
Motivation
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RQ
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Literature
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Hypotheses
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Research design
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Results
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Conclusion
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The Pathway to a Successful MA Dissertation

Assessing the Effectiveness of Research Training

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PGCHE Project Presentation
23 June 2015

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Structure

- ① Motivation
 - ② Research questions
 - ③ Literature
 - ④ Hypotheses
 - ⑤ Research Design
 - ⑥ Results
 - ⑦ Discussion and Conclusion
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Motivation: Students' learning

▶ **Main goal of teaching:**

- Improve students' skills and knowledge.

▶ **Key factors affecting students' performance:**

- Demographics (gender, ethnicity, language skills)
- Previous experience
- Individual potential

→ Motivation: How does designing and delivering modules and curriculum affect the performance of these different types of students?

Motivation: Research training



▶ **Is research training effective?**

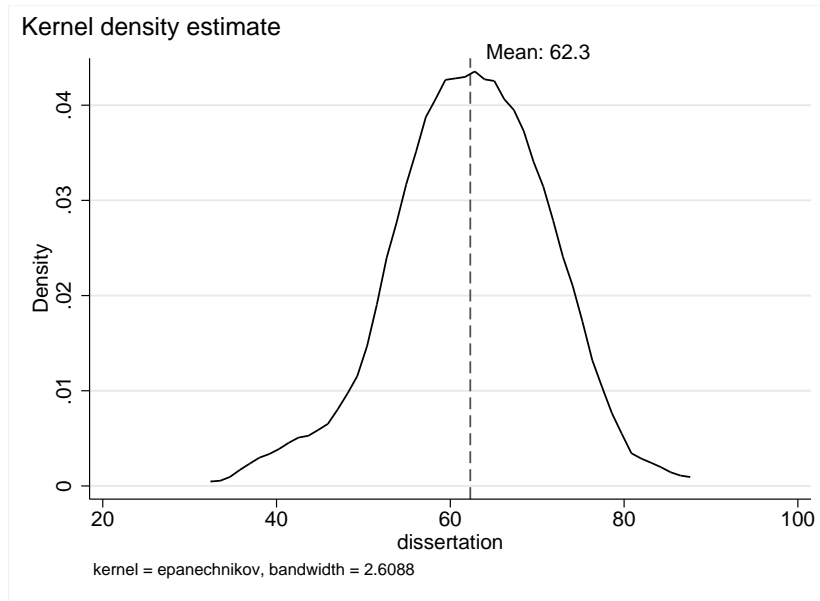
- For which students?
- Under which circumstances?



Q-Step

▶ **How can we improve students' learning?**

Motivation: MA dissertation results (in Politics and IR)



(Years: 2011-2013, 3 cohorts. N of students=220.)

Research Questions

- 1 Does methodological training significantly improve students' performance?
- 2 Do students from different backgrounds profit differently from methodological training?

Literature review: What determines the success of students' learning?

1. Demographic background

- ▶ Growing female advantage (Buchmann and DiPrete 2006)
 - ▶ 'Achievement gap' based on ethnicity (Kao and Thompson 2003)
 - Cultural orientation, e.g. educational aspiration (Coleman 1961; Jencks 1972; McClelland et al. 1953)
 - Structural position, e.g. parents, peers, schools (Bankston and Caldas 1998)
 - ▶ Adoption problems of international students
 - Language barriers (Ridley 2004; Andrade 2009)
 - Previous degree clashes (Scheyvens et al. 2003)
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Literature review: What determines the success of students' learning?

2. Previous experience and abilities

- ▶ Prior learning and academic achievement (Martin et al. 2013)
- ▶ Intellectual ability, learning style and personality (Busato 2000)

3. Programme specific factors

- ▶ Subject centred learning (Morrison-Saunders and Hobson 2013)
 - ▶ Part-time disadvantage (Nelson Laird and Cruce 2009)
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Literature review: What determines the success of students' learning?

4. Teacher characteristics

- ▶ Teacher quality (Hanushek 1971; Rockoff 2004; Devlin and O'Shea 2012)
- ▶ Teacher background, e.g. country of origin (Farkas et al. 1990; Alberts 2008)

Literature review: Summary

Impact on students' performance:

| <i>Positive</i> | <i>Negative</i> |
|--------------------------------|--|
| Mother-tong English | Ethnic minority |
| High academic achievement | Foreign-born |
| Match of teachers and subjects | Previous degree from non-related subject |
| | Part-time |

→ How can research training affect these positive and negative factors?

Hypotheses: The effectiveness of research training

Hypothesis 1: General

- ▶ Taking a research training course increases students' performance.

Hypothesis 2: Alienation

- ▶ Taking a research training course harms students that are generally disadvantaged.

Hypothesis 3: Compensation

- ▶ Taking a research training course benefits in particular students that are generally disadvantaged.

