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Working Towards 'Doing it Better': Seeking the Student Voice in Teacher Education

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Abstract. In this article we report on the monitoring of pre-service teachers' experiences of their course at a regional university in NSW, Australia. The intention of this research project was to engage with pre-service teachers to gauge their perceptions and their awareness of their developing teacher knowledge and skills. Our aim was to gather more comprehensive and meaningful data than that generated by standard, centrally administered, student evaluation surveys. Our research was conducted across four consecutive years to gather third- and final (fourth) year students' expectations for, and reflections on, their secondary education course. Drawing from the extant literature, and set against a context of shifting political agendas surrounding teacher education, the surveys were designed to capture the student voice. Key findings included the perceived need for increased behaviour management strategies, the inclusion of more 'practical' assessment tasks, and improved university-to-school transitions, including sustained professional learning agendas.

Key words: curriculum; teacher knowledge; course design; transitions; skills; assessment

Introduction

The notion of involving students in their own education is not new. Morrison (2009, p.103) reminds us of this citing the body of works of Freire, Dewey, Illich, Giroux and others, who "have all, in some form or another, argued for a 'democratic' education – [asserting] that students should have more voice and choice in what they study, and how and when they study it". However, the idea of seeking student voice about the knowledge and skills they deem to be important *is* new to teacher education (with some exceptions, for example Clark and Byrnes, 2015; Morrison, 2009).

Hattie (2010, p.12) has been scathing of teacher education courses, arguing there is a "woeful lack of evidence about the optimal ways to be effective teacher educators" and that teacher educators possess virtually no data about the effects (positive, or negative) that they have on pre-service teachers. Korthagen, Ploughman and Russell (2006, p. 1035) observed that, "all over the world, candidates' [teacher education students] voices are rarely used to ascertain whether their teacher education program achieves its goals". Questions about the nature of the dissonance between pre-service teachers and teacher educators' valuations of

their courses have received scant attention in the research literature. We concluded that investigating this dissonance was timely.

Knowledge is becoming an increasingly fluid concept, as is the nature of where knowledge resides. Nilsson (2012, p.238/9) maintained that teacher knowledge, being so complex, relied on relationships between "knowledge about subject matter, pedagogy, and context". Although these dynamics are challenging to study, it is vital that we understand these interactions along the continuum of teacher knowledge development if we are to continue to refine and improve teacher education curriculum, and additionally, understand the "changing perceptions of relevance" around teacher knowledge (Clark and Byrnes, 2015, p. 390).

As teacher educators, we are not deaf to anecdotal but persistent student demands for more practical knowledge associated with things such as classroom (behaviour) management and assessment design skills, and to their oft-repeated claim that they glean more knowledge about teaching on their professional experience placements than they do from us. And we are not alone. The Productivity Commission Schools Workforce (2012, p. 72) identified that "students consistently rate their practicum as the most important part of their teacher education courses". Clark and Byrnes (2015, p.390) concluded that "professors cannot compete with the practical experience and learning gained from interacting with a class of students under the guidance of an experienced [classroom] teacher".

Given the above, we sought to investigate what *our students* considered important, as opposed to what *we as teacher educators* held as important and necessary to their preparation as teachers. This paper thus highlights the findings of a four-year longitudinal research project that took place in a school of education at a regional university in NSW, Australia. The rationale for the research was to gather more comprehensive, meaningful data than that generated by end of session university-wide student evaluation surveys.[1] In addressing the problem of low response rates to such surveys, Jansen (2008) cited in Fullan and Scott (2009, p.94) suggested "part of the problem may be that we are not engaging emotionally with students 'in their world". We felt this was an idea worth interrogating and thus developed supplementary course experience surveys designed to foreground the student voice around teacher knowledge and skills they considered as important.

Over four consecutive survey periods we investigated student-reported experiences of their course. A survey period consisted of the administration of a questionnaire at the beginning (the 'pre') and the end (the 'post') of the third year of a four-year undergraduate secondary education program, over four consecutive years. Some participating students were enrolled in a one-year Postgraduate Diploma in Education, thus two surveys were administered during this year. In all, 485 students completed the pre-course surveys and 494 completed post-course surveys. The following summarises our journey through the literature as we strove to understand the many contemporary influences on curriculum design in teacher education. It is included here as both prelude and background to our research.

