

QPR 2026, Adelaide

# Do Thesis Topics Matter? How Topic Characteristics Shape Doctoral Experience and Confidence in Defence

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# Literature Review and Gap

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## Topic choice literature

- Interest shapes topic choice.
- Prior research supports continuity.
- Supervisor fit matters at selection.

## Doctoral experience studies

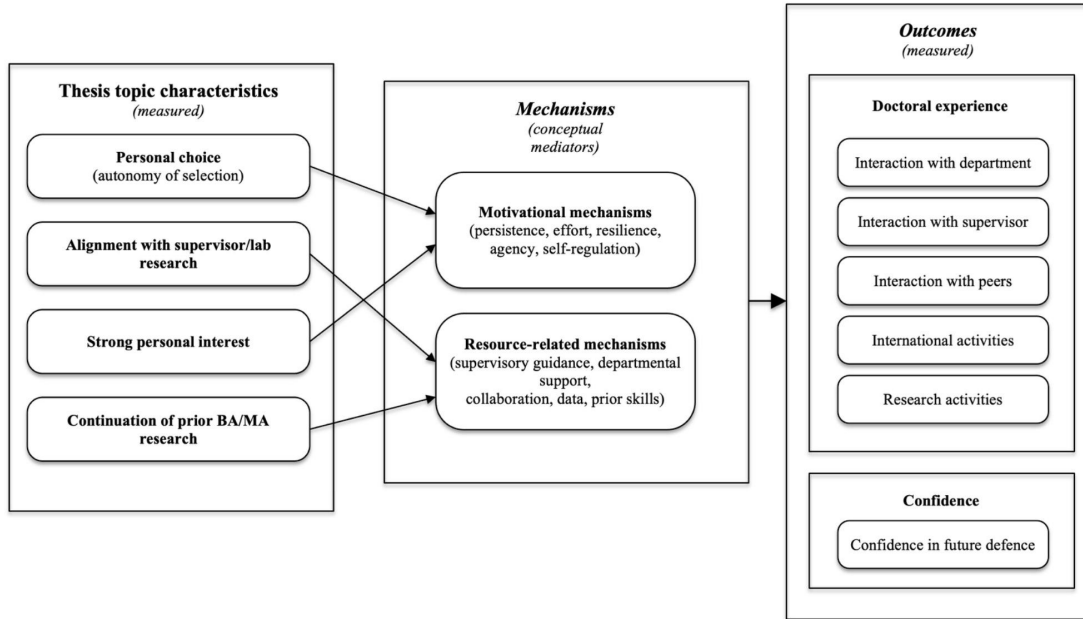
- Motivation supports persistence.
- Local support shapes progress.
- Confidence depends on environment.

**Few studies test whether thesis topic characteristics predict doctoral experience and confidence in defence.**

- RQ1. How are topic characteristics related to doctoral experience?
- RQ2. How are they related to confidence in future defence?

# Conceptual Framework

## Conceptual model



## Why Russia is an interesting case

- Topics are fixed early.
- Changing them later is costly.
- Support beyond the supervisor is limited.

**This makes early topic fit more consequential.**

# Data and Design

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## Nationwide sample

Russia, 2021-2022

**1,539 doctoral students**

161 universities

## Topic measures

1. Personal choice
2. Alignment
3. Strong personal interest
4. Continuation

## Analytical strategy

OLS with clustered SEs

Five experience models

One defence-confidence model

## Experience outcomes

Supervisor interaction

Department interaction

Peer interaction

International activities

Research activities

Confidence in defence

Controls include background and outcome-specific variables; the slide keeps only the focal thesis-topic predictors.

