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Developing a Survey Instrument to Explore Career Pathways of Past Teacher Education Students

Lynda Kidd, University of Tasmania

Abstract
Despite reported shortages of teachers world-wide, around 50% of teacher education students do not establish themselves in the teaching profession. It is therefore important to confirm the career pathways these students undertake and that teacher education degrees are of benefit to them throughout their career. This paper describes the method used to construct the survey required for the larger study that will explore the career pathways of past teacher education students. Developing the new survey was simplified by identifying and adapting questions from established surveys used in previously published projects. Demographic questions and those related to motivations, career pathways and occupational reflections were categorised into themes for further consideration. The majority of the questions in the new survey were from the established surveys, some of which were re-worded to better suit the purpose of the larger study, and additional questions were included where required to ensure the research questions of the larger project were answered.

Introduction
Not all teacher education students become teachers in the K-12 classroom setting. Despite reported shortages of teachers world-wide (e.g., Painter, Haladyna, & Hurwitz, 2007; Skilbeck & Connell, 2003), 12% of teacher education students do not complete their teacher education course and 30% of teacher education graduates do not enter the teaching profession (Smithers & Robinson, 2001). Add to this early career attrition rates, which varies from 18% (Smithers & Robinson, 2001) to 40% (Ewing & Smith, 2003), and there are around 50% of teacher education students who do not establish themselves in the teaching profession. A more recent study conducted by the Queensland College of Teachers (QCT) (2013) showed similar results with 25% of graduates not being employed as teachers and a further 28% of those that did begin teaching leaving shortly after. Earlier this decade, teacher attrition rates were predicted to increase yet an exhaustive search of more recent articles has failed to reveal current teacher attrition rates for Australia.

Studies designed to identify problems experienced by beginning teachers, and teachers in general, indicate that some of the major issues that cause dissatisfaction amongst teachers are long hours, high workloads, poor student behaviour, and lack of student interest (e.g., Australian Education Union, 2009; Harris, 2006; Ingersoll, 2001) and that they are disillusioned by the public status of teachers (Ministerial Council on Employment Education Training and Youth Affairs, 2003; Rhodes, Nevill, & Allan, 2004). These factors are still being reported as teacher retention issues (e.g., Buchanan, 2010; Dinham, 2013) yet not all teachers who experience these issues leave teaching. Research into teacher attrition has shown that teacher education graduates’ decisions to leave the teaching profession are varied and complex (Gilbert, 2011). What is not clear in the literature is what career pathways teacher education graduates, and non-graduate students, undertake and what factors influence their choices. All graduates require employable skills that are transferable (Crossman & Clarke, 2010), especially those who are career mobile. It is therefore important to confirm
that teacher education degrees are of benefit to all teacher education graduates throughout their career, whether or not they are teaching in the K-12 school system.

The project established to explore these themes consisted of three main research questions:

- What career pathways do teacher education students and graduates undertake?
- What factors influence their decisions to enter the teaching profession, to leave early in their teaching career?
- In what ways do teacher education courses support the range of careers chosen?

A new survey instrument was required as these perspectives have not been focal points of previous research.

This paper describes the method used to construct the survey created for the larger study that will explore the career pathways of past teacher education students. The survey will be distributed this year to all past teacher education students from the education faculty at an Australian university, whether or not they graduated or taught. This has the potential to capture a total population of around 14,000 people. Principals from government and non-government schools will be asked to forward a broadcast email with the survey link to all current teachers. Snowball sampling will be employed by means of posters and promotional events to alert non-teacher students and graduates to the project. The survey will available online as well as a hard copy and phone linkup. The survey will remain open for at least a year to maximize the snowball sampling effect.

Of use from the research literature on quantitative methodologies is information about the technical aspects of developing a survey, such as survey format, structure of questions, and survey length (e.g., Babbie, 2014; Bryman, 2004; Gray, 2009). A review of the literature found that it is common practice to use questions from previous research to create a new survey as the comparison of data over place and time increases the validity and reliability of the instruments (Bryman, 2004). Little information, however, is available on how to gather and combine questions from previous research studies, which forms the focus of this paper.

