



# Technical Appendix

**Incentivising excellence: Attracting  
high-achieving teaching candidates**

February 2022

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# Appendix 1: Technical Details

The project was approved through BETA's ethics approval process, with risk assessed by Macquarie University (reference No: 520211038330091) in accordance with the guidelines outlined in the National Statement on Ethical Conduct in Human Research.

## Population and sampling

Our population of interest was young high-achievers and mid-career professionals who had never studied teaching or worked as a teacher. Young high-achievers were defined as 18-25 year olds who scored an Australian Tertiary Admission Rank (ATAR) of 80 or above (or an Overall Position greater than 11 or an International Baccalaureate less than 23). Mid-career professionals were defined as 26-60 year olds who had a Bachelor's degree or higher.

Our sample was recruited by Dynata, who incentivised participants. Dynata describe their incentivisation process as follows: 'Panellists are rewarded for taking part in surveys according to a structured incentive scheme, with the incentive amount offered for a survey determined by the length and content of the survey, the type of data being collected, the nature of the task and sample characteristics. (...) All incentives are awarded only once the survey has been completed. The incentive options allow panellists to redeem from a large range of gift cards, points programs, charitable contributions, and partner products or services.'

Young high-achievers were recruited by Dynata and Student Edge ( $N = 501$ ). Young people were also invited to participate through emails sent by stakeholders and Quality Initial Teacher Education Review Expert Panel members, however no completed surveys were recorded with this recruitment method. Mid-career adults were recruited only by Dynata ( $N = 1432$ ).

**Table 1.** Sample characteristics of the young high-achievers

Category		Number	Percentage
Gender	Female	307	61%
	Male	183	36%
	Non-binary	9	2%
Location	New South Wales	189	38%
	Victoria	154	31%
	Queensland	65	13%
	Western Australia	51	10%

Category		Number	Percentage
	Other	42	8%
	Metropolitan	454	91%
	Regional	47	9%
Study Status	Current undergraduate student	316	63%
	Current postgraduate student	85	17%
	Not currently studying	100	20%
Completed Studies	Undergraduate	130	26%
	Postgraduate	57	11%
	None completed	314	63%
Current or completed study field	STEM	356	29%
	Non-STEM	346	71%
Considering future study	Yes	358	71%
	No	143	29%
School leaving rank	ATAR > 80	423	84%
	- 80.00 – 84.95	65	13%
	- 85.00 – 89.96	108	22%
	- 90.00 – 94.95	120	24%
	- 95.00 – 99.95	130	26%
	OP > 11	60	4%
	IB < 23	18	12%

Note: N = 501. The percentage totals do not always sum to 100 as “Prefer not to answer” responses are excluded.

**Table 2.** Sample characteristics of the mid-career professionals

Category		Number	Percentage
Age	26-40	750	52%
	41-60	682	48%
Gender	Female	781	55%
	Male	645	45%
	Non-binary or I use a different term	4	<1%
Location	New South Wales	505	35%
	Victoria	420	29%

Category		Number	Percentage
	Queensland	216	15%
	Western Australia	131	9%
	Other	42	11%
	Metropolitan	1278	89%
	Regional	154	11%
Highest completed qualification	Bachelor's	717	50%
	Grad Diploma/Certificate	271	19%
	Master's	400	28%
	Doctorate	44	3%
Completed study and/or current work field	STEM	599	42%
	Non-STEM	833	58%

Note: N = 1432.

## Discrete choice experiment analysis

One of the primary advantages of a discrete choice experiment is that we can test a large number of attribute levels without requiring participants to view every possible combination of these levels. For example, for young high-achievers, we tested 7 levels of starting pay, 7 levels of top pay, 7 levels of study incentives, and 6 levels of work incentives: in a full factorial design, there would be  $7 \times 7 \times 7 \times 6 = 2,058$  teaching packages in total.

Rather than implementing a full factorial design, we used a *randomised balance design* to optimally reduce the number of comparisons each participant has to make. Each participant was shown only a subset of all possible combinations, while over the entire participant sample, each feature level was compared with other levels at least 1,000 times. This is important in ensuring participants do not become fatigued from making too many comparisons, while also ensuring we have enough data to make reliable inferences about the impact of each feature level.

