

# Promote professional and personal development opportunities to recruit and retain workers in education

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## ABSTRACT

Exploring students' perceptions of teaching as a profession and their motivations for pursuing it can provide valuable insight for developing effective policies aimed at enhancing teacher recruitment efforts. Although the topic of recruiting and retaining workers in education is not new, most previous studies have sought the views of teachers instead of students to understand why people choose teaching as a career. This paper aims to study students' perceptions and attitudes toward professional and personal development opportunities that can be offered to undergraduate students. These opportunities include paid internships, teacher assistant positions, and training to recruit and retain educators. We analyzed qualitative and quantitative survey responses from 89 students in various majors at a prominent Canadian public university. The survey analysis shows that interventions such as enhanced training and professional development opportunities, financial benefits, and increasing the availability of resources for entering a teaching career may help attract more students into teaching. The outcomes of this study provide insight into potential adjustments needed to attract a larger and more diverse cohort of students pursuing careers in education.

**Keywords:** training, networking, financial incentives, professional development, recruitment, retention

## INTRODUCTION

The demand for educators is increasing as many existing teachers leave the profession (Admiraal & Kittelsen Røberg, 2021). This fact makes attracting and retaining qualified teachers increasingly important. It has been observed worldwide that a substantial number of teachers leave at the beginning of their careers; with many countries reporting such attrition rates of up to 50% (Admiraal & Kittelsen Røberg, 2021; Räsänen et al., 2020). The high turnover rates associated with teaching have not only been affecting novice teachers (Ward, 2019), but many experienced teachers as well as they lose engagement in their work (Veldman et al., 2013). Some of these teachers leave the field entirely, while others decide to take on other positions in educational environments (Veldman et al., 2013).

The USA as well as various European countries have experienced extensive teacher shortages and are facing ongoing challenges in recruiting and retaining teachers (Delhaxhe et al., 2018; Sanders & Horn, 1998). In Canada, teacher shortages are especially prevalent in French language and technological education disciplines in the province of Ontario (Ontario College of Teachers, 2022). Recruitment and retention rates of educators in Canada have not been well-documented, however it has been estimated that between 3% and 30% of new teachers leave the profession in the first five years of work (Karsenti & Collin, 2013). In Ontario, newly employed teachers have struggled to navigate working their way up to full-time positions, resulting in their disengagement (Ontario College of Teachers, 2022). Only 63% of first-year teachers reported positive feelings toward their employment in the 2021-2022 school year (Ontario College of Teachers, 2022), which was a decrease from previous years that could have been attributed to hybrid teaching during the COVID-19 pandemic. However, Ontario teachers' satisfaction with job security has also been steadily decreasing (Ontario College of Teachers, 2022).

One approach used to mitigate teacher shortages is to offer paid internships and part-time or full-time teaching assistant positions (See et al., 2020). Another approach involves financial rewards such as bursaries, loan forgiveness, and incentive payments for teaching in regions in which there is a shortage (See et al., 2020).

It has been suggested that financial incentives appeal most to those already considering a career in education but make little to no impact in attracting those who are not interested (Gorard et al., 2022). Policymakers often implement such strategies without considering the specific needs and concerns of prospective teachers (Gorard et al., 2022).

To increase and diversify the teacher supply, it is important to consider the perspectives of those who have decided against the career instead of only those already employed in or heavily considering the field (Gorard et al., 2023). It is therefore helpful to look more carefully into why some students choose to go into teaching while others do not.

This research paper reflects on an ongoing effort to recruit and retain workers in education (See et al., 2020). Students at the University of Guelph in Ontario, Canada who are interested in, unsure about, or uninterested in a teaching career are the base of this work. For both researchers and policymakers, it is important to assess the extent to which students of varying levels of interest in pursuing the teaching profession differ in their perceptions of the career.

In this paper, we first describe the demographic characteristics of the participants. Next, we discuss the students' responses to survey questions related to general career drivers such as the motivation to become a teacher; the availability of resources such as social networking events and teaching-specific training; life as a teacher; obstacles and challenges against pursuing a teaching career; as well as suggestions to policymakers to improve the recruitment and retention of teachers. We conclude with a summary of the findings and future directions for fellow researchers. Although research has been widely conducted about the recruitment and retention of teachers, no known previous research in Canada has investigated students' perspectives related to this topic. In addition, we compare the perceptions of students who are aspiring teachers with those who are unsure and those who are uninterested in this career. Hence, the overarching goal of this paper is to add to the existing literature, which is based primarily on the views of current teachers, by reflecting on students' perceptions, opinions, and attitudes about the teaching profession.

## LITERATURE REVIEW

### Financial Encouragements (Including Scholarships, Bursaries, and Higher Wages)

The literature on financial incentive strategies for teacher recruitment and retention yields mixed results. Research suggests that while financial incentives may strongly appeal to individuals already inclined towards a career in education, they often have a minimal impact on attracting those who are initially uninterested (Gorard et al., 2022). For instance, Steele et al. (2002) explored an experiment with the goal of attracting aspiring California teachers to lower-performing schools through a monetary fellowship called the Governor's teaching fellowship. The probability that fellowship recipients entered these schools was significantly higher than those who did not receive the fellowship by 28.06 percentage points. Award recipients qualified to teach subjects in high demand, such as math and science, were more likely to accept positions at these schools. Although award recipients were incentivized to remain employed, the difference in the probability of leaving between groups was not statistically significant.

In a longitudinal study, Ryu and Jinnai (2020) examined the effects of changes in salaries and group-based merit incentives on the turnover rates of public-school teachers in North Carolina. It was found that an increase in salary was associated with an initial increase, then an eventual decrease in the likelihood of turnover. Merit payments considered the efforts of all teachers equally by rewarding them based on the average academic performance of all students in the school. This event resulted in a higher dissatisfaction and turnover rate of qualified teachers than those who were less experienced.

In some American school districts, financial reforms have been used in the hopes of improving teachers' salaries, and consequently their retention rates. A study by Nguyen et al. (2023) found that this implementation increased teachers' salaries by an average of \$4,000. Teachers working at schools in areas of lower socioeconomic status, as well as those with more experience, were shown to receive the largest gains and thus had decreased turnover rates.

Furthermore, Blackmore et al. (2023) analyzed the effect of a teacher financial incentive scheme in Australian government schools that were less desirable for employment. Teachers received an initial payment to apply to these schools, then successful hires received relocation assistance as well as annual retention bonuses. Financial incentives were a low priority for teachers applying to these roles, as they tended to be more intrinsically motivated: teachers gave more merit to their feelings of value at work in their choice to remain employed in these schools.

Regarding the opinions of undergraduate students, Gorard et al. (2023) examined career survey results of this demographic in various disciplines throughout England. They found that the perception of lower salaries relative to other professions turns many students against the prospect of a teaching career. When asked about incentives that could be enticing, students responded that training salaries, tax-free bursaries, or loans to cover tuition and living expenses could have moderate impact. With all else equal, financial encouragement did not appeal differently between those considering teaching and those leaning toward other occupations.

### Training Programs and Mentoring

For the purpose of retaining novice educators, mentorship and training programs could be considered helpful. However, the relatively sparse literature about this topic has reported mixed results of these programs, with many robust experimental studies displaying no evidence of positive effects (See et al., 2020).

In one of the stronger studies on induction programs and mentorship, Glazerman et al. (2010) ran a randomized experiment involving novice teachers, with the treatment group receiving intensive support through a formal induction program, and the control group receiving no interventions. The induction program involved various supports including full-time mentorship and a structured training curriculum. Despite this, no statistically significant differences in retention rates or job satisfaction were found between groups after the four years of the study.

März and Kelchtermans (2020) spearheaded a longitudinal study to determine the networks that early-career teachers (ECTs) are most reliant on. ECTs were assigned formal mentors as they made their transition into teaching. ECTs considered mentorship a resource, but developing relationships with their closest colleagues to be more important. März and Kelchtermans (2020) concluded that formal mentorship is most effective when the mentor and mentee have similar roles. They also found that the opportunity to contribute ideas and feedback to the school significantly enhances ECT retention rates.

Whalen et al. (2019) explored novice Canadian teachers' experiences with mentorship during their first three years of employment. The general sentiments amongst participants were that school districts did not emphasize formal mentorship for new teachers, and that programs are optional and not well-managed when implemented. Some issues cited were the lack of coordination between mentors and mentees, and mentors being unwilling to sacrifice more time than required for their job. Regardless, all participants informally sought out their own mentors. Participants expressed that watching other teachers and using their lesson plans helped them with their own development, and that a trustworthy community network is most crucial for retention.

Another year-long study in an American school district assessed the impact of mentorship between experienced and novice teachers on various aspects of the teaching career, including retention (Mathur et al., 2012). The mentorship program was implemented to reduce attrition rates among novice teachers. This experience increased mentors' confidence in teaching as well as mentees' knowledge about career practices. There was no significant difference found between groups in their intentions to continue with teaching; however, most survey respondents expressed eagerness to remain in the career.

Ronfeldt et al. (2014) further explored the effects of preservice teaching-specific training on the retention of teachers through the analysis of a national survey. The specific training opportunities they focused on were practice teaching and coursework related to pedagogy. They estimated that participating in 8 to 11 extra weeks of teaching practice or 3 to 9 extra methods courses significantly increased the odds of a teacher remaining in their career compared to teachers who had not done so. It was also found that one more week of practice teaching significantly increased the likelihood of teachers returning for a second year compared to those without intervention, with science and math teachers benefitting the most.

