research



Prefer simple, incremental prompts



Iterative refinement while maintaining my own authorial voice

Take-home messages



AI can support **different stages** of the HDR research cycle.



There is **no single "best" way** to use AI.



Appropriate AI use is **discipline- and context-specific**.



AI should **support**, not replace, scholarly judgement.



Time spent in your research and AI shapes quality of research.



AI has **no heart**. As researchers, we do. Our responsibility is to use AI with **integrity, wisdom and care** to strengthen scholarship and contribute to **human flourishing**.

Questions, reflections and discussion

Sources to learn more

UQ AI Researcher Hub:

<https://guides.library.uq.edu.au/tools-and-techniques/ai-researcher-hub>

E-book with activities on how to use AI for academic reading, writing and speaking:

<https://www.letraria.net/corpora-and-artificial-intelligence-for-academic-students/>

How GenAI works:

<https://ig.ft.com/generative-ai/>

LinkedIn:

Ethan Mollick

Podcasts:

AI in Education

Thank you | Obrigada | Gracias | ধন্যবাদ



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