Contemporary Learning Agendas

Until the extant pressures exerted by external accreditation imperatives, many teacher education programs rather than having evolved as integrated curricula, consisted of individual

[1] In our experience, the manner of student feedback elicited by the standard online student evaluation instruments is deficient in useful insights, and as students are not required to complete such evaluations, results in skewed samples. A major flaw of the end of semester surveys is that students do not understand their purpose, and anecdotally, lecturers are aware that low survey response rates are a significant issue. At our university response rates generally fluctuate between 20 – 30% of the cohort responding, rarely more.

units of work, which seemed to have developed like 'cottage industries' reflecting the skills, interests and professional gaze of the individual academics who wrote and taught them. Little change occurred in curriculum development, until the end of the 2000's when the impact of the 'Digital Education Revolution' [DER][2], new teaching standards (News South Wales Education Standards Authority [NESA]), and a looming Australian Curriculum (Australian Curriculum and Reporting Authority [ACARA]) combined into ongoing cycles of accreditation, major change and innovation in school curricula and teacher education courses across Australia.

The assumption underlying these new agendas was that learning programs and spaces needed to adapt and cater for students' evolving learning needs, the new learning contexts, and for ICT-related pedagogies. Darling-Hammond (2006, p. 300) summed up these demands as a "spectacular array of things that teachers should know and be able to do in their work," which for teachers and teacher educators alike, presents a confronting new era in curriculum and learning design.

A significant challenge for teacher educators is to design and deliver pre-service teacher education programs that assist teachers to understand a wide variety of multi-modal and cultural contexts, while catering for the diversity of students in their classrooms. Teacher educators must respond rapidly to change in all of these arenas, and their role is increasingly one of fostering and promoting adaptability and flexibility in the programs their teams deliver. As Hardman (2009, p.587) observed, "after more than two decades of educational reform, educators, parents, researchers, and policy makers are still asking what constitutes an effective teacher, of which a corollary is what constitutes effective teacher education?" This debate has raged on into the second decade of the 2000s, evidenced by constant media chatter regarding teacher (in) effectiveness and the most recent Teacher Education Ministerial Advisory Group [TEMAG] Report (2015).

There appears to be as many points of view about what constitutes rigorous and relevant teacher education as there are parties espousing them. Hattie (2010, p.4) observed that as teacher educators we "promulgate the 'core' knowledge and experiences that beginning teachers need to learn – and this is often a vexed, hard fought, and long process - and each of us decide different answers ... we all claim to our students that 'our way' is essential".

In such a politically-charged climate, teacher educators are compelled to constantly evaluate and re-evaluate through teaching and research, and other dealings with schools and school systems, the essential and the desirable characteristics, skills, and knowledge for teachers. Further, these things must be viewed against the shifting contexts for learning, and meanings of learning, in the 21st century. The following briefly explores some of these contexts and their implications for teaching and for teacher education.

Skills for Young People in the 21st Century – Changing Contexts

Since 2000 conceptualisations in the educational lexicon have included things such as '21st century learners', 'learning in the 21st century', and '21st century skills and competencies'. Although it is probably high time to question this terminology given that we are eighteen years into this century, what this terminology has come to signify remains salient, as does the underlying assumption that teachers will need to be sufficiently prepared to deliver the skills and develop the qualities thus promoted. Therefore, it surely follows that

[2] The 'Digital Education Revolution' [DER], involved an investment by the federal government of over two billion dollars in ICT implementation in all schools in Australia.

such aspects should also be an integral component of teacher preparation as the following discussion asserts.

Crockett, Jukes and Churches (2011) argued that in addition to important literacy skills, young people needed to be fluent across many other areas in the twenty-first century. These fluencies included: solution fluency; information and media fluency; creativity and problem solving fluency. Lists of 21st century learners' attributes can be found in the publications of the Organisation for Economic Co-operation and Development (OECD) (for example, Ananiadou & Claro, 2009), and in the Melbourne Declaration on Educational Goals for Young Australians (Ministerial Council on Education, Employment, Training and Youth Affairs [MCEETYA], 2008)[3]. Since 2009, the OECD has been active in publishing, promoting and testing for so-called 21st century tendencies, competencies and skills that workers and citizens will need in order to be effective. There are three dimensions to these attributes: information; communication; and ethical and social impact dimensions.