### Professional Development

Having opportunities to continuously evolve as educators is critical towards professional success (Smith, 2003). Previous studies have suggested that effective professional development programs include activities that are collaborative; that are tailored to specific subjects of interest; that are sustained over long periods of time; and that allow teachers to practice skills (Sims & Fletcher-Wood, 2020). However, Sims and Fletcher-Wood (2020) scrutinized previous studies with these results to determine that repetition of skills matters more than the sustainability of training; and that collaboration and subject-relatedness may not be as important as once thought. As with other incentives, more experimental studies are required to determine whether professional development has a causal impact on the retention of educators (See et al., 2020).

Allen and Sims (2017) studied the effects of robust, subject-specific professional development programming by a national organization on the retention of science teachers in England. Through studying cases and controls, they determined that any participation in the developmental programming increased the odds of school and career retention by 48% and 166%, respectively.

Another longitudinal experimental study by Helms-Lorenz et al. (2015) exploring the influence of a teacher induction program on the retention rates of Dutch secondary school teachers revealed negligible effects. The retention of the experimental group was a mere 2% higher than the control group. Importantly, this study also suggested that novice teachers who have been certified are 2.55 times more likely to stay in their schools than those who are not certified. Additionally, those who have strong teaching skills are 2.53 times more likely to stay in their schools than those whose skills are deemed to be weaker. As expressed by novice teachers, coaching and observation were the most beneficial aspects of this induction program.

Ovenden-Hope et al. (2018) examined a professional development program called RETAIN, which was intended to strengthen British teachers' skills in the hopes of improving their retention rates. This program stresses the importance of teachers partaking in research and having a say in matters relating to the curriculum they teach. Professional development activities including modules, mentorship, and supported learning communities contributed to this program's success in retaining all teachers from the study and allowing them to enhance their skills.

In a 2020 study of data from two surveys in England, Worth and Van den Brande (2020) discovered how teachers' feelings of autonomy may play a role in their career satisfaction. It was found that increasing teachers' autonomy over their professional development is especially important for the satisfaction and retention of teachers, with higher autonomy being associated with an increase in teachers' career longevity plans. However, teacher autonomy was reported as low, suggesting that teachers should be allowed to be more selective in their professional development activities.

### Alternative Routes into Teaching

Alternative approaches to qualify teachers can also be instrumental in increasing recruitment. These diversified pathways are often established with the goal of accelerating teachers' certification processes for faster employment, or to make pursuing a teaching career more accessible (See et al., 2020). However, a lack of support for these teachers within the school environment compared to traditionally certified teachers has been identified (Rose & Sughrue, 2020).

As alternatively certified teachers may not have developed the same qualifications as other teachers, individualized approaches are recommended (Darling-Hammond et al., 2005; Rose & Sughrue, 2020). Rose and Sughrue's (2020) study of Florida teachers highlighted that special attention should be given to the professional development of alternatively certified teachers to improve their retention rates. Survey data indicated that 32.26% of alternatively certified teachers believed that professional

**Table 1.** Demographic data of survey respondents expressed as frequencies and percentages

Variable	Category	Frequency	Percentage (%)
Gender	Woman	48	53.93
	Man	30	33.71
	Other (non-binary, gender neutral, gender fluid, or prefer not to say)	11	12.36
Academic program	Biological/biomedical sciences	29	32.58
	Quantitative disciplines (mathematics, statistics, physical science, engineering, or computer science)	42	47.19
	Other (arts, arts and science major, or business)	18	20.22
Year of study	1 <sup>st</sup> year	24	26.97
	2 <sup>nd</sup> year	31	34.83
	3 <sup>rd</sup> year	10	11.24
	4 <sup>th</sup> or 5 <sup>th</sup> year	18	20.22
	Master's level	6	6.74
Age	19 or younger	46	51.68
	20-21	24	26.97
	22+	19	21.35
Ethnic groups	White	52	58.43
	South Asian	14	15.73
	Latino/a/x	5	5.62
	Chinese	4	4.49
	Arab	2	2.25
	West Asian & Middle Eastern	2	2.25
	Other (Black, Korean, North African, Southeast Asian, Filipino/a/x or not listed)	6	6.74
Identified with more than one ethnic group (Filipino/a/x & White; Arab & West Asian & Middle Eastern; or Southeast Asian & White)	4	4.49	

development opportunities influenced their retention, but that administrators of schools were less familiar with the struggles they faced. Professional development activities were slightly associated with the retention of these educators; however, they were not a significant predictor for attrition. Suggested strategies for these teachers included mentorship and small group activities.

Alternative routes to teaching are also helpful tools in recruiting those of underrepresented populations, making the field of education more diverse. One example of this underrepresentation is the employment of Black men as special education teachers in a field dominated by White women (Scott, 2017). This study focuses on such men who participated in alternative route programs (ARPs) throughout the USA State of Virginia. Factors such as funding, fewer requirements than university-sanctioned programs, and recruitment targeted towards this demographic were major motivators of registration in ARPs. Continuous on-the-job training and support from other Black faculty members enhanced the experience for these teachers (Scott, 2017).

Another study by Ernst-Slavit et al. (2022) gathered the experiences of ESL Latina paraeducators who underwent an alternative route to teaching to make recommendations about recruitment and retention practices in this context. This program spanned two years, during which paraeducators earned a BA in elementary education along with other related certifications. It was found that the retention of participants was mostly fueled by a strong sense of community, and the researchers recommended that alternative programs should emphasize supportive connections.

## METHODOLOGY

### Participants

Students at the University of Guelph in Canada were investigated in this study. In the Fall 2023 and Winter 2024 semesters, graduate and undergraduate students in a variety of different courses were invited to complete a survey to express their motivations and feelings toward a career in education. This survey encompassed 89 students across different demographics. The demographic details of these participants are outlined in **Table 1**.

### Research Design

The survey was administered, adhering rigorously to ethical standards, guaranteeing confidentiality, and elucidating the research's purpose to the participants. Students were assured that they were under no obligation to participate or provide specific responses, thereby encouraging honest completion of the survey. The investigator had access to the information only after all final grades were submitted to the registrar's office. No compensation nor incentives were offered to the students, nor did the students incur any costs in participating. The study was approved by the research ethics board prior to the distribution of surveys. There were no known risks to the students.

Survey questions pertained to different aspects of the students' perceptions, opinions, and attitudes about the teaching profession. Survey questions addressed students' motivations to become teachers; perceptions of resource availability, including training and networking opportunities; perceptions of life as a teacher; and perceptions of challenges faced by teachers based on career-related factors and contract-related factors. Students were also able to express their opinions on suggestions to policymakers in their efforts to increase recruitment and retention of students into teaching careers.

**Table 2.** Percentages of each gender by level of interest in a career in K-12 education

Gender	Interested	Not sure yet	Not interested
Woman	27.08	37.50	35.42
Man	36.67	30.00	33.33
Other	18.18	36.36	45.46

**Table 3.** Percentages of each ethnic group by level of interest in a career in K-12 education

Ethnic group	Interested	Not sure yet	Not interested
White	36.54	40.38	23.08
South Asian	28.57	28.57	42.86
Latino/a/x	0.00	40.00	60.00
Chinese	25.00	25.00	50.00
Arab	0.00	0.00	100
West Asian & Middle Eastern	0.00	0.00	100
Other	33.33	16.67	50.00
Mixed ethnicity	25.00	25.00	50.00

**Table 4.** Percentages of each academic program by level of interest in a career in K-12 education

Academic program	Interested	Not sure yet	Not interested
Biological/biomedical science	27.59	24.14	48.27
Quantitative	33.33	42.86	23.81
Other	22.22	33.33	44.45

### Objective of the Study

The primary objectives of this study are the following:

1. To explore the primary factors motivating students to pursue a career in education.
2. To ascertain students’ perspectives on the obstacles or challenges that might discourage them from pursuing a career in education.
3. To assess the availability of resources that support students in preparing for a career in education.
4. To explore students’ attitudes and perceptions regarding the provision of professional and personal development opportunities, such as scholarships, financial benefits, and access to training and qualifications, aimed at preparing them for a career in education upon graduation.
5. To examine students’ opinions on various suggestions that can be made to the policymakers, such as increasing scholarship and grant availability and increasing acceptance to teacher’s colleges, to enhance the recruitment of undergraduate students as future teachers.
6. To evaluate students’ comprehension and perspectives regarding the advantages and challenges that teachers encounter throughout their careers.
7. To assess students’ views on whether an increased starting salary in the education sector would motivate them to choose a career in education.

### Data Source and Analysis of the Data

The survey consisted of Likert scale style questions (1 = strongly disagree to 5 = strongly agree), multiple choice responses, as well as open-ended response questions. The survey questions were first checked for validity before being administered to all students.