Research design: Data

Sample of students

- ▶ Last three cohorts of PGT students in politics and IR (N=220 students)
- ▶ **Why MA-Students?**
 - Student diversity: Different background and previous degrees
 - Learning diversity: Some take method training, some don't

Sources of data

- ▶ Student records (Saturn, application files, mark sheets)
- ▶ Supervision records
- ▶ Programme handbooks

Research design: Concepts and Variables

Dependent variable: Student performance

- ▶ Final mark in MA thesis (ranges from 35 to 85; average=62.3)
- ▶ **Why MA dissertations?**
 - Include all training that students received in their programme: knowledge, essay-writing, critical thinking, time-management
 - 'Objectively' assessed output that allows comparability
 - Dissertations are central in any degree (BA, MA, PhD)

Research design: Concepts and Variables

Independent variables

- ▶ Demographics: Gender, age, nationality, language skills, scholarship
- ▶ Pathway through the MA programme (full/part-time, modules, tutors, dissertation supervisor)
- ▶ Ability: Previous degree, marks received in all MA modules

Research design: MA programmes in politics at U of Notts

► 10 Programmes:

- MA in International Relations (39.1%)
- MA in Diplomacy (17.2%)
- MA in International Security and Terrorism (21.9%)
- MA in Social and Global Justice (4.6%)
- MA in War and Contemporary Conflict (2.5%)
- MA in Politics and Contemporary History (8.0%)
- MA in International Relations (Research Track) (3.3%)
- MA in Politics and Contemporary History (Research Track) (0.8%)
- MRes in Politics (Research Track) (0.4%)

► Modules: 30 politics + non-political options for some degrees

Research design: Research training provision

Training modules:

- MA modules:
 - Quantitative Political Analysis (Training)
 - Designing Political Enquiry (Research Design)
- Research track modules:
 - Research Design, Practice and Ethics (Research Design)
 - Foundations in Qualitative Methods (Training)
 - Foundations of Quantitative Methods (Training)
 - Philosophy of Research – Social Science (Research Design)

Who takes these training modules?

- IR students have to choose either QM or RD.
- Research track students have to do all four modules.
- Optional for all others.

Results

Descriptive results: Does taking method training make a difference?

Table: Average dissertation results

| <i>Method</i> | Research Design | Training |
|---------------------|-----------------|----------|
| Yes | 62.0 | 61.9 |
| No | 62.7 | 64.8 |
| Difference | +0.6 | +2.9 |
| N of students (Yes) | 96 | 35 |
| % | 38.1 | 13.9 |

→ How can we know that these effects are due to method training?

Results: Students' ability

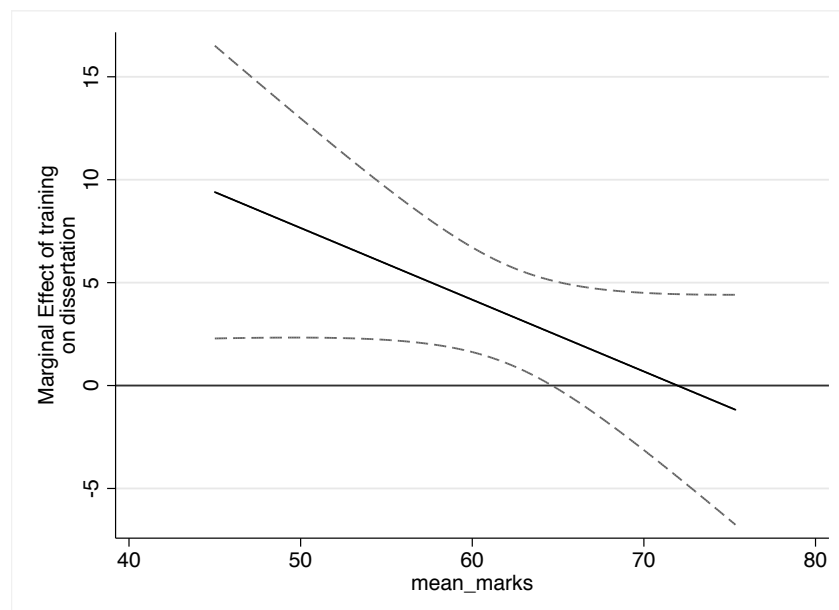
Table: OLS-Regression results: Predicting dissertation mark

| Testing | RESEARCH DESIGN | | TRAINING | |
|-----------------|---------------------|-------------------|--------------------|---------------------|
| | Hyp. 1 | Hyp. 2+3 | Hyp. 1 | Hyp. 2+3 |
| Method training | 2.61*** (0.85) | -1.56 (9.50) | 3.33*** (1.22) | 25.08** (12.30) |
| Average marks | 1.19*** (0.08) | 1.16*** (0.10) | 1.16*** (0.07) | 1.22*** (0.08) |
| Interaction | | 0.07 (0.15) | | -0.35* (0.20) |
| Intercept | -13.11*** (4.81) | -11.11* (6.36) | -10.91** (4.74) | -14.44*** (5.13) |
| R^2 | 0.54 | 0.53 | 0.54 | 0.54 |

Significance levels: * $p < .1$, ** $p < .05$, *** $p < .01$. Note: Dependent variable: Dissertation mark. Year-dummies included. Standard error in parentheses. Number of students: 220.