As noted, the early-mid 2000s also witnessed the rollout of the Digital Education Revolution [DER]. The DER was the Australian government's response to a common perception, fueled no less by popular literature at the time[4] proposing the notion of an entire, homogenous generation of learners as 'digital natives' (Prensky, 2001), and that Information Communication Technology [ICT] was the silver bullet education needed to succeed in the 21st century. However, with ICT skills necessarily come other thinking skills. Wagner (2016) developed a list of 'must have' skills, or core competencies that the 'Net generation' will need for the future: critical thinking and problem-solving; collaboration across networks and leading by influence; agility and adaptability; initiative and entrepreneurialism; effective oral and written communication; accessing and analysing information; and curiosity and imagination. It could be postulated that such skills are core to ICT mastery, and also to effective teaching.

The Challenge for Teacher Educators in their Curriculum Design

Gillett-Swann and Grant-Smith (2017, p.325) remind us of "the increasing complexity and diversity of the pre-service teacher cohort" in an era when teacher education itself is "growing and changing at all levels" (Ell, Haigh, Cochran-Smith et al, 2017, p. 327). Teacher education is therefore evolving in dynamic circumstances, and in the sphere of practice, teachers' roles are likewise being continually reconceptualised. For example, in Australia and internationally in recent years, a strong theme emerging in teacher education theory and praxis has been the recasting of teachers as researchers and data gatherers and analysers[5], and as such, as evidence-based practitioners. Hattie (2010, p.14) has been singular in his view that our primary role as teacher educators is to teach pre-service teachers "how to be evaluators of their impacts on students". He has urged teacher educators to go further by modelling to our

[3] The Melbourne Declaration document outlined characteristics of successful life-long learners, such as "creative and productive users of technology… creative, innovative and resourceful… collaborate, work in teams and communicate ideas… are enterprising, show initiative and use their creative abilities" (MCEETYA, 2008, pp.8-9).

[4] The term 'digital' natives was first coined by Prensky in 2001 (See: Prenksy, M. (2001a). Digital natives, digital immigrants. *On the Horizon*, *9*, 5, 1–6. Also, Prenksy, M. (2001b). Digital natives, digital immigrants, part II. Do they really think differently? *On the Horizon*, *9*, 6, 1–6. Subsequent research, for example, Bennett, Maton and Kervin (2008) asserted emerging evidence that challenged the assumption that there is a homogenous generation with a distinctive learning style. They argued, it may very well be the case that "there is as much variation within the digital generation as between the generations" (p. 799).

[5] For example the work of researchers such as Fullan and Scott ; Hattie; Marzano; and Petty

students the ways in which we are inquiring into our own practices and how this impacts on them.[6].

A major challenge for designers of teacher education programs therefore, is to promote pedagogies that cater to an increasingly diverse student cohort (Hattie, 2010), and capture multiple learning agendas such as those outlined above. Further, this needs to be achieved whilst simultaneously keeping up with broader and constantly shifting regulatory, political, socio-cultural and neoliberal contexts of school education. Broadly and by way of summary, the required pedagogies should therefore be:

- Relational;
- Collaborative;
- Student-centred;
- Capable of teaching students how to research and gather data;
- Capable of teaching students how to cater for diversity;
- Interdisciplinary, innovative and creative; and
- Capable of promoting the development higher order thinking, inquiry and critical reflection skills.

However, in our devotion to responding in our curriculum design to this kaleidoscope of influences on teacher education, have we been forgetting the most important element? Namely, how were our students positioned in relation to all of this? More specifically:

(1) Were/how were our students engaging with the elements of contemporary pedagogies and learning agendas canvassed above, as represented in our curriculum design? and,

(2) Was there a dissonance between students' and our own (teacher educators') valuations of the constitutive knowledge and skills comprising effective teacher education?

Thus our research sought to give our students a voice in relation to these questions, and to thereby develop a better understanding of their experiences of the course. Our methods and findings are outlined below.