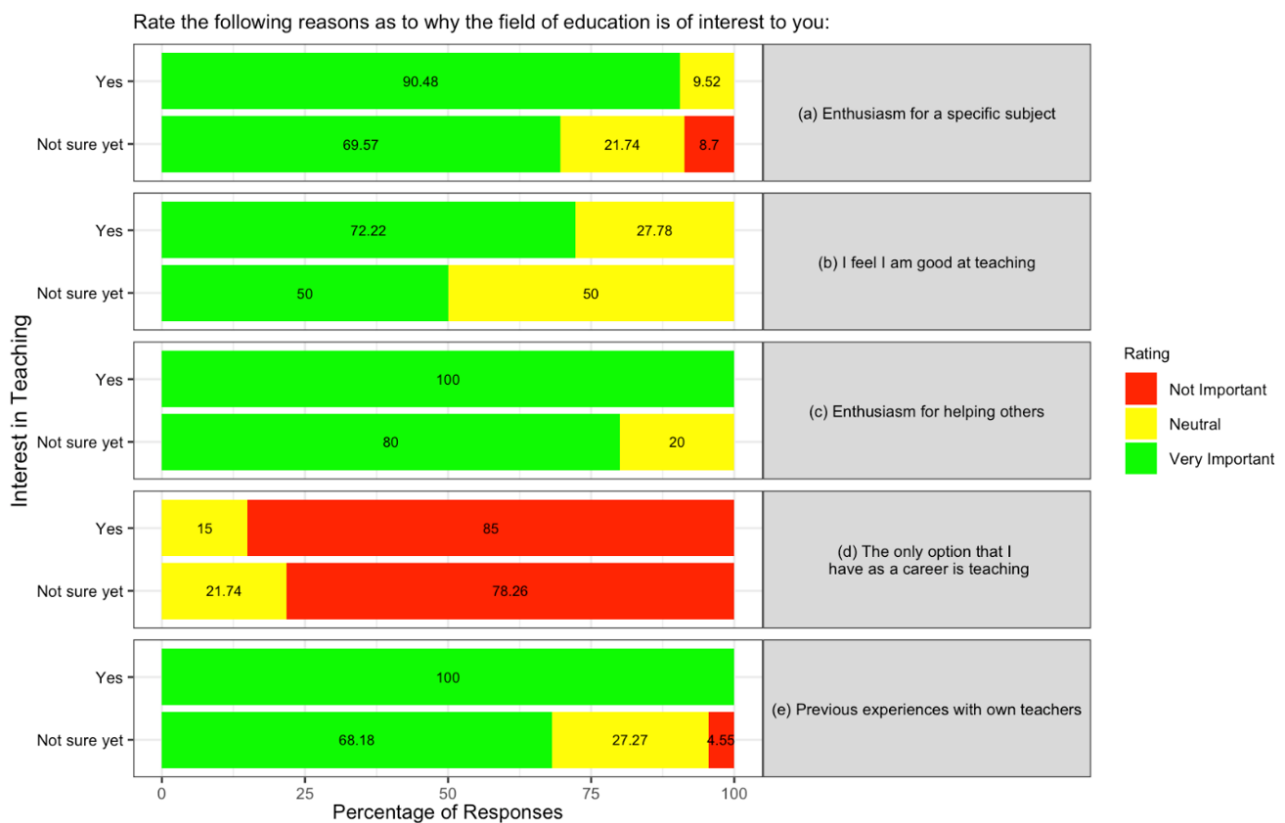
Data analysis was conducted using the R statistical software. Descriptive statistics for each survey question were used to identify factors that motivate or discourage students from pursuing a career in teaching. These insights provide potential interventions to enhance the recruitment and retention of novice educators. The findings were presented through appropriate tables and graphs generated with R.

## RESULTS

### Characteristics of Potential Teachers

**Table 1** displays the demographic data of the survey participants, including gender, academic program, year of study, age, and ethnic groups. Overall, 26 (29.21%) respondents expressed interest in teaching, 31 (34.83%) were unsure about a career in teaching, and 32 (35.96%) were not interested in a teaching career.

The demographics of gender (**Table 2**), ethnic group (**Table 3**), and academic program (**Table 4**) were organized by the percentage of respondents of each interest level (interested, not sure yet, and not interested) in pursuing a career in teaching.



**Figure 1.** Percentages of student ratings for reasons why the field of education is of interest to them (Source: Authors' own elaboration)

The majority of survey respondents were women (53.93%). However, a higher percentage of male respondents expressed interest in K-12 teaching (36.67%) compared to 27.08% of female respondents and 18.18% of respondents of other genders. Women were also most likely to be unsure of a teaching career at 37.50%, compared to men (30%) and other genders (36.36%).

Most of the survey respondents were White (58.43%), with a reasonable proportion of this ethnic group also being interested in teaching (36.54%). However, a large proportion of the White respondents also reported uncertainty regarding their interest in teaching (40.38%). While other ethnicities had lower sample sizes, most did not express definitive interest in a teaching career.

The largest proportion of respondents (47.19%) reported studying quantitative disciplines, such as mathematics, engineering, computer science, and physical sciences, with 32.58% studying biology-related disciplines, and 20.22% in other majors such as business or arts. Students in quantitative disciplines were also the most interested in teaching, at 33.33%, followed by biological and biomedical science students (27.59%) and students in other majors (22.22%).

### General Career Drivers: Motivation to Become a Teacher

#### Important factors that generate interest as an educator

**Figure 1** shows the ratings of students interested and unsure about a career in teaching regarding reasons why the field of education is of interest to them.

Students with an interest in teaching were more likely to report having had positive experiences with their own teachers than those unsure of their career. Of those interested in a teaching career, 90.48% attributed their desire to enthusiasm for a specific subject. Additionally, 72.22% of these students felt they were good at teaching, and 100% of them indicated enthusiasm to help others and have had good experiences with former teachers. Among the students unsure about teaching, the highest percentage (80%) of them expressed that their interest in education stems from enthusiasm for helping others, while only 50% of them believed they were good at teaching. An open-response question allowed students to identify other reasons for their interest in the field of education. Some expressed a willingness to follow in the footsteps of their parents who were educators, an enjoyment of teaching and working with kids, as well as career perks such as salary, benefits, and holiday breaks. Others expressed a desire to work in a career that is rewarding, flexible, and stable.

#### Important factors in a career as an educator

**Figure 2** shows the ratings of students interested and unsure about a career in teaching regarding how important various factors would be to them in a career as an educator. These included contractual benefits such as sick time, bank time, paid time off, dental and vision benefits, and parental leave; student debt relief incentives; the current demand for teachers; long- and short-term disability support; a dynamic work environment; good and stable pay; job security; the location of their job; extended mental health supports; pension and secure retirement benefits; a predictable work schedule allowing for regular breaks over the summer and winter; and a union workplace.



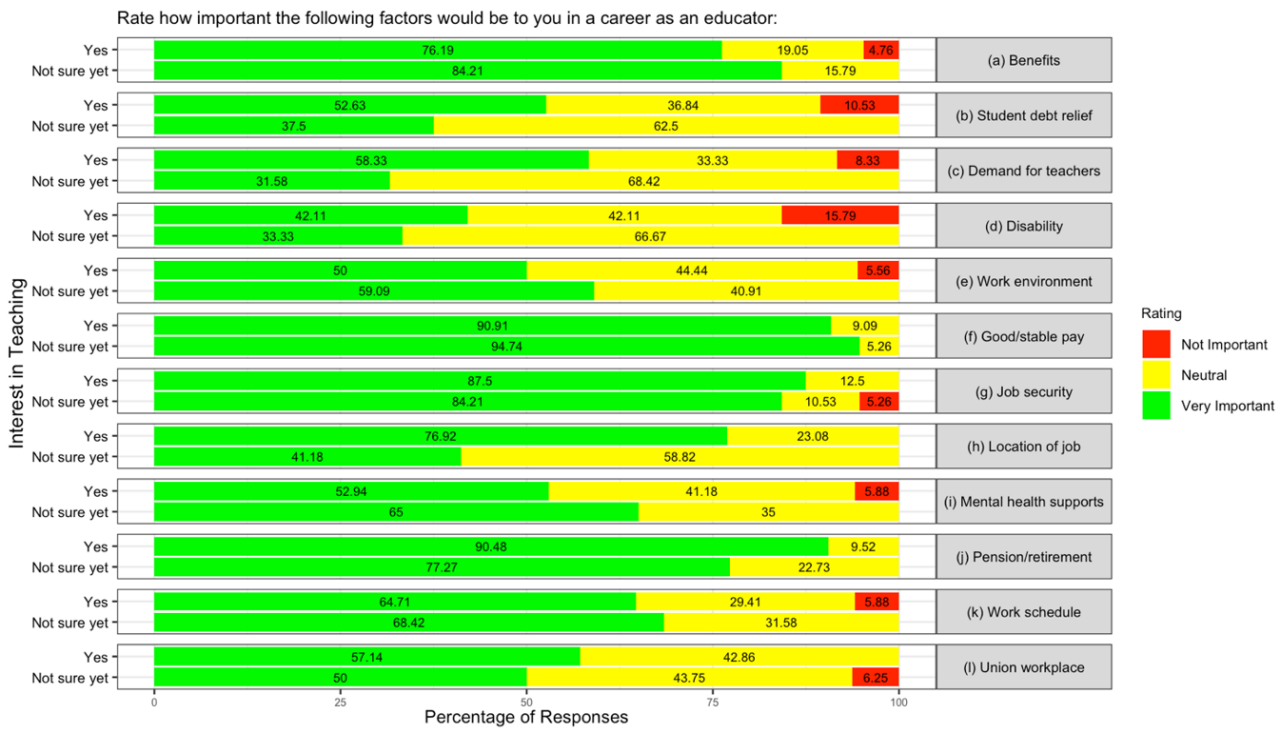


Figure 2. Percentages of student ratings of important factors in an education career (Source: Authors' own elaboration)