All data processing and analysis was performed using R (version 4.0.3, R Core Team, 2020) in R Studio (RStudio Team, 2020).

To analyse the discrete choice experiment results, we fitted a mixed-effects logit regression. Choice of a teaching package (0 = did not choose vs 1 = did choose) was regressed on a categorical study incentives variable, a categorical work incentives variable, and two continuous variables for starting pay and top pay.

We reported the marginal probabilities of choosing a career in teaching for each incentive, while holding all other incentives at the 'baseline' value. The baseline values (or the baseline job package, as we refer to it in the report), was \$60,000 starting pay, and a \$100,000 top pay, no work or study incentives.

# Appendix 2: Statistical Tables

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Statistical tables are contained in a Microsoft Excel file and can be found on the webpage that hosts this technical report and the policy report.

# Appendix 3: Survey Instrument

The survey instrument consisted of four parts:

1. Screening questions
2. Teaching career questions
3. Discrete choice experiment
4. Demographics and career intention questions.

## Cohort 1: Young High-Achievers

### Part 1: Screening Questions

Question	Responses	Drop if
1. What is your age?	Numerical response.	Not 18-25
2. Are you currently studying at university?	<ul style="list-style-type: none"> <li>- Yes, at the undergraduate level</li> <li>- Yes, at the postgraduate level</li> <li>- No</li> </ul>	
3. Have you already completed a university degree? Select all that apply.	<ul style="list-style-type: none"> <li>- Yes, at the undergraduate level</li> <li>- Yes, at the postgraduate level</li> <li>- No</li> </ul>	
4. <i>[If Yes, at the undergraduate level, Yes, at the postgraduate level to Q2 OR Yes, at the undergraduate level, Yes, at the postgraduate level to Q3]</i> What is, or was, your field of study? Select all that apply	Use list in Table 1 in Appendix.	Teacher education
5. On finishing school, did you receive an Australian Tertiary Admission Rank (ATAR), Overall Position (OP), or International Baccalaureate (IB)?	<ul style="list-style-type: none"> <li>- Yes, an ATAR</li> <li>- Yes, an OP</li> <li>- Yes, an IB</li> <li>- No</li> </ul>	No
6. <i>[If Yes, an ATAR to Q8]</i> What was your ATAR?	See Table 2 in Appendix	<80

Question	Responses	Drop if
7. [If Yes, an OP to Q8] What was your OP?	See Table 2 in Appendix	>11
8. [If Yes, an IB to Q8] What was your IB?	See Table 2 in Appendix	<23

## Part 2: Teaching career questions

1. Have you ever considered becoming a primary or secondary school teacher?
  - a. Yes, I am planning to become one
  - b. Yes, I have considered it, and am still open to the possibility
  - c. Yes, I have considered it in the past, but would not any longer
  - d. No, I have never considered it
2. What do you think a classroom teacher's average **starting salary** is (before tax)?
  - a. Less than \$40,000
  - b. \$40-49,000
  - c. \$50-59,000
  - d. \$60-79,000
  - e. \$80-99,000
  - f. \$100-119,000
  - g. \$120-149,000
  - h. \$150-199,000
  - i. \$200,000 or more
3. What do you think is the **highest amount** a classroom teacher can earn per year (before tax)?
  - j. Less than \$60,000
  - k. \$60-79,000
  - l. \$80-99,000
  - m. \$100-119,000
  - n. \$120-149,000
  - o. \$150-199,000
  - p. \$200-249,000
  - q. \$250-299,000
  - r. \$300,000 or more

## Part 3: Discrete Choice Experiment

In this section, we want to understand what would encourage you to become a teacher. We understand that you might not be considering a teaching career right now - and that's okay.

Over the following pages, we will present you with 2 different study/work packages.

### Each package has different benefits:

- **During Study:** these are things that might make it more attractive to **study to be a teacher**.
- **During Work:** these are incentives that might make it more attractive to **work as a teacher**.
- **Starting Pay:** the annual salary in your first job as a classroom teacher.
- **Top Pay:** the highest annual salary you could receive as a classroom teacher.

### What you need to do:

- Carefully consider trade-offs between these benefits.



- Select the package you prefer.

An example of the choices is shown below. You will make 7 of these choices in total.