Methods

Our surveys were designed to capture students' expectations, and their developing teacher knowledge, as they looked towards a key stage in their course (containing the majority of their education units and two professional experience placements), and their reflections on their experiences at the conclusion of this year. The research employed a mixed methods methodological approach, utilising both quantitative and qualitative data collection methods. This design allowed for one type of data to enrich, clarify and inform the other in the analysis and interpretation (Creswell & Plano Clark, 2011).

Participants

Data were collected from students, ranging in age from the early twenties (the majority) to early fifties, and enrolled in what we termed two 'core' secondary education units (subjects), delivered in the third or final year of a four-year of a combined degree depending on their enrolment pattern (e.g. Bachelor of Arts/ Bachelor of Education; Bachelor of Science/Bachelor of Education etc.). Demographic data about the students was not

[6] This sentiment has been supported by the findings of the recent TEMAG report (2015).

collected, however they were asked to identify whether they were enrolled in the subject in on-campus learning mode or online learning mode.[7]

Materials and Procedure

In each survey period in the second week of teaching session one (February), students enrolled in on-campus classes across the university's three sites completed an 18-question pre-course survey. Students who were undertaking their studies on line completed the questionnaire during a mandatory residential workshop early in the teaching session. The post-course questionnaire was completed two weeks before the end of Session 2 (September) each year in the same manner according to the students' mode of enrolment.

Although participation was voluntary, the majority of our students (95%) completed the surveys. In total, 485 students completed the pre-course questionnaires, and 494 the post-course questionnaires over the four survey periods. Although most students would have completed both the pre- and post-surveys in the same year, course attrition rates and unusual or part-time study patterns should also be taken into consideration with a small percentage of students present for the first survey no longer enrolled for the second.

The first thing the pre-course survey asked the students to do was to rate from 1 to 7 (Likert scale) a series of statements in relation to what they considered the most important elements that would contribute to their success at SCU. The findings are displayed in Table 1 (below). The statements to which students were asked to respond were a mixture of items encapsulating what we termed *short term course satisfaction* elements indicated in Table 1 by an asterisk [*]; and of elements reflecting *broader contemporary and longer term learner/learning agendas,* identified in Table 1 by a hashtag [#]. The actual question students were asked was:

> *On a scale of 1 – 7, 1 being not important at all and 7 being essential, how do you rate the following statements in relation to what you consider to be the most important elements that will contribute to your success at SCU?*

The post-course questionnaire sought a ranking of only *six* of the eighteen pre-course survey items presented to students in the pre-course survey (refer Table 1). Here our purpose was to encourage students to reflect on (and accordingly rate on a 1-7 Likert scale) the importance of six specific items (refer Table 1) representative of broader and contemporary longer term learning agendas. The other twelve items relating to short term course satisfaction attributes were not applied in the post-course surveys because our aim here was to encourage students, who had by this time undertaken at least one professional placement, to critically reflect on elements relating more specifically to the development of skills associated with longer term professional learning (refer Table 2).

Thus instead of being asked, as they had been in the pre-course survey to rate these elements in relation to what they considered to be the most important elements *'that will contribute to your success at SCU',* students were asked to: "*rate the following elements along the scale in terms of how important you think they are as part of your learning in a secondary teacher education course."*

The majority of the pre-course survey items were replicated over the four survey periods, however some varied slightly in their wording after the first survey when it was

[7] There was no statistically significant difference between external and internal students' responses. Although process of data gathering was slightly different, the two groups however showed no significant impact over all, thus we have not included this element in the presentation of our findings.

realised they contained equivocal or repetitive aspects. Data were extracted from questions that were proximally related. Individual participants were not tracked across pre- and post-course surveys because they were cohort surveys. Accordingly, these findings should be interpreted with caution as they are not suggestive of a cause and effect relationship between students' expectations/experiences and completion of a one-year period in their respective course pathways. Rather, the data indicate the expectations /experiences of independent groups at varying times that were measured using questions in which the wording, while proximally similar, was not repeated exactly for the reasons outlined above. To compare the responses to the six post-course items to the six equivalent pre-course items, independent groups t-tests were used.