Established Teacher Survey Instruments

Although questions from previous research are used in new surveys, each survey is purpose driven and needs to suit the purpose of the study for which it is created. Surveys are designed for the local context in which the study is to be conducted and, therefore, they are not always transferable to other studies without critical appraisal. Developing the new survey instrument to establish the major factors influencing career choices and background information of teacher education past students was simplified by identifying and adapting questions from surveys used for previously published projects. Of particular relevance to the larger study for which the new survey instrument is needed, are surveys conducted by the Queensland College of Teachers (2013), Kidd, Brown and Fitzallen (2015), Australian Education Union (AEU) (2008), and Boyd et al. (2004a, 2004b, 2004c). These surveys were selected because they included potential questions for the new survey. The reports that have arisen from the data collected from each of these surveys demonstrate the robustness of these surveys and questions and the ability of the questions to elicit information relevant to the career choices of teachers. These established surveys are summarised below to highlight the relevance of the questions of each survey to the new survey instrument. Deficiencies found were addressed through the inclusion of additional questions in the new survey, which will be referred to as the Teacher Education Career (TEC) survey herein.
In order to investigate why Queensland trained teachers were not teaching in schools within that state, the Queensland College of Teachers (2013) surveyed 386 Queensland teacher education graduates from 2005 to 2012 who had been, but were no longer, locally registered as teachers. This survey contained questions on motivations to enter and to leave the teaching profession. The results showed that participants became teachers because they were passionate about teaching and helping children. Around 25% of the participants, however, were never employed as school-teachers even though half of these non-teacher participants were actively seeking teaching positions. Of the 238 participants who did gain teaching positions, approximately 28% left because they could not gain continued employment in Queensland schools. The other two main reasons given in the study for leaving the teaching profession were inadequate support and workload demands.

Stress, workload, and lack of secure employment opportunities were also factors influencing teachers to leave the profession in the Tasmanian survey study that involved 91 beginning teachers, with no more than 5 years' experience, in government and non-government schools (Kidd, Brown, & Fitzallen, 2015). This study also included questions related to support received by the beginning teachers and found that although support in the form of formal and non-formal induction programs were available for first year teachers, not all beginning teachers had equitable access the support available.

The AEU (2008) surveyed 1,545 beginning teachers with up to 3 years of teaching experience, and found similar results with workload and behavior management being major concerns for beginning teachers. The AEU survey also gathered data that indicated that approximately 54% of participants were currently in ongoing or permanent employment and of these, approximately 30% envisioned leaving the government school system within the next 5 years.

A project conducted in New York City (NYC) included three surveys, which targeted teacher education graduates, first year teachers, and former teachers (Boyd et al., 2004a, 2004b, 2004c). The former teacher survey was completed by teachers who were employed as teachers in the former year and thus included participants who had since left teaching in NYC. The main aim of the NYC surveys was to explore whether the type of teacher education course undertaken made a difference in the teaching position gained and teacher effectiveness. Although the surveys contained some questions similar to those in the other established teacher surveys, the results reported thus far have focused on the effects of teacher movement and teacher effectiveness of teachers. The data gathered showed that after three years, less than half of these beginning teachers remained at their original starting school with 28% of them leaving the New York State public school system altogether (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2007). Teachers who entered the teaching profession with prior teaching experience were as likely to transfer schools or leave the teaching profession, as were teachers who entered the profession without previous teaching experience (Boyd et al., 2011).