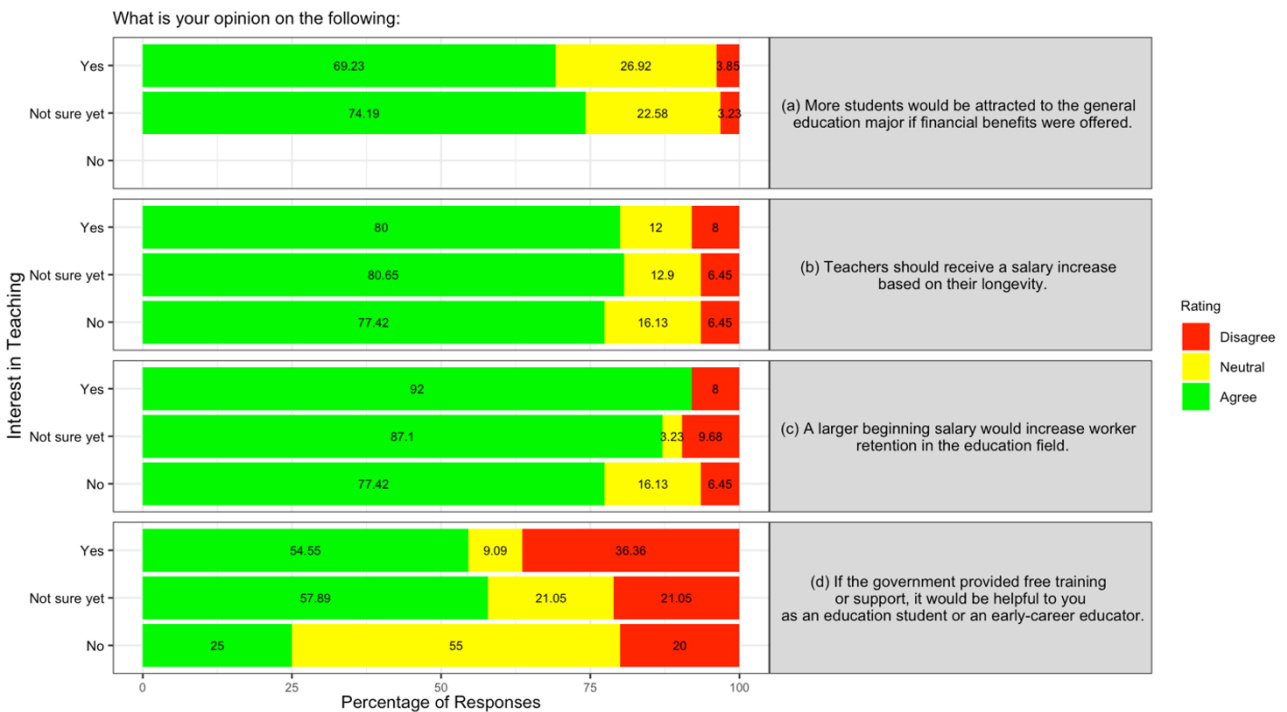
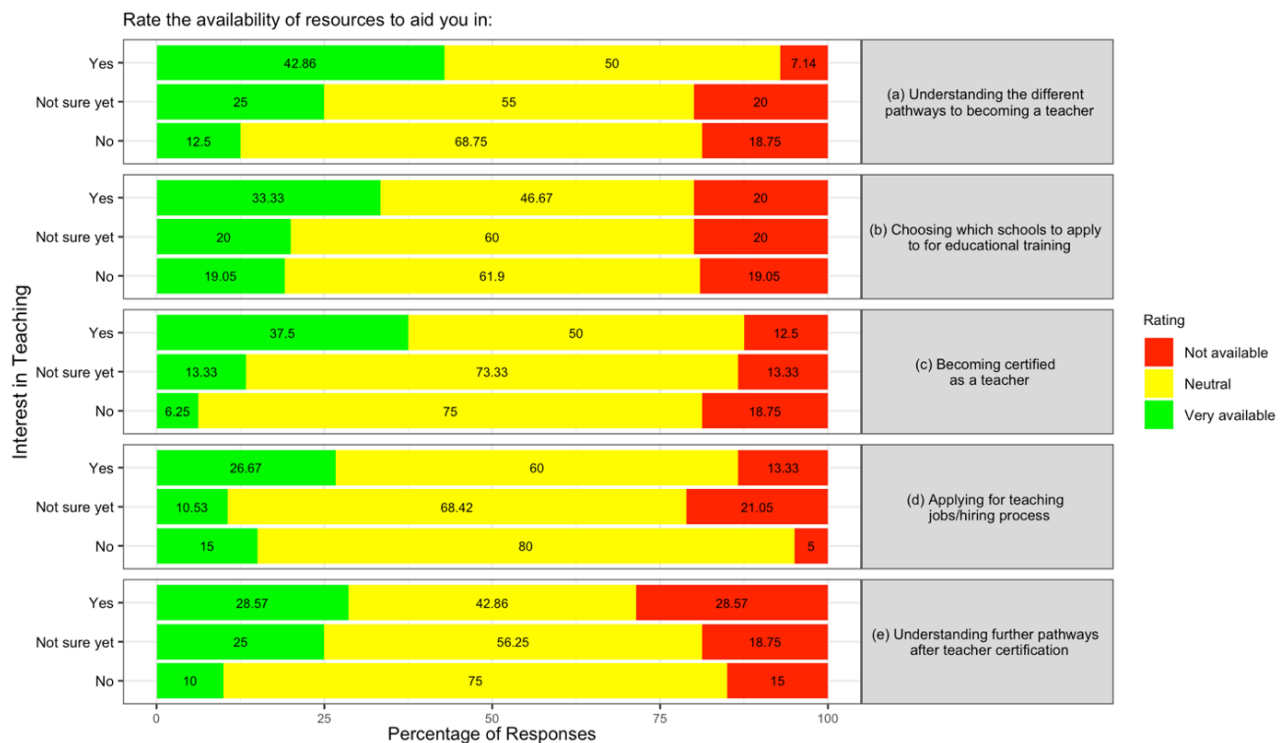


Figure 3. Percentages of student opinions of factors attracting people to seek and remain in a career in K-12 education (Source: Authors' own elaboration)

Among students interested in teaching, the highest percentage (90.91%) reported that good and stable pay is very important to them. Having a pension and secure retirement benefits was also considered very important by 90.48% of this group. The factor with the largest difference in opinions between groups was the location of the job, with 76.92% of those interested reporting it as very important, compared to only 41.18% of those unsure about teaching. Besides those listed in the survey, another factor that respondents identified is the ability to make a difference in students' lives.

**Attractive factors to seek a career in K-12 education**

Figure 3 shows students' opinions regarding attractive factors towards seeking and remaining in a K-12 education career. Students interested, unsure, and uninterested in teaching all expressed their views on these statements.



**Figure 4.** Percentages of student ratings of resource availability to aid them in entering a teaching career (Source: Authors' own elaboration)

The vast majority of respondents (at least 70%) across interest levels agreed that financial benefits would increase recruitment; that teachers should receive salary increases based on career longevity; and that larger beginning salaries would increase career retention.

However, responses were more divided regarding the usefulness of government-provided free training and support. Just over 50% of those interested (54.55%) and unsure (57.89%) about teaching agreed that it would be helpful, compared to only 25% of those uninterested in the career.

### General Career Drivers: Resource Availability

#### Availability of resources for career entry

**Figure 4** shows students' ratings of the availability of resources that can aid them towards entering a teaching career. These include understanding the pathways to becoming a teacher; selecting schools to apply to for educational training; the certification process; the job application and hiring processes; and understanding further pathways after certification.

All groups demonstrated their belief that resources are limited for these factors in the recruitment of educators. Fewer than half of respondents in each group believed that these resources are widely available. Among students interested in teaching, the highest percentage (42.86%) believed that resources for understanding the different pathways to becoming a teacher were widely available, while the lowest (26.67%) believed the same for the application and hiring process. Among those unsure about teaching, the highest percentage (25% each) believed that resources for understanding further pathways after certification and understanding different pathways to enter the career were very available.

Most respondents (> 75%) across interest groups were unaware of potentially helpful resources other than those assessed in **Figure 4** that could help them prepare for a teaching career.

#### Social networking events for aspiring teachers

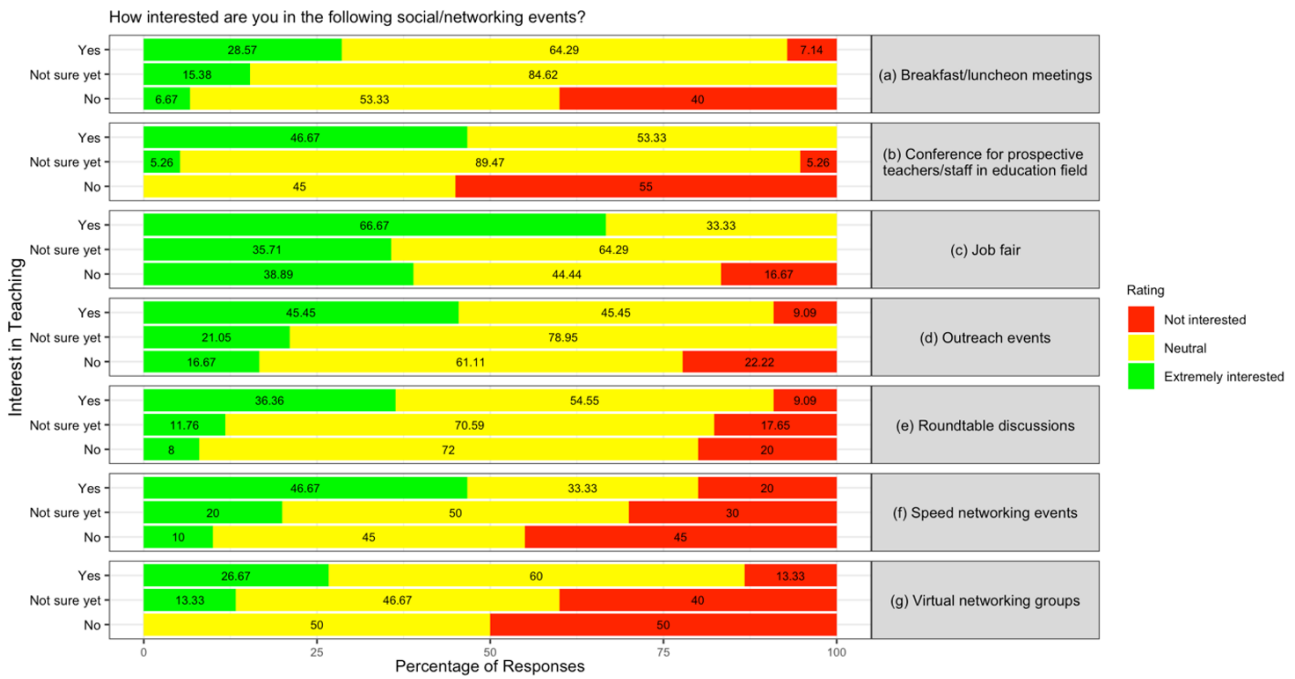
24% of students interested in teaching reported having attended a networking event catered to students in educational programs. Only 3.23% of those unsure and 6.25% of those uninterested in teaching reported the same.