### Attributes and Levels

**Which of these packages would make you most likely to consider a career in teaching?**

*Even if you haven't really considered teaching as a career option, please try to select one of the packages rather than the "Neither of these packages" option.*

- Study Enticement
  1. \$20,000/year scholarship during study
  2. \$30,000/year scholarship during study
  3. Opportunity to complete a paid 4-week teaching internship before commencing study
  4. Paid work in a school throughout your entire period of study
  5. Paid work in a school in your final year of study
  6. Studying in a course where all students have an ATAR of 80 or above
  7. No additional incentive
- Work enticements
  1. Guaranteed ongoing employment as a teacher
  2. Guaranteed ongoing employment as a teacher in a nearby school
  3. Manageable workload that supports your work/life balance
  4. Overtime work is recognised and paid
  5. Mentoring and support from senior staff
  6. No additional incentive
- Starting pay
  - \$60K to \$90K in \$5K increments (7 levels)
- Pay at the top
  - \$100K to \$130K in \$5K increments (7 levels)

### Part 4: Demographics and career intention questions

1. What state or territory do you live in?
  - a. ACT
  - b. NSW
  - c. NT
  - d. QLD
  - e. SA
  - f. TAS
  - g. VIC
  - h. WA
2. Do you live in:
  - a. *[depending on answer to Q1]* Canberra/Sydney, Newcastle, Wollongong or the Central Coast/Brisbane, Gold Coast or the Sunshine Coast/Adelaide/Hobart/Melbourne or Geelong/Perth
  - b. Elsewhere in ACT/NSW/QLD/SA/TAS/VIC/WA
3. How do you describe your gender?
  - a. Woman or Female
  - b. Man or Male
  - c. Non-binary

- d. I use a different term (please specify)
  - e. Prefer not to answer
4. Are you considering studying at a university in the future?
- a. Yes
  - b. No
5. *[If Yes to Q4]* In what field are you intending to study?
- a. List from Table 1 in Appendix
6. In what industry do you expect to work in the next 5 to 7 years?
- a. List from Table 1 in Appendix (Teacher Education changed to Education, Law and Paralegal Studies changed to Law)
7. For the occupation you expect to have, what do you think the **starting salary** (before tax) is?
- a. Less than \$40,000
  - b. \$40-49,000
  - c. \$50-59,000
  - d. \$60-79,000
  - e. \$80-99,000
  - f. \$100-119,000
  - g. \$120-149,000
  - h. \$150-199,000
  - i. \$200,000 or more
8. For the occupation you expect to have, what do you think is the **highest amount** you will earn per year (before tax)?
- a. Less than \$60,000
  - b. \$60-79,000
  - c. \$80-99,000
  - d. \$100-119,000
  - e. \$120-149,000
  - f. \$150-199,000
  - g. \$200-249,000
  - h. \$250-299,000
  - i. \$300,000 or more

## Cohort 2: Mid-Career Adults

### Part 1: Screening Questions

Question	Responses	Drop if
1. What is your age?	Numerical response.	Not 26-60
2. What is the highest non-school qualification you have completed?	<ul style="list-style-type: none"> <li>- Certificate I, II, III, or IIII</li> <li>- Advanced Diploma, Associate Degree, or Diploma</li> <li>- Bachelor Degree (with or without Honours)</li> <li>- Graduate Diploma or Certificate</li> <li>- Master Degree</li> <li>- Doctorate</li> <li>- Other</li> </ul>	Certificate I, II, III or IIII, Advanced Diploma, Associate Degree, or Diploma, or Other
3. What was your field of study? Select all that apply	Use list in Table 1 in Appendix.	Teacher education
4. Have you ever been employed as a teacher?	<ul style="list-style-type: none"> <li>- Yes</li> <li>- No</li> </ul>	Yes
5. Which of the following best describes your employment status?	<ul style="list-style-type: none"> <li>- Employed, full-time</li> <li>- Employed, part-time or casual</li> <li>- Employed, on long-term leave</li> <li>- Not employed, currently looking for work</li> <li>- Not employed, intending to look for work in the future</li> <li>- Not employed, not intending to look for work now or in the future</li> </ul>	Not employed, not intending to look for work now or in the future