The post-course questionnaire also consisted of four additional open-ended questions designed to obtain qualitative data relating to the students' reflections on their course experiences. These were coded into broad categories then axial coded - broken down into major themes and sub-themes - and ranked according to the number of mentions, as shown in Figures 1 to 3. Every time an item was mentioned, it was recorded, with the lists of nominated elements growing considerably in length and depth during the four year period in which the surveys were conducted. To make the data more manageable, nominated elements, where appropriate, were compared and/or contrasted and reintegrated as categories developed. Axial coding was then applied to the data to refine these major categories and to construct key themes in the students' responses. Where something was mentioned fewer than twenty times (or by less than 5% of students) it was generally not recorded in Figures 1 – 3 (below) unless its small number of mentions was unexpected and therefore worthy of comment.

Results

Table 1 shows the descriptive statistics for the responses to the questions on both the pre- and post-course surveys. Table 1 also illustrates that the majority of students rated most items as very important or essential (scores of 6 or 7), indicated by the means of these items being 6 or above. Items considered by students to be highly important included:

- Quality teaching in units;
- Clear and concise study materials;
- Fairness in grading assessments; and
- Supporting transition from university to employment.

Items considered to be the least important included those related to research (Pre-Q9 and Post-Q3) and collaboration (Pre-Q5 and Post-Q3). However the ratings of both of these items increased from pre-to post-course surveys (see below). Reasons for this will be proposed in the Discussion section.

Pre or Post Question	Proximal meaning of question	*N*	*Min*	*Max*	*Mean*	*SD*
Items included in the 'pre' course survey						
Pre - Q1	Clear concise study materials*	485	3	7	6.53	0.81
Pre - Q2	Clear communication about resources*	484	2	7	6.32	0.98
Pre - Q3	Engaging lectures*	484	1	7	5.95	1.14
Pre - Q4	Sufficient administrative assistance*	485	2	7	5.92	1.11
Pre - Q5	Collaborative opportunities with students#	485	1	7	5.03	1.30
Pre - Q6	Sufficient teaching assistance*	485	3	7	6.31	0.94

Pre - Q7	Skill acquisition for classroom success#	484	2	7	6.47	0.95
Pre - Q8	Improving personal communication skills#	484	1	7	5.87	1.12
Pre - Q9	Opportunity to engage in research#	485	1	7	4.96	1.35
Pre - Q10	Fairness in grading assessments*	481	2	7	6.46	0.87
Pre - Q11	Quality teaching in units*	483	3	7	6.50	0.80
Pre - Q12	Stimulating course that challenges my thinking#	259	2	7	6.24	0.91
Pre - Q13	Opportunity to improve academic skills*	259	2	7	5.98	1.07
Pre - Q14	Consistent application of grading criteria*	485	1	7	6.07	1.03
Pre - Q15	Support from staff in relation to practicum*	482	1	7	6.39	0.93
Pre - Q16	Supporting transition from Uni to employment#	483	2	7	6.46	0.88
Pre - Q17	Facilitation of independent learning#	481	1	7	5.40	1.58
Items included in the 'post course survey						
Post - Q1	Collaborative opportunities with students#	493	1	7	5.59	1.23
Post - Q2	Improving personal communication skills#	494	1	7	5.96	1.15
Post - Q3	Opportunity to engage in research#	494	1	7	5.38	1.31
Post - Q4	Stimulating course that challenges my thinking#	494	1	7	6.06	1.05
Post - Q5	Opportunity to improve academic skills*	494	1	7	5.55	1.31
Post - Q6	Facilitation of independent learning#	494	1	7	5.63	1.29

**Denotes short term course satisfaction elements*
 # Denotes elements reflective of broader contemporary and longer term learner/learning agendas

Table 1. Descriptive statistics for proximal items

Additionally, independent *t*-tests were conducted to compare the mean ratings for the six items presented both pre- and post-course. Data for the full four survey periods were used to compare the ratings for Questions Q5, Q8, Q9, and Q17, but due to the lack of equivalent questions Q12 and Q13 in the pre-course questionnaires for the second two years of the survey, the comparisons for these questions involved the first two years only. The means for the six items and outcomes of the significance test is shown below in Table 2.