Among those who have attended these events in the past, 3 students expressed that job fairs were the most effective opportunity. These popular events allow for potential teachers and employers to connect on the spot, allowing them to assess whether there is a mutual fit for job openings (Laksana & McGrath, 2015).

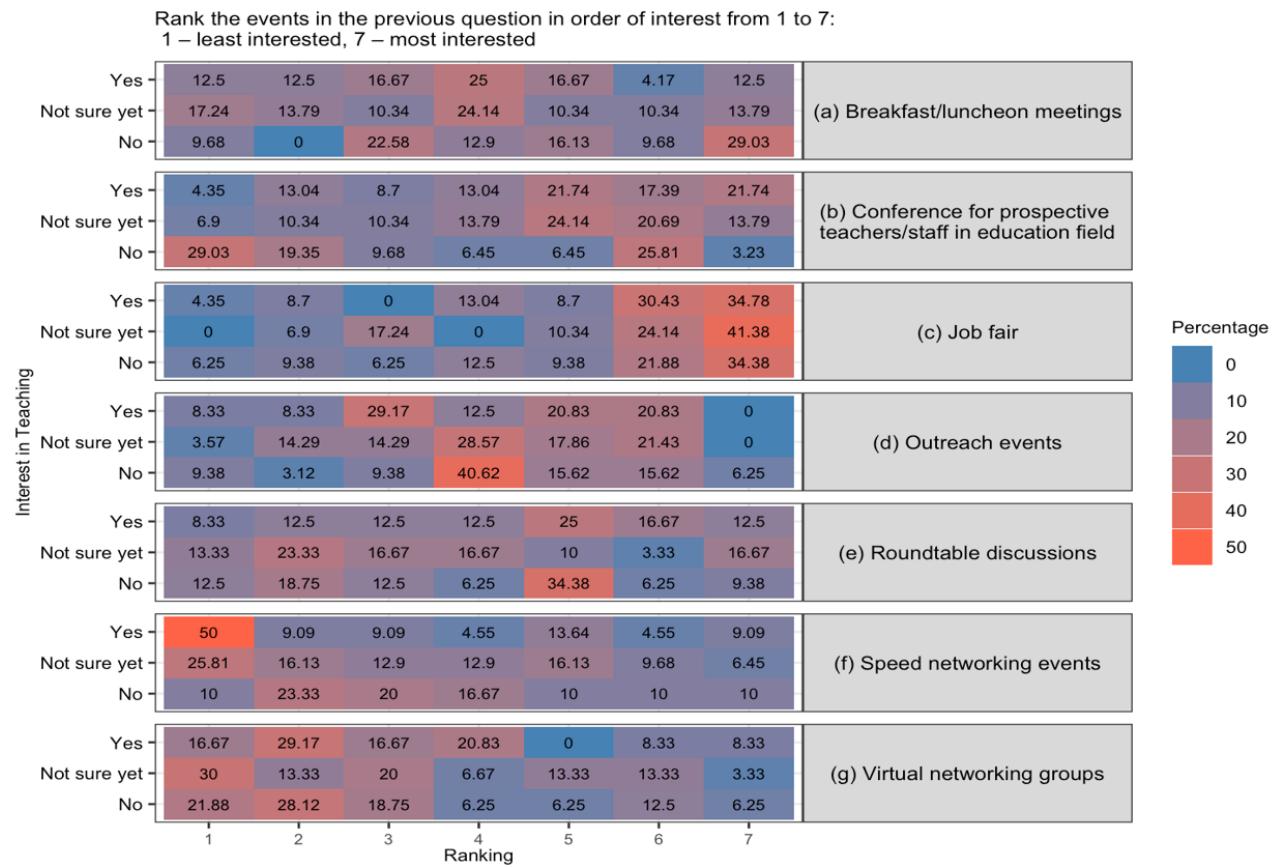
**Figure 5** shows students' ratings of interest in various social networking events catered towards aspiring and current educators. These include breakfast and luncheon meetings; conferences; job fairs; outreach events; roundtable discussions; speed networking events; and virtual networking groups.

General disinterest in these networking events was shown by all groups. All events had fewer than 50% of respondents interested, with the exception of job fairs, as 66.67% of those interested in teaching were eager to attend. Among those uninterested in teaching, 55% indicated disinterest in conferences.





**Figure 5.** Percentages of student ratings of interest in various social/networking events catered towards students in educational programs (Source: Authors' own elaboration)



**Figure 6.** Heatmap of student rankings of social/networking events catered towards students in educational programs with a ranking of 1 denoting lowest level of interest and 7 denoting highest level of interest (Source: Authors' own elaboration)

**Figure 6** shows a heatmap of students' rankings of their interest in social networking events catered towards aspiring teachers in terms of their importance.

Consistent with students' belief that job fairs are seen as the most effective networking event, the highest percentage of students in all groups ranked it 7 (indicating highest level of interest), with 34.78% of those interested, 41.38% of those unsure, and 34.38% of those uninterested in teaching. The event ranked 1 (lowest level of interest) by the highest percentage of students

**Table 5.** Percentages of students' preferences for full-time or part-time internships or teaching positions

Position preference	Interested in teaching	Not sure yet	Not interested
Full-time	15.38	25.81	28.12
Part-time	73.08	54.84	50.00
Unsure	11.54	19.35	21.88

interested in teaching was speed networking events, with 50% of these respondents expressing the least interest towards this opportunity.

### **Teaching-specific training and paid positions**

Those interested in teaching were the most likely to have indicated being offered opportunities to receive teaching-specific training in their undergraduate studies (26.92%), and those unsure about teaching were the least likely (9.68%). 15.62% of students uninterested in teaching have been offered such an opportunity.

Students were also asked if they have been offered opportunities to take on a paid teaching position at their educational institution, such as a tutoring or Teaching Assistant role. Students unsure about a teaching career were the most likely to have been offered an opportunity to have a paid teaching position (61.61%), followed by those interested (53.85%) and those uninterested (34.38%).

Among the students who have not been offered paid teaching positions, both those interested in teaching and those currently unsure were highly interested in taking on a paid teaching position if it were available to them (92.86% and 94.74%, respectively). Those uninterested in a teaching career still expressed some openness to such a position, at 57.14% of respondents.

**Table 5** displays descriptive statistics regarding students' preferences for full-time or part-time teaching positions or internships.

In all groups, most respondents were more interested in part-time internships or teaching positions. This includes 73.08% of those interested in teaching, 54.84% of those unsure and 50.00% of those uninterested in teaching.

Students were also asked about whether they would be interested in taking courses that outline potential challenges they may face in a schooling environment. Those interested in teaching were much more likely to be willing to take such a course (92.31%), while only 41.94% of those unsure and 56.25% of those uninterested in teaching indicated interest.

**Figure 7** shows the distribution of student responses regarding the types of training or development that they believe would be most beneficial to aspiring teachers before they graduate.

Students interested in teaching were most likely to believe training in classroom management was most valuable (42.31%), followed by subject matter expertise and student encouragement (23.08% each). Of those unsure and uninterested in teaching, the most common response was student encouragement (48.39% and 59.38%, respectively).

Aside from the responses given in **Figure 7**, aspiring teachers would like to see a variety of other aspects of teaching integrated into an undergraduate course. These include student-centric topics such as diversity, equity, and inclusion principles; communication skills while teaching and interacting with students; and behavioral management strategies. Other topics proposed were career adaptation and potential changes; technical skills; and the creation of subject materials such as tests and course notes.