The above shows that these established teacher surveys contained questions related to teacher education graduates careers in the teaching profession for their past, present and future but did not included questions on current non-teacher career options. The questions related to support and job satisfaction related only to teaching positions. Motivation questions for entering and leaving teacher profession differed between surveys and were somewhat limited. The questions from these surveys had potential to form the foundation of a new survey and, therefore, were compiled into a table for further assessment. Codes used for all the surveys included in this paper for ease of reference are listed in Table 1.
Table 1. Codes Used for Survey Names

<table>
<thead>
<tr>
<th>Survey</th>
<th>Title</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boyd et al.</td>
<td>Examining teacher preparation: Does the pathway make a difference? Survey of first year teachers.</td>
<td>NYC2</td>
</tr>
<tr>
<td>(2004a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boyd et al.</td>
<td>Examining teacher preparation: Does the pathway make a difference? Survey of former teachers.</td>
<td>NYC3</td>
</tr>
<tr>
<td>(2004b)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boyd et al.</td>
<td>Examining teacher preparation: Does the pathway make a difference? Survey of program graduates, Year 1.</td>
<td>NYC1</td>
</tr>
<tr>
<td>(2004c)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kidd et al.</td>
<td>Beginning teachers perceptions of their introduction into the teaching profession.</td>
<td>UTAS</td>
</tr>
<tr>
<td>(2015)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QCT (2013)</td>
<td>Attrition of recent Queensland graduate teachers</td>
<td>QCT</td>
</tr>
<tr>
<td>Teacher Education Careers</td>
<td>Teacher education students’ and graduates’ career pathways: What are they doing now?</td>
<td>TEC</td>
</tr>
</tbody>
</table>

Development of Teacher Education Careers Survey Instrument

The questions compiled from the established teacher surveys were categorised into themes and considered against each of the current project’s research questions. This provided an efficient method to highlight any gaps that required additional questions. Four main themes arose from the established teacher surveys with two to five categories in each of the themes, as listed below.

- **Background information** – Demographics, degree, and previous work experience
- **Motivations** – Factors influencing decision to enter teacher education degree, and factors influencing decision to leave teaching
- **Career pathways** – past teacher employment, current employment, current teacher employment, and future career plans
- **Reflections** – support received, job satisfaction, preparedness, and comparison of teaching and non-teaching employment.

The themes and categories covered by each of the established teacher surveys used to create the new survey are shown in Table 2. As noted previously, the NYC surveys were exploring whether the type of teacher education course taken made a difference in the teaching position gained. Most the questions in these three NYC surveys therefore relate more to the course undertaken rather than the participant’s teaching career. From the questions asked in the NYC graduates survey, it appears that New York City has several levels of teacher certificates available and therefore recent graduates and first year teachers may have had previous teaching experiences.

**Background information**

Gathering background information about the participants allows for the comparison of variables and usually includes demographic information, such as age and gender. Teacher education studies also collect information about the degree studied. For instance, which degree/qualification was undertaken, where was the course studied, and what was the year of graduation/completion. The demographic questions were relatively similar in all the surveys
although the NYC survey included English as an additional language (EAL), race, marital status, children, and income of family.

Table 2. Outline of Themes and Categories Covered by Previous Surveys

<table>
<thead>
<tr>
<th>Themes and categories</th>
<th>NYC1</th>
<th>NYC2</th>
<th>NYC3</th>
<th>UTAS</th>
<th>QCT</th>
<th>AEU</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Background information</strong></td>
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<td></td>
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<tr>
<td>Demographics</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>Degree</td>
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<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
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<td></td>
<td>x</td>
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<td><strong>Motivations</strong></td>
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<tr>
<td>Entering teaching</td>
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<td>x</td>
<td>x</td>
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<tr>
<td>Leaving teaching</td>
<td></td>
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<tr>
<td><strong>Career Pathways</strong></td>
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<tr>
<td>Past teacher employment</td>
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<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Current teacher employment</td>
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<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Current non-teacher employment</td>
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<tr>
<td>Future Career plans</td>
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<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td><strong>Reflections</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Support received</td>
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<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Job satisfaction</td>
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<td></td>
<td></td>
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<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Preparedness</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Comparison of jobs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Teacher expectations</td>
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<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