# How the Outcome Variables Were Built

## Experience outcomes

**19 study items**

3-point scale

**CatPCA**

R, promax rotation

**6**

**components**

78% variance

## Five components

**Supervisor interaction**

**Department interaction**

**Peer interaction**

**Research activities**

**International activities**

Educational workload

**Standardized component scores: higher values mean a stronger presence of that aspect.**

## Lack of confidence in defence

**5 fear items**

"I am afraid..." (1-4 scale)

**CatPCA**

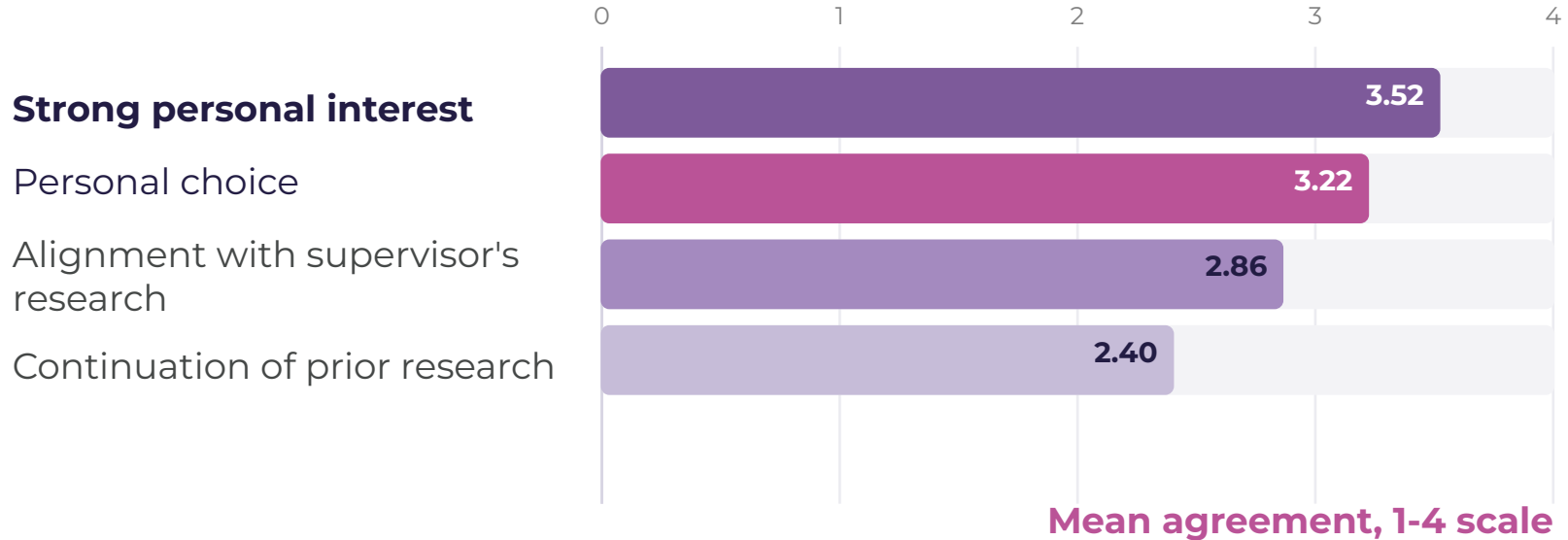
1 component  
66% variance

**Standardized score**  
**Higher values mean lower confidence.**

Later result slide reverses the sign for readability.

Experience outcomes come from 19 items and CatPCA with six extracted components; the confidence measure comes from five negatively worded fear items and a single CatPCA component.

# What Do Doctoral Students Report About Their Topics?



**Doctoral students most strongly agree that their topic is personally interesting. Continuity with earlier research is the weakest characteristic in simple descriptive terms.**