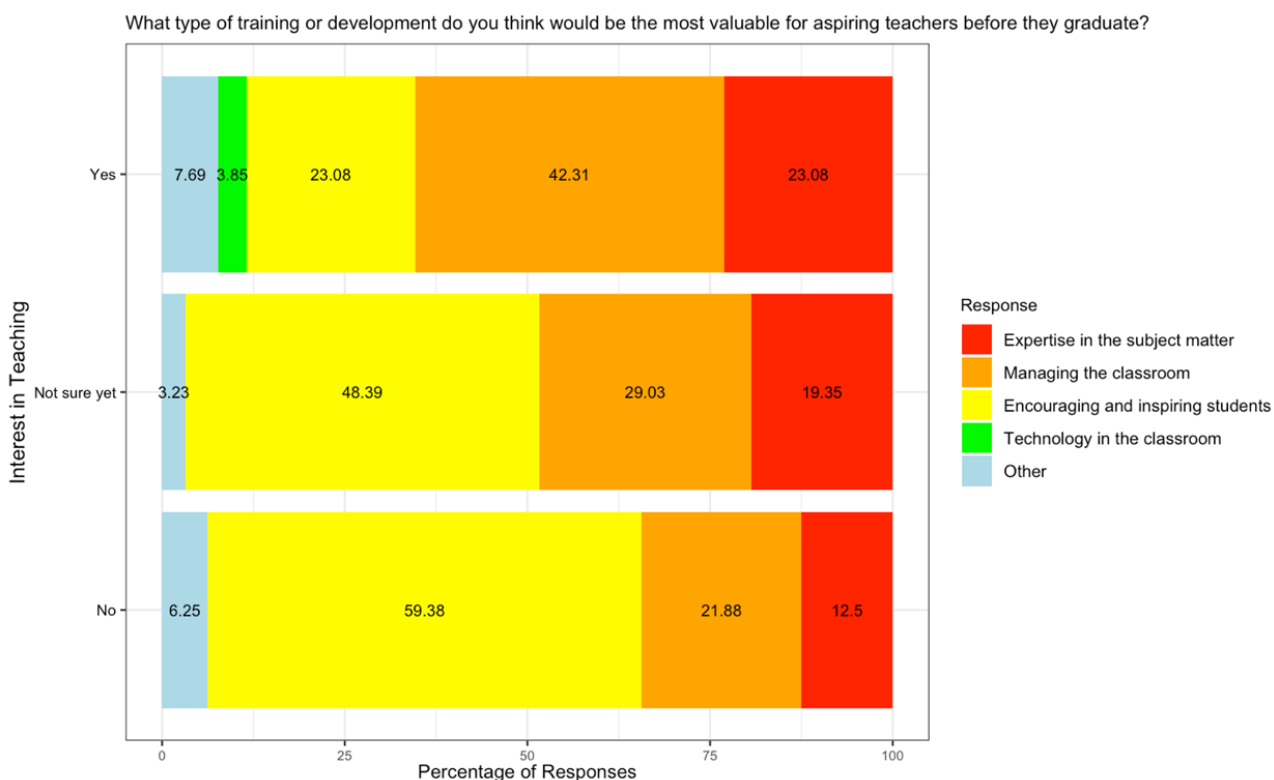
### **Obstacles or Challenges That May Deter From Pursuing a Career in Education**

34.62% of students interested in teaching reported that they have encountered obstacles or challenges that may deter them from pursuing a career in education, while 19.35% of those unsure and 18.75% of those uninterested reported the same. Among the students who expressed having faced obstacles and challenges, a variety of issues were mentioned. These include their personal support systems as well as support within the school environment; financial barriers against attending teacher's college or higher education; confusion about requirements for teacher's college admissions; low salaries relative to workload; as well as the challenge of working with children.

When asked if they recognize any demographics that may have limited access to opportunities that help to further their career in education, 38.46% of students interested in teaching said yes, while 23.33% of those unsure and 35.48% of those uninterested indicated the same. Students identified a variety of demographics that fit these criteria. These included individuals of lower socioeconomic status; those who have not pursued higher education; and minority groups such as people of colour, LGBTQ+ individuals, Indigenous communities, and people with disabilities. Also identified were international students and immigrants whose first language is not English.

### **Life as a Teacher**

Students were asked to rate the usefulness of various resources that they may use as a new teacher. These include administrative support in assigning and aiding teachers in important tasks such as leading school events or communicating with their school board; granting them decision-making autonomy; respecting them as professionals; and allowing them to take on other roles at school such as running extracurricular events. Additionally, students rated the usefulness of co-teaching and shared planning with other teachers; personal development resources; mental health support and access to counselling; mentorship from an experienced teacher; online resources for course development and lesson planning; and pre-teaching orientation events. All of these proposed resources were perceived to be very useful by those interested in teaching. Mentorship from an experienced



**Figure 7.** Percentages of student responses regarding the types of training or development that are the most valuable for aspiring teachers before they graduate (Source: Authors’ own elaboration)

teacher was seen by the highest percentage of respondents as very useful (88.89%), and the lowest percentage of respondents considered personal development experiences to be very useful (64.71%).

When students interested in teaching were asked if they would pursue a higher education degree such as a master’s or PhD while working as a teacher, 69.23% of respondents expressed interest in doing so, while 19.23% were undecided and 11.54% were not interested. Additionally, 100% of these students were interested in taking advantage of a paid scholarship program that would allow them to pursue a higher education degree while working as a teacher.

Students were also asked whether they believe extending paid working hours would increase the morale and volunteer rate of teachers for extracurricular activities at school. Most students interested in teaching (69.23%) agreed with this statement.

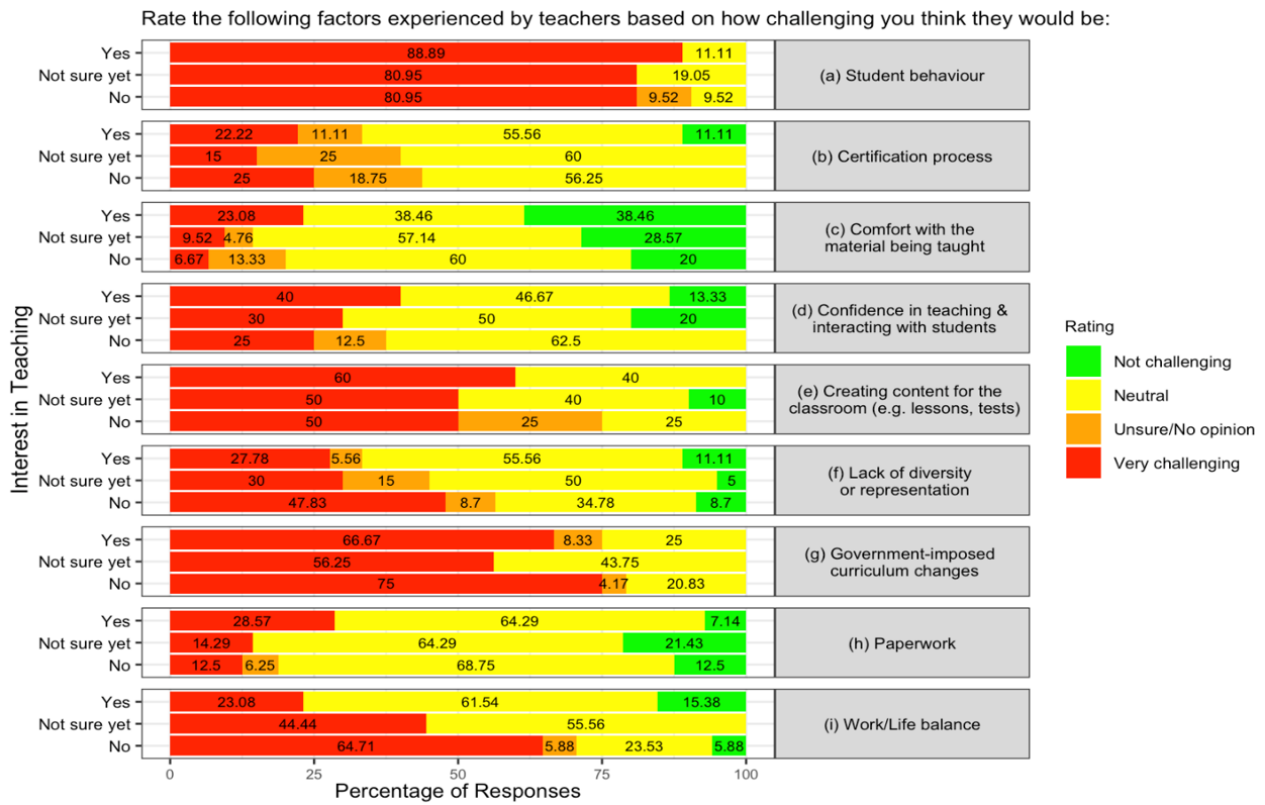
Furthermore, students were asked to indicate their interest in various opportunities that could be pursued alongside a teaching career, including new degrees or certifications; personal development opportunities such as workshops and conferences; and research projects in their area of expertise. All three opportunities were deemed very valuable by those interested in teaching. 71.43% agreed that new degrees or certifications would be valuable, along with 66.67% for personal development opportunities and 63.16% for research projects.