English as an additional language was considered an important item as approximately 3,500 international students were enrolled at the University of Tasmania in 2013 (Council of the University of Tasmania, 2014) as well as additional EAL domestic students. Although the AEU survey included Aboriginal and Torres Strait Islander (ATSI) identity, race and ATSI questions were not included in the TEC survey as there are very few teacher education students who identify themselves as Aboriginal or Torres Strait Islanders. For instance, the AEU (2006a) survey had 8 ATSI overall from 1207 Australian participants, which is less than 1 percent. The challenges identified by the AEU (2006b) for ASTI beginning teachers were similar to those reported by all beginning teachers in the report. Research in relation to teacher education attrition has not yet identified ASTI as an issue, or suggested it as a topic to be explored. In addition to this, the low number of ASTI would limit the capacity to explore fully the inter-cultural tensions that may influence teacher education graduates career choices. It was therefore decided not to include race or ASTI as a separate item, however, a general open-ended question provides the opportunity for participants to include their opinions on race if they consider this to be a factor that influences their decision.
People’s marital status and number of children may influence career choices as it may limit their opportunities to travel to rural or out of state employment. Hence, these questions were included in the TEC survey. Specific details on the amount of family income received was not included in the survey, as in NYC surveys, due to the sensitivity of the topic and the reliant of people’s recall memories over a long period of time. More general question on employment obtained both previously and currently were included to gather data around this topic.

As expected, questions relating to the degree obtained by teacher education students were in all the surveys collated, with AEU also enquiring into whether further studies have been undertaken by the graduate. This additional question has been included in the TEC survey as both non-teacher and teacher participants may have completed further studies to gain better employment. At the university being studied, certain teacher education degrees are only available at certain campuses and available in particular years. Requesting this information and cross-referencing the data will serve to alert the researchers to participants who may complete the survey even though they are not part of the target population. The UTAS survey was the only one that enquired into non-teaching work experience prior to studying teacher education therefore these questions were included in the TEC survey.

Motivation

Previous research associated with teachers and teacher retention have included motivations for both entering and leaving the teaching profession (e.g., Rhodes, Nevill, & Allen, 2004). The motivational sections in the NYC1 and NYC2 surveys related to students’ motivations to choose their particular teacher education course and did not relate to their reasons for studying to become a teacher. The NYC3 and QCT surveys included motivations that focused on why the teachers were leaving teaching positions, including questions relating specifically to their particular locations (New York City and Queensland). The UTAS and QCT surveys’ asked the participants to select as many items relating to what motivated them to become a teacher as were applicable to them. The new survey included most of the motivational items from the NYC3, QCT, and UTAS surveys, covering motivations for both entering and leaving teaching, to gain an insight into changes that may occur during studying and early teaching careers. It also included new items related to motivations to study teacher education due to; dissatisfaction in a previous career, attendance at a particular campus, inability to study other degree choices, and employment status. Additional items for motivations to leave the profession were; gaining non-teaching employment, teaching position outside of the school setting, and furthering educational qualifications.

Career Pathways

Careers are a combination of all employment and educational experiences (Baruch, 2004) and therefore include the participants’ non-teaching and teaching employment, before and after graduation, and their future aspirations. As mentioned previously, the graduates and first year teachers in the NYC study may have had previous teacher employment prior to completion of their current course due to several levels of entry into the teaching profession. Past employment related to teaching was collected from graduates in NYC1 survey and, to some extent, the first year teachers in NYC2 survey. The first year teachers were also asked about the teaching experience they obtained within their teacher education course, and their current teaching positions. Former/current teachers, NYC3, were only asked about their current teacher employment. NYC2 also asked first year teachers about the type of employment for which they applied. This included questions related to location, Socio-economic status, size and culture of school, conditions of the position gained, hours and fields taught. Location, grades and fields taught were also addressed in the other surveys.
The employment factors related to the type of employment, location of employment, employment contract, and fields taught were included in the TEC survey for current and past teacher employment questions. Similar questions were also created that related to non-teaching past and current employment for participants who were/are not teaching.