→ Method training generally matters!

Results: The compensation effect (H3) of method training



→ Method training benefits in particular academically weaker students!

Results: Students' background

| Testing | NATIVE ENGLISH (56.2%) | | FEE STATUS (Int: 27.5%) | | |
|---------------|---------------------------|----------|----------------------------|----------|----------|
| | Hyp. 1 | Hyp. 2+3 | Hyp. 1 | Hyp. 2+3 | |
| Training | 3.61** | 3.41* | Training | 2.63* | 3.54* |
| Engl. native | 3.63*** | 3.58*** | International | -5.31*** | -4.87*** |
| Interaction | | 0.45 | Interaction | | -3.60 |
| Intercept | 60.02*** | 60.05*** | Intercept | 63.48*** | 63.36*** |
| R^2 | 0.05 | 0.06 | | 0.09 | 0.09 |
| N of students | 204 | | 218 | | |

Significance levels: * $p < .1$, ** $p < .05$, *** $p < .01$. Note: Dependent variable: Dissertation mark. Year-dummies included. Fee status: British (47.6%), EU (24.9%), International (27.5%).

→ Method training cannot diminish the achievement gap due to language and origin!

Results: Students' previous degree

| Testing | FIRST CLASS (10.5%) | | POLITICS DEGREE (50.2%) | | |
|---------------|------------------------|----------|----------------------------|----------|----------|
| | Hyp. 1 | Hyp. 2+3 | Hyp. 1 | Hyp. 2+3 | |
| Training | 2.99 | 0.55 | Training | 3.02* | -0.10 |
| First class | 4.34 | 1.18 | Politics | -1.77 | -2.52* |
| Interaction | | 9.70 | Interaction | | 6.04* |
| Intercept | 62.57*** | 62.82*** | Intercept | 62.98*** | 63.35*** |
| R^2 | 0.04 | 0.06 | | 0.02 | 0.04 |
| N of students | 86 | | 200 | | |

Significance levels: * $p < .1$, ** $p < .05$, *** $p < .01$. Note: Dependent variable: Dissertation mark. Year-dummies included. Previous degree - results: First (10.5%), 2.1 (75.8%), 2.2 (13.7%). Previous degree - subject : Politics/IR (50.2%), Social Science + History (30.5%), Humanities (12.7%), Area Studies (4.2%), Other (2.4%)

→ Previous politics degree has negative impact on achievement, which is compensated by training.

Results: Degree structure

| Testing | PART-TIME (8.8%) | | SUPERVISOR MATCH (45.6%) | | |
|---------------|---------------------|----------|-----------------------------|----------|----------|
| | Hyp. 1 | Hyp. 2+3 | Hyp. 1 | Hyp. 2+3 | |
| Training | 2.89* | 2.70 | Training | 3.07* | 3.41 |
| Part-time | -0.57 | -0.98 | Supervisor match | -1.98* | -1.90 |
| Interaction | | 1.96 | Interaction | | -0.65 |
| Intercept | 61.95*** | 61.98*** | Intercept | 62.78*** | 62.74*** |
| R^2 | 0.01 | 0.01 | | 0.02 | 0.02 |
| N of students | | 202 | | | 220 |

*Significance levels: * $p < .1$, ** $p < .05$ *** $p < .01$. Note: Dependent variable: Dissertation mark. Year-dummies included. Previous degree - results: First (10.5%), 2.1 (75.8%), 2.2 (13.7%). Previous degree - subject : Politics/IR (50.2%), Social Science + History (30.5%), Humanities (12.7%), Area Studies (4.2%), Other (2.4%)*

→ Previous politics degree has negative impact on achievement, which is compensated by training.

Summary of results

- ▶ Method training - especially quantitative and qualitative training - improves students' performance.
- ▶ This positive effect is strongest for the students that generally have lower marks in their taught modules.
- ▶ Method training cannot diminish the achievement gap due to language and origin

Recommendations

- ▶ Extend the provision of research method training, as it is most beneficial for students that have lower marks and that require more training than those with generally very high marks.

Future research

- ▶ Increase number of cases
- ▶ Extend to areas beyond politics
- ▶ Better measurements for students' abilities
- ▶ Look at other training provisions

Positivist training in an otherwise non-positivist programme?

Thank you for your attention!

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