### Part 2: Teaching career questions

4. Have you ever considered becoming a primary or secondary school teacher?
  - a. Yes, I am planning to become one
  - b. Yes, I have considered it, and am still open to the possibility
  - c. Yes, I have considered it in the past, but would not any longer
  - d. No, I have never considered it
5. What do you think a classroom teacher's average **starting salary** is (before tax)?
  - a. Less than \$40,000
  - b. \$40-49,000
  - c. \$50-59,000
  - d. \$60-79,000
  - e. \$80-99,000
  - f. \$100-119,000
  - g. \$120-149,000

- h. \$150-199,000
  - i. \$200,000 or more
6. What do you think is the **highest amount** a classroom teacher can earn per year (before tax)?
- a. Less than \$60,000
  - b. \$60-79,000
  - c. \$80-99,000
  - d. \$100-119,000
  - e. \$120-149,000
  - f. \$150-199,000
  - g. \$200-249,000
  - h. \$250-299,000
  - i. \$300,000 or more
7. What qualification do you think you would need to complete work as a teacher?
- a. I would not need any additional qualification
  - b. A 6-month full-time Graduate Certificate
  - c. A 12-month full-time Graduate Diploma
  - d. A 2-year full-time Master's Degree

### Part 3: Discrete Choice Experiment

In this section, we want to understand what would encourage you to become a teacher. We understand that you might not be considering a teaching career right now - and that's okay.

Over the following pages, we will present you with 2 different study/work packages.

#### Each package has different benefits:

- **During Study:** these are things that might make it more attractive to **study to be a teacher**.
- **During Work:** these are incentives that might make it more attractive to **work as a teacher**.
- **Starting Pay:** the annual salary in your first job as a classroom teacher.
- **Top Pay:** the highest annual salary you could receive as a classroom teacher.

#### What you need to do:

- Carefully consider trade-offs between these benefits.
- Select the package you prefer.

An example of the choices is shown below. You will make 6 of these choices in total.

#### Attributes and Levels

#### Which of these packages would make you most likely to consider a career in teaching?

*Even if you haven't really considered teaching as a career option, please try to select one of the packages rather than the "Neither of these packages" option.*

- Study Enticement
  1. \$20,000/year scholarship during study
  2. \$30,000/year scholarship during study
  3. Opportunity to complete a paid 4-week teaching internship before commencing study
  4. Paid work in a school throughout your entire period of study
  5. Paid work in a school in your final year of study

6. A condensed one-year full-time qualification
  7. Mortgage or rent payments covered throughout study
  8. No additional incentive
- Work enticements
    1. Guaranteed ongoing employment as a teacher
    2. Guaranteed ongoing employment as a teacher in a nearby school
    3. Manageable workload that supports your work/life balance
    4. Overtime work is recognised and paid
    5. Mentoring and support from senior staff
    6. Additional payment (on top of your starting salary) to recognise your prior experience
    7. No additional incentive
  - Starting pay
    - \$60K to \$90K in \$5K increments (7 levels)
  - Pay at the top
    - \$100K to \$130K in \$5K increments (7 levels)

#### Part 4: Demographics and career intention questions

9. What state or territory do you live in?
  - a. ACT
  - b. NSW
  - c. NT
  - d. QLD
  - e. SA
  - f. TAS
  - g. VIC
  - h. WA
10. Do you live in:
  - a. [depending on answer to Q1] Canberra/Sydney, Newcastle, Wollongong or the Central Coast/Brisbane, Gold Coast or the Sunshine Coast/Adelaide/Hobart/Melbourne or Geelong/Perth
  - b. Elsewhere in ACT/NSW/QLD/SA/TAS/VIC/WA
11. How do you describe your gender?
  - a. Woman or Female
  - b. Man or Male
  - c. Non-binary
  - d. I use a different term (please specify)
  - e. Prefer not to answer
12. In what industry were you most recently employed?
  - a. List from Table 1 in Appendix (Teacher Education changed to Education, Law and Paralegal Studies changed to Law)
13. What is your current employment income (before tax)?
  - a. Less than \$40,000
  - b. \$40-49,000
  - c. \$50-59,000
  - d. \$60-79,000
  - e. \$80-99,000
  - f. \$100-119,000
  - g. \$120-149,000
  - h. \$150-199,000
  - i. \$200,000 or more
  - j. \$200-249,000

k. \$250-299,000

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