**Challenges Faced by Teachers**

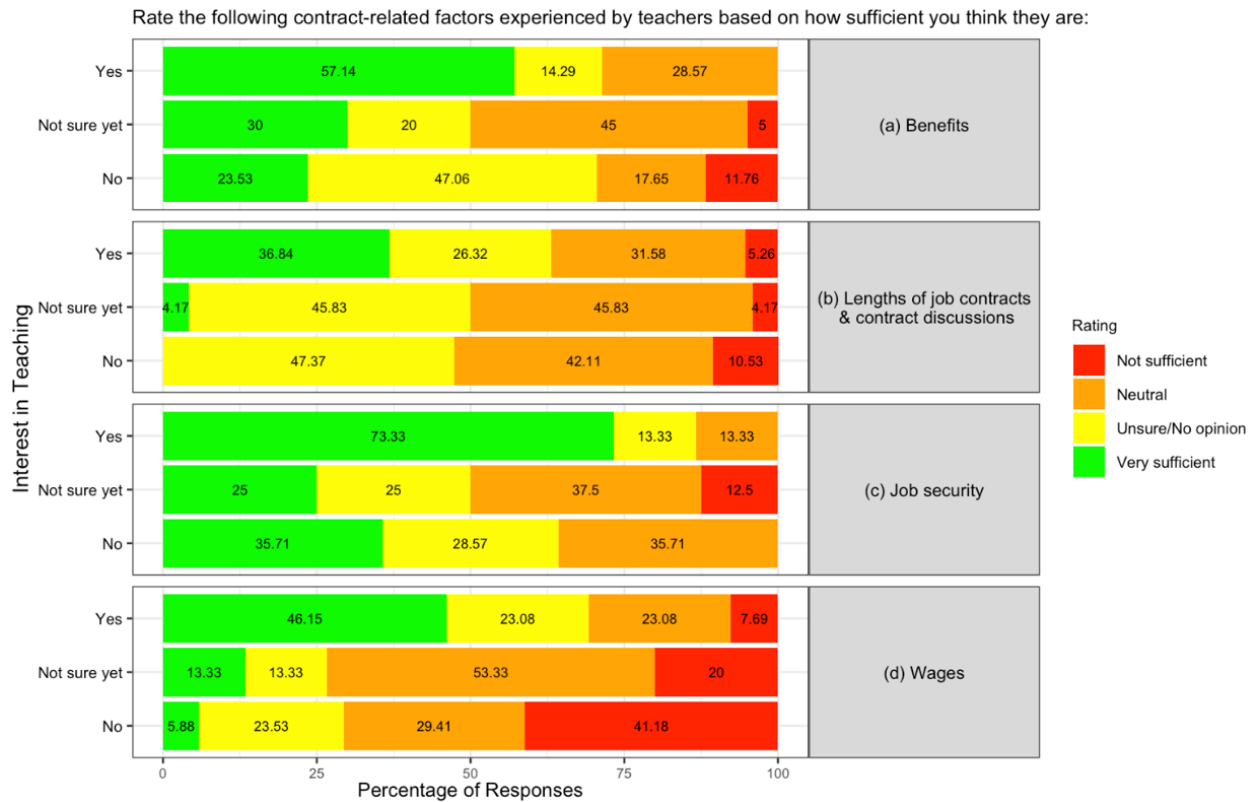
**Career-related challenges**

Students were asked to rate various factors experienced by teachers based on how challenging they perceive them to be. These factors included student behavior; the teacher certification process; comfort with the material being taught; confidence in teaching and interacting with students, creating classroom content such as lessons and tests; a lack of diversity or representation, government-imposed curriculum changes; paperwork; and work/life balance. **Figure 8** shows the distribution of ratings among students of all interest levels in teaching.

Student behavior was perceived by all groups to be a very challenging issue for teachers to handle (88.89% of those interested, and 80.95% each of those unsure and uninterested). The highest percentage of students responded that comfort with the material being taught is not challenging, at 38.46% of those interested, 28.57% of those unsure, and 20% of those uninterested in teaching. A substantial difference in responses was found between groups for work/life balance. Only 23.08% of students interested in teaching perceived this to be a very challenging aspect of the career, while 64.71% of those uninterested reported the same.



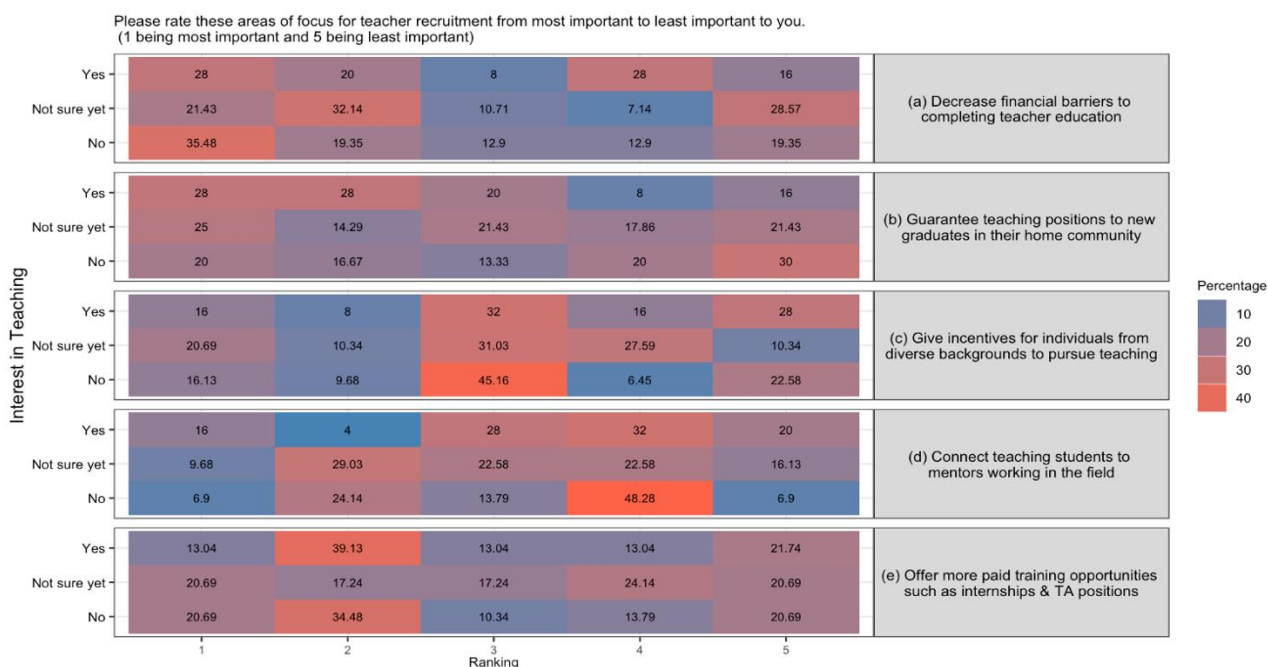
**Figure 8.** Percentages of student ratings of challenging factors experienced in an education career (Source: Authors' own elaboration)



**Figure 9.** Percentages of student ratings of contract-related factors experienced by teachers based on their sufficiency (Source: Authors' own elaboration)

**Contract-related challenges**

Students were asked to rate various contract-related factors based on how sufficient they perceive them to be. These factors included benefits; lengths of contracts and contract discussions; job security; and wages. **Figure 9** shows the distribution of ratings among students of all interest levels in teaching.



**Figure 10.** Heatmap of student rankings of potential areas of focus to increase teacher recruitment with a ranking of 1 denoting highest importance and 5 denoting lowest importance (Source: Authors’ own elaboration)

Overall, aspiring teachers were much more likely to be satisfied with the sufficiency of these factors than those unsure about or uninterested in teaching. There were differing opinions on job security across interest groups, with 73.33% of respondents interested in teaching deeming it sufficient, compared to only 35.71% of those uninterested and 25% of those unsure. Another substantial difference in responses between groups was for wages, with 46.15% of students interested in teaching deeming wages to be sufficient, compared to only 13.33% of those unsure about the career and 5.88% of those uninterested. In fact, 41.18% of students uninterested in teaching deemed wages to be insufficient.

Students identified various other challenges experienced by teachers during their careers, including a lack of freedom over teaching; a lack of provided resources; mental health struggles of their own and of their students; class sizes and student-teacher ratios; as well as insecurities regarding the general reputation of a teaching career.

**Suggestions to Policymakers from Students’ Perceptions and Opinions**

Various areas of focus intended to increase teacher recruitment have been identified. These include decreasing financial barriers to completing teacher education (Gorard et al., 2022; See et al., 2020); offering more paid training opportunities such as internships and teaching assistant positions (See et al., 2020); giving incentives for individuals from diverse backgrounds to pursue teaching (Carver-Thomas, 2018); connecting teaching students to mentors working in the field (Nesje & Lejonberg, 2022); and guaranteeing teaching positions to new graduates in their home community.

**Figure 10** shows the distribution of student rankings by interest level in teaching of the importance of these suggestions.

Students interested in teaching reported that decreasing financial barriers against completing teacher education and guaranteeing teaching positions to new graduates in their home communities were the most important areas of focus (28% each ranking it #1). Interested students deemed giving incentives to individuals from diverse backgrounds to pursue teaching the least important area of focus (28% ranking it #5). Those unsure about teaching favored guaranteeing teaching positions to new graduates in their home communities (25% ranking it #1), while the largest proportion of this group (28.57% ranking it #5) deemed decreasing financial barriers to completing teacher education as the least important area of focus. Among students not interested in teaching, decreasing financial barriers against teacher’s education was also favored (35.48% ranking it #1), while guaranteeing teaching positions to new graduates in their home community was the least favored (30% ranking it #5).

Later survey questions consisted of statements regarding policymakers and their specific efforts to increase the recruitment and retention of teachers. These included “Policymakers, institutions and schools offer vertical opportunities to scale and develop further in your career”; “The government should offer an increased number of scholarships/grants to lower the barrier for entry to the teaching profession”; and “Acceptance to teacher’s colleges should be increased.”

Many students (between 45.16% and 60% per group) agreed that acceptance to teacher’s colleges should be increased. Most respondents across interest levels (at least 74% per group) also agreed that policymakers should offer more scholarships and grants to lower entry barriers into teaching. However, the groups had mixed opinions regarding the offering of vertical opportunities for career development. Those uninterested in teaching were substantially more likely than other groups to disagree that these opportunities are offered (22.58%). However, over 60% of each group had neutral feelings toward the provision of vertical career opportunities.

Students were also given the opportunity to express their opinions regarding the current Canadian teacher shortage. **Table 6** shows descriptive statistics about students’ worries about their futures as educators.