Current non-teacher employment was raised to a certain degree in the UTAS survey but the types of careers obtained were not reported. This topic is an important aspect of the teacher education students’ careers study as the current literature on teacher attrition rates implies that if teacher education graduates are not teaching in K-12 employment, they are not teachers. This excludes those who teach in establishments such as universities, registered teaching organisations, and those involved in student support or office training programs. The TEC survey gathers this data in depth and asks if the participant considers themselves as a teacher in these occupations. All of the established surveys included future career plans to the extent that they asked teacher education graduates and teachers how long they intend to remain in the teaching profession. This question has been included in the teacher section of the TEC survey and has been adapted for the non-teacher section to allow comparisons between the different career pathways for the two cohorts.

Reflections

The focus here is for past teacher education students to reflect on the advantages and disadvantages of entering both teaching and non-teaching occupations as these factors also influence career choices. The questions related to this in the established surveys enquired into the type of support received, job satisfaction, preparedness, expectations and comparison between occupations. The NYC1 survey for graduates did not have any of these items as the survey participants were not currently employed as teachers. Support received was included in all the other surveys although job satisfaction was not included in NYC3. Feeling of preparedness to teach after studying was part of the AEU and UTAS survey whilst expectations of teaching were only in the UTAS survey. NYC3 was the only survey where participants were asked to compare their non-teaching occupations with previous teaching positions. The majority of these questions were included in the TEC survey and were also adapted for non-teaching occupations for comparisons between teacher and non-teacher occupations. Due to the size of the survey, however, participants were first asked if they would be willing to answer further questions relating to support and job satisfaction to allow them opt out if desired. This was organised to mitigate the possibility of survey fatigue.

Finalising the TEC Survey Instrument

After establishing which questions could be used or/adapted, extra questions were created to ensure all the research questions were covered. These additional questions were mainly those that related to non-teacher occupations. The questions included; work experience prior to teacher education studies, any alternative occupations they may have obtained after teacher education, whether they saw themselves as a teacher in their other occupations, and if their teacher education studies were beneficial to them in their non-classroom occupations. Other new questions created related to whether the occupation the participant currently held was their preferred choice.

As a preliminary quality assurance strategy, five experienced teachers and three teacher education lecturers, who were not eligible to participate in the study, trialled the new survey. The feedback given from the testers was very positive with comments like “there are complicated aspects of a teacher’s career but you seem to have simplified them appropriately.” Based on feedback given, minor editorial changes were made to the survey, which improved the clarity and validity of some questions. When activated, the survey will
remain open for at least 6 months to allow a snowballing sampling strategy to be effective. The request for participants to forward the survey link to their colleagues and acquaintances is included in the survey information. Once the data are collected, exploratory and confirmatory factor analysis (de Vet, Ader, Terwee, & Pouwer, 2005) will establish the stability and reliability of the survey.

Conclusion

Using questions from established teacher surveys simplified the process of developing a new survey for the project on past teacher education students’ career choices. The questions from the established surveys were assessed and those found relevant to the current project formed the foundation of the new TEC survey instrument. The majority of the questions for the new survey were from these established surveys, therefore, increasing the validity and reliability of the new instrument. Additional items related to questions on motivations to enter and leave the teaching profession, and support and job satisfaction were required. In some instances, re-wording of questions was necessary to provide similar questions for the participants in non-teaching occupations. The questions created specifically for the new survey related mainly to non-teacher occupations and occupational preferences. The successful development of the TEC survey will facilitate the collection of data that relates to the research questions in the larger study on teacher education students’ career pathways. Quantitative analysis of the data will lead to a better understanding of why some graduates remain teachers, what careers graduates who do not become teachers and non-graduates undertake, and the factors that influence their choices. This information has the potential to assist teacher education providers and education sectors to develop courses and programs that will improve the attrition rates of teachers and benefit all graduates in their chosen careers.

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