Items	Pre/Post	*N*	*M*	*t*	*p*	95%CI	
Q5: Collaborative opportunities with students	Pre	485	5.03	-6.89	<001*	-.72	-.40
	Post	493	5.59				
Q8: Improving personal communication skills	Pre	484	5.87	-1.27	.21	-.23	.05
	Post	494	5.96				
Q9: Opportunity to engage in research	Pre	485	4.96	-4.97	<.001*	-.59	-.27
	Post	494	5.38				
Q12: Stimulating course that challenges my thinking**	Pre	259	6.24	2.73	.007*	.07	.41
	Post	222	6.00				
Q13: Opportunity to improve academic skills**	Pre	259	5.98	3.89	<.001*	.22	.65
	Post	222	5.55				
Q17: Facilitation of independent learning	Pre	481	5.40	-2.45	.015	-.41	-.05
	Post	494	5.63				

*Note - * Significant at Bonferroni adjusted significant level .0083. ** Years 1 and 2 survey data only.*

Table 2. Changes in importance of items from pre-course questionnaire to post-course.

Referring to Table 2 above, the implications of each of these t-tests, that is, of the changes (or in some cases, no change) in students' ranking of the importance of items from pre-course questionnaire to post-course, are expanded in the following interpretation:

Q5: *Collaborating with other students*: There was a significant increase in the students' rating of this item in terms of its importance from pre to post-course, indicating they considered working collaboratively was more important post course than prior to it.

Q8 *Improving personal communication skills*: There was no change in the rating of importance from pre to post course for 'improving personal communication skills'. This may imply simply that participants in this study already possessed a suitable level of personal communication skill and hence felt that this item of learning did not apply to them.

Q9: *Opportunity to engage in research*: There was a significant increase in mean rating for 'opportunity to engage in research', indicating that students considered that this was more important subsequent to the course. This finding illustrates that participation in research is an element students consider should be entrenched in educational course design. We reflect on this finding in our Discussion section.

Q12 *Stimulating course that challenges my thinking*: There was a small and marginally significant decrease in mean rating for this item. This finding might suggest that students do not feel the need to be either challenged or stimulated. However, a more cautious interpretation might be that students are preoccupied with the here and now of teaching and feel that they have little time to wander down interesting but diversionary tracks on their journey through their teacher education degree, and the intense content and professional experience demands accompanying it.

Q13 *Opportunity to improve academic skills*: There was a significant decline in mean rating for this question. The results here are indicative of the learning stages of a university student. Upon entry to the university, academic skills are being learnt and practised. Towards the end of the course students will have significantly improved their academic skills and feel less need to improve them.

Q17 *Facilitation of independent learning*: There was no change in the mean rating for this question, however this finding should be interpreted carefully. Although this item's value did not increase over time, students rated it moderately high on the Likert scale at both pre- and post-survey times. This indicates that students realise the value of independent learning upon entering university and maintain this belief throughout their course.

As previously mentioned in the 'post' surveys students were also asked to write responses to four open-ended questions. The first was:

List 3 skills you believe to be important or essential for beginning teachers to possess.

Figure 1 summarises responses to this question. Coding of the students' responses to this question over the four survey periods resulted in the three clusters depicted in Figure 1. They were:

- Cluster 1: *Practical teaching skills*;
- Cluster 2: *Personal qualities*; and,
- Cluster 3: *Life-long learning skills*.

The findings presented in Figure 1 (below) illustrate that items students listed were not all, as the question specified, 'skills'. Most students applied a broad interpretation to this question, and nominated aspects more akin to 'qualities'. However, this added depth to their responses and provided us with valuable insights into students' thinking at this critical beginning point in their teaching career.