# Result 1: Doctoral Experience Across Five Dimensions

## Standardized coefficients for focal topic characteristics

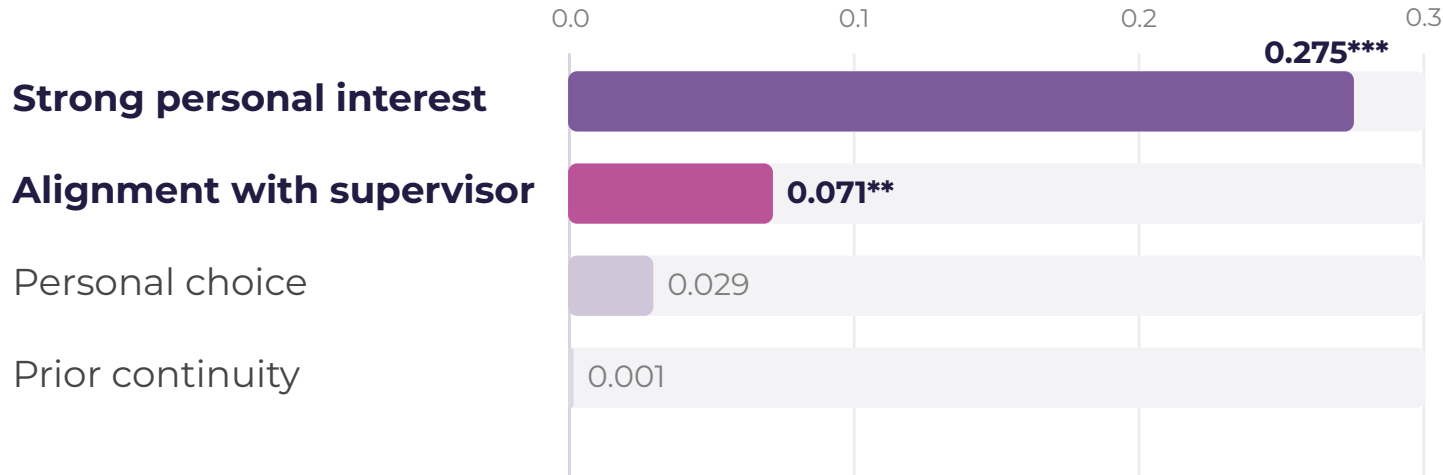
| Topic characteristic             | Supervisor      | Department      | Peers  | International   | Research        |
|----------------------------------|-----------------|-----------------|--------|-----------------|-----------------|
| Personal choice                  | 0.019           | 0.074*          | 0.061* | 0.063**         | 0.021           |
| Alignment with supervisor        | <b>0.154***</b> | <b>0.082**</b>  | 0.068* | <b>0.113***</b> | 0.074**         |
| <b>Strong personal interest</b>  | <b>0.189***</b> | <b>0.159***</b> | 0.064* | 0.067**         | <b>0.198***</b> |
| Prior continuity of the research | -0.017          | -0.011          | -0.006 | 0.010           | -0.034          |

- Strong personal interest is positive in all five models.
- Alignment with supervisor is also significant and positive in all five models.
- Personal choice matters only for department, peers, and international activity.
- Prior continuity is not significant once the other characteristics are included.

**Interest is the strongest topic-related predictor in 3 of the 5 experience models.**

## Result 2: Confidence in Future Thesis Defence

Signs reversed for readability: larger bars mean more confidence



**~4x**

Interest is almost four times stronger than alignment

**Only two topic characteristics matter here: strong personal interest and alignment with the supervisor's research.**

# Brief Summary

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## Interest beats fit

Across outcomes, a topic that stays meaningful to the student is more powerful than simple structural fit alone.

## Alignment still helps

Research fit with the supervisor is positive in every experience model and also supports confidence in defence.

## Autonomy alone is not enough

Personal choice mostly matters for outward engagement. It is not the main driver of research activity or defence confidence.

## Continuity is not the key story

Simply continuing an earlier topic does not predict better doctoral outcomes once the other topic characteristics are considered.

# Implications for Doctoral Programs

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## **Treat topic approval as support, not only as paperwork**

Early topic approval should include a serious conversation about whether the topic is genuinely interesting to the doctoral student.

## **Balance interest and feasibility**

The best topics are likely those that combine personal meaning with real local support, data, and supervision.

## **Make research fit visible early**

Departments should discuss supervision fit, data access, and research environment before weak topic choices become long-term problems.

The findings suggest that topic selection should remain flexible enough to combine doctoral student motivation with institutional support.

# Thank you

## Main message

**A good doctoral topic should be both personally meaningful and locally supported.**

Questions?