**Table 6.** Percentages of students' attitudes toward their future in education based on the current Canadian teacher shortage

Attitude	Interested	Not sure yet	Not interested
The shortage worries me about my future in education	36.00	32.26	31.74
The shortage makes me hopeful about my future in education	48.00	22.58	29.42
The shortage does not change how I feel about my future in education	16.00	45.16	38.84

Students interested in a teaching career were most likely to report that the current Canadian teacher shortage makes them hopeful about their future in education (48.00%), while 36.00% stated that the shortage worries them. Of those unsure, 45.16% reported that the shortage does not change how they feel about their future in education.

Students were further asked if they agree with the statement "The current Canadian teacher shortage is leading to more burnout among workers in education. This is not a barrier to entry for me." Just over half of those interested in teaching (52%) agreed with this sentiment, while 40% of those unsure and 35.48% of those uninterested expressed the same feelings. However, burnout caused by the teacher shortage was reported to be a barrier for 20% of those interested, 40% of those unsure and 35.48% of those uninterested in teaching.

Through an open-ended question, students proposed several other suggestions for policymakers to expand opportunities for a career in education. In addition to financial incentives, students suggested raising awareness of the teacher shortage; reducing the cost and length of teacher's college while increasing acceptance rates; reaching out to individuals who have previously expressed interest; increasing mental health resources; and providing more professional development opportunities.

## DISCUSSION

This paper was written with the purpose of gathering the opinions of university students regarding various aspects of the teaching career, including the recruitment process. While some of our findings mirrored those of previous studies, others differed.

The most methodically comparable papers were those by Gorard et al. (2022, 2023), which sought the opinions of undergraduate students in England regarding teaching careers. A demographic similarity to this study was that White students were most likely to pursue a teaching career. However, these two studies found that females were more likely to have intentions of entering a teaching career, and that many aspiring teachers studied humanity-based subjects instead of the sciences. We instead found that a higher proportion of males and students in mathematical and scientific programs expressed an interest in teaching, though this could be attributed to our much smaller sample size.

Students' motivations to become teachers in our study were consistent with research by Kang et al. (2024) and Gorard et al. (2022), which found that prior learning experiences and perceived teaching abilities motivate pre-service teachers' desire to teach. While students interested in teaching expressed the importance of stable salaries (Figure 2), previous research suggests that teachers tend to be more motivated to pursue their career based on intrinsic factors such as feelings of value in the workplace or a desire to work with children (Blackmore et al., 2023). Our study found that pensions were also considered to be important to aspiring teachers. However, research by Kimball et al. (2005) found that pensions are not a strong attractor to the teaching career, but that they could be if teachers were more knowledgeable about their benefits.

Our results regarding the use of financial incentives to attract those who are not aspiring teachers (Figure 3) contradict those found in previous research, which found that financial incentives mainly attract people already interested in teaching (Rosen, 2012; See et al., 2020). Our findings regarding larger base salaries are consistent with a study by Hendricks (2015), which noted that increasing teachers' base salaries by 1% had a positive impact on both recruitment and retention.

Furthermore, the results found in this study pertaining to students' interest in social networking events catered to potential teachers (Figure 5 & Figure 6) relate to a study by Lapham and Lindemann-Komarova (2014). They found that formal networking was not popular amongst Russian teachers and that pedagogical fairs are useful recruitment tools. Further, social networking amongst Russian teachers was deemed moderately popular. Our results found that aspiring teachers had little interest in formal meetings, but moderate interest in job fairs. Regarding teaching-specific training, Figure 7 shows that the highest percentage of aspiring teachers in our study found training in classroom and behavioral management to be the most valuable training opportunity. This result is consistent with previous research suggesting that improvement in behavioral management training is necessary since it is currently too broad (Flower et al., 2016). New teachers have previously expressed that they are unprepared to handle more intense student behavior (Flower et al., 2016).

Pertaining to career deterrents and challenges, Gorard et al. (2022) and Pietrzak et al. (2011) found that two important factors preventing undergraduate students from pursuing teaching are heavy workloads, and salaries that are too low. These relate to the results outlined in Figure 8 and Figure 9, respectively, as many students not interested in teaching indicated a lack of work/life balance and insufficient wages. Notably, students interested in teaching considered work/life balance substantially less challenging than those not interested in the career, and almost half of students interested in teaching found wage conditions sufficient. This could possibly indicate that those uninterested in teaching have done research that has made them decide the career is low paying, or that this is simply their perception without additional knowledge. Another surprising finding from our study was that students already interested in teaching were more likely to have faced obstacles deterring them from teaching than uninterested or unsure students. A potential explanation for this finding could be that these students are more informed of the barriers they may face relative to those more interested in other professions.



Regarding the usefulness of resources for new teachers, our study found that aspiring teachers would find formal mentorship very helpful. This differed from the research of März and Kelchtermans (2020), who found that newly inducted teachers considered formal mentorship to be a useful tool, but that reliable go-to networks with close colleagues were most useful. However, the students surveyed in this study believed that resources that help them find their way into teaching are limited (Figure 4). Many new Ontario teachers have expressed similar sentiments regarding the lack of available resources (Ontario College of Teachers, 2022). Further research is necessary to determine whether the limited provision of resources is specifically experienced by aspiring teachers in Ontario or if it is experienced on a wider scale.

Furthermore, we found that students interested in teaching deemed job security to be sufficient, while those less interested tended to disagree (Figure 9). This result is consistent with research done by Faremi (2017), as well as Mackenzie and Nwafor (2019), suggesting that sufficient job security is positively associated with educator retention. However, our result contradicts findings from the Ontario College of Teachers (2022) indicating that Ontario teachers believe job security sufficiency is declining, with only 39% of teachers deeming it excellent or very good in the 2021-2022 school year.

## CONCLUSIONS

Our study provides preliminary evidence of potential interventions that can improve the recruitment of undergraduate students into teaching, while retaining them as new teachers. Students identified that a large motivator toward pursuing teaching is a desire to help others, while perceiving that many factors, such as stable salaries, benefits, and job security are responsible for keeping teachers in their careers. Conversely, students uninterested in teaching expressed that salaries and work-life balance are among the biggest deterrents. In Figure 3, students expressed a general belief that financial benefits such as larger beginning salaries and incentives would improve recruitment and retention practices. Furthermore, students expressed openness to government-provided free teaching-specific training, while also believing that training in areas such as behavioral management and student encouragement should be improved to enhance the satisfaction of teachers (Figure 7).

Figure 4 shows that students of all interest levels in teaching believed that the availability of resources to educate them about entering the teaching career was limited. This could be a potential deterrent against pursuing teaching. Therefore, policymakers should consider enhancing these resources to make them more accessible to all university students. This would allow them to be educated early on about pathways and opportunities they can take advantage of to make an informed decision about their future in teaching.

Results indicated little interest among students in social networking events catered to aspiring teachers, while job fairs were the most popular option in our study. Previous research, including a study completed by Wolff and Moser (2009), has shown that networking in general is associated with career satisfaction. This is therefore a potential area of improvement for policymakers. Incorporating teaching positions at university job fairs, for example, could allow students who are on the fence to gather more information about entering a teaching career (Beam, 2016).

Another notable result was that students of all levels of interest in teaching had relatively little experience with training or paid employment related to teaching. However, over half of students in all groups reported being open to such a position if it were available to them. This suggests that opportunities to teach or tutor through undergraduate employment positions could increase the recruitment of educators as students realize their potential as teachers. An example of such a position would be undergraduate teaching assistant roles. Weidert et al. (2012) indicated that former teaching assistants are slightly more likely to become teachers or professors. Tutoring positions can also be helpful in equipping students with the skills and confidence necessary for a future teaching career (Wankiiri-Hale et al., 2020).

The insights generated by this study on students' perceptions of education as a career, including factors attracting and deterring students from teaching, can help policymakers determine their areas of focus for the recruitment and retainment of new teachers.

### Limitations

Despite the breadth of topics covered in this survey, it is important to interpret these results with caution since only 89 students provided responses. In addition, this was an observational study, through which a convenience sample was used to collect data. This prevents the results from being generalizable to similar populations, as causality cannot be determined without an experimental design. Furthermore, the respondents of this survey were predominantly White and studying biological or quantitative disciplines, leaving us with little data regarding other ethnicities or academic programs.

### Recommendations for Future Study

The limitations and conclusions of this study allow for recommendations to be made which could allow for similar future studies to be more robust.

First, a larger, more randomized sample should be taken, through which it would be possible to perform more robust statistical testing and report results other than descriptive statistics. This would allow us to generalize the results to our desired target population, which comprises of all undergraduate students at the University of Guelph.

It would also be beneficial to survey more students studying disciplines such as the arts, business, and other non-STEM (science, technology, engineering, and mathematics) majors. The small sample size of certain disciplines made it difficult to control for this potentially confounding variable. Similarly, the predominantly White respondent base limited the exploration of opinions from other ethnic groups, indicating a need for further investigation into these perspectives. Other confounders that

could be further explored are the occupation and educational background of students' parents (Gorard et al., 2023), socioeconomic status, and grade-point-averages of students.

By incorporating these suggestions into future work, policymakers would be provided with comprehensive insights into the factors that attract and deter undergraduate students from pursuing teaching careers. This understanding would allow policymakers to adjust their recruitment and retention strategies accordingly.

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**Declaration of interest:** No conflict of interest is declared by the authors.

**Data sharing statement:** Data supporting the findings and conclusions are available upon request from the corresponding author. Fulfillment of these requests will be subject to the permission of the Research Ethics Boards at University of Guelph.

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