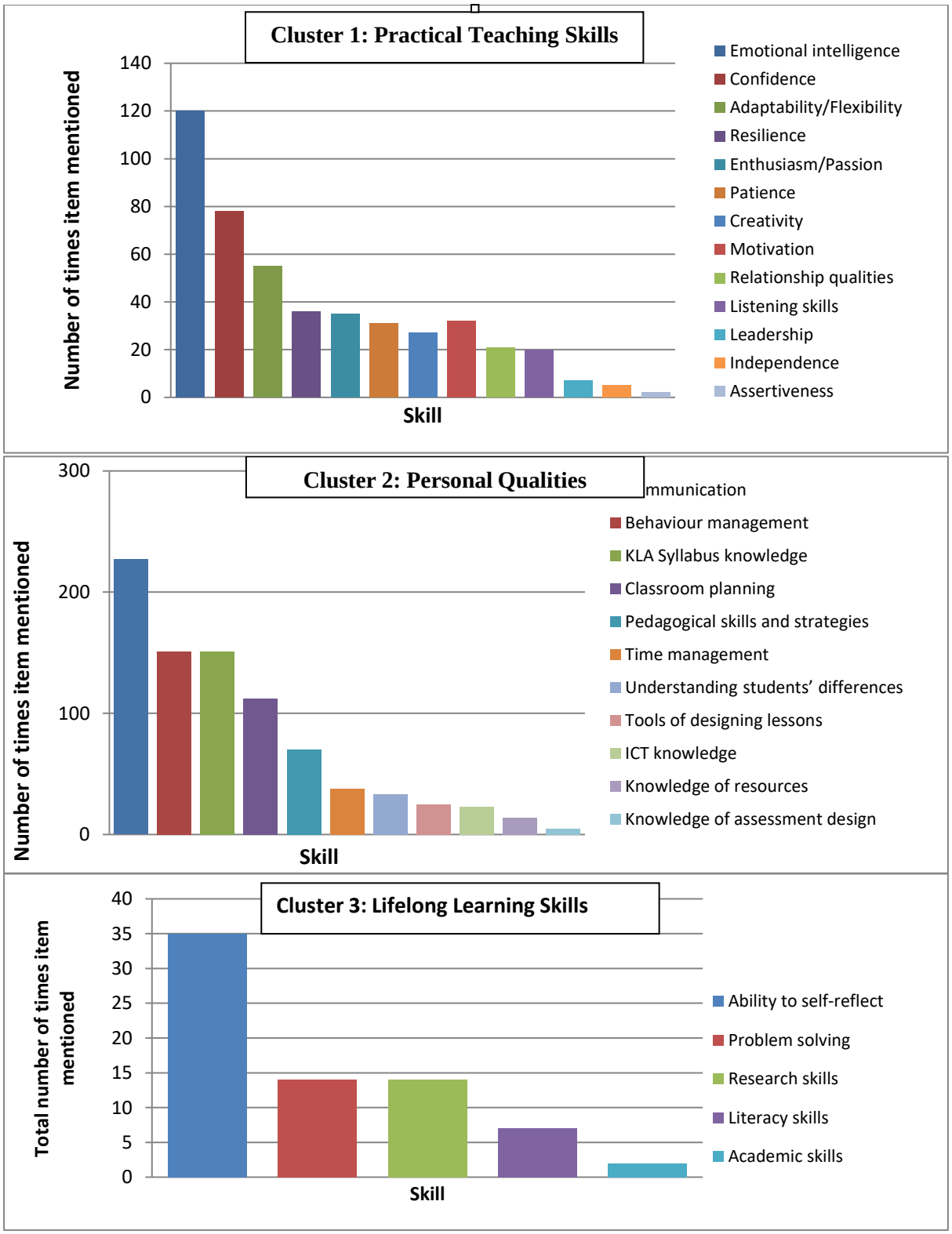

Figure 1. Student Responses to the post-course survey question: List 3 skills you believe to be important or essential for beginning teachers to possess.

The top-rating items across the four-year period for Cluster 1: *Practical teaching skills*, were 'communication skills' followed by 'behaviour management' and 'Key Learning Area syllabus knowledge'. The fourth highest rating item in any of the three clusters was 'emotional intelligence' (see Cluster 2, in Figure 1, above). As exemplars of this, the students nominated qualities such as: open-mindedness; empathy; compassion; approachability;

intuition; tolerance; and self-knowledge. The overall nomination of this item showed strong growth across the four survey periods.

These top four items were followed by 'classroom planning and organisation skills' and 'knowledge of pedagogical skills and strategies'. However importantly, to put these two items in perspective, students nominated 'emotional intelligence' more often than 'classroom planning and organisation skills', and 'confidence' slightly more often than 'knowledge of pedagogical skills and strategies.'

Next was 'adaptability/flexibility', followed by: 'time management'; 'understanding students' differences - learning needs/styles'; 'resilience, enthusiasm/passion'; 'creativity'; and the 'ability to self-reflect/critically reflect'. Students' responses to this question were articulate, succinct and thought provoking, and we provide some excerpts in our discussion of findings.

It was noted that very few students nominated skills of 'collaboration' and 'teamwork' over the four years in which the surveys were conducted. This is consistent with the outcome of the item [Q5 (pre) and Q1 (post)]:'Collaborative opportunities with students', which had a mean rating of 5.03 for the pre-course questionnaire, increasing to 5.59 on the post-course questionnaire.

The second of the four open-ended questions asked students to:

List 3 things that you believe characterise effective assessment in the context of a pre-service teacher education course.

This question was included to elicit more specific information and insights from the students that might usefully enlighten future assessment design. As indicated in Figure 2, the most nominated aspect was that students wanted 'practical' assessment tasks. Responses indicated that by 'practical' students meant realistic, authentic, relevant, scenarios that mirror real world situations, and role-plays – certainly not essays. One assessment mentioned particularly positively by the students was a micro-teach activity. Students also related that they valued assessment with clear guidelines, rubrics and marking criteria. They also called for 'encouraging, constructive and detailed feedback', and for assessment that is 'relevant, useable, and gives an allowance for growth and development'.

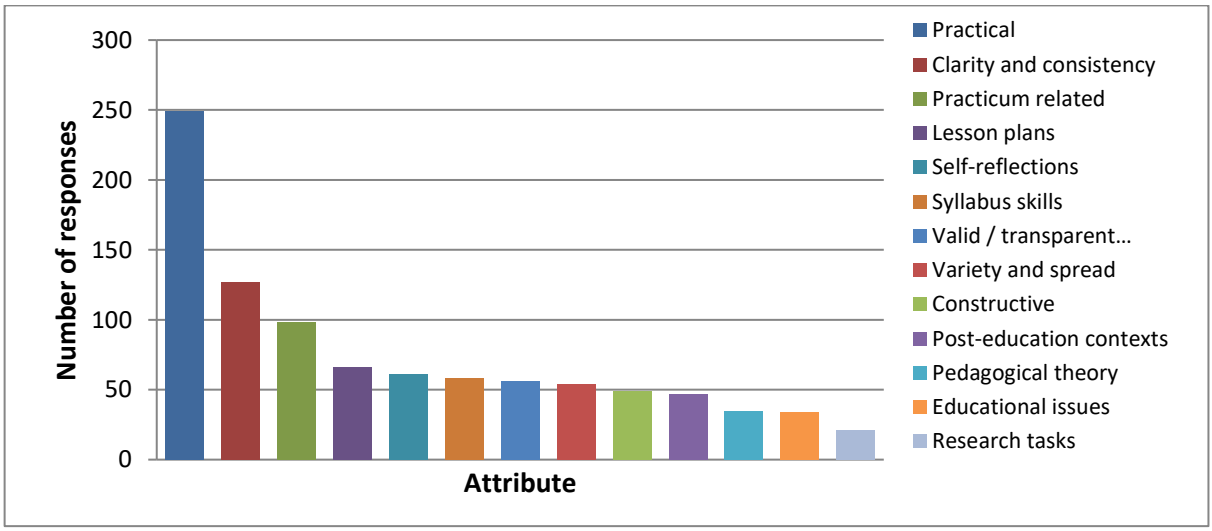

Figure 2. Attributes nominated by students as characterising effective assessment in a teacher education course.

Included in the top three nominated items was a desire to have assessment that related more critically to practicums, i.e. linked to, or performed during, the professional experience placement. Students' notions of assessment also included their professional experience

portfolio.[8] Figure 2 illustrates that the students also valued assessments that developed their lesson and unit planning skills, and their self-reflective skills. They were however, not so futures-focused in their conceptions of effective assessment. In their responses an engagement was not evident with the notion that a key underlying purpose of assessment is to promote life-long learning skills and to articulate with post-education contexts, for example through research-based assessment (evidence gathering) tasks. This finding will be examined in the discussion.

The third question asked of students:

In addition to your practicum experience can you identify an element of the course that has contributed to your 'classroom readiness'?

In their responses students identified the importance of on-campus face-to-face tutorials which gave them the opportunity to practice and model their skills, discuss and exchange ideas with other students, and learn from the anecdotes and 'real life' experiences of their tutors see Figure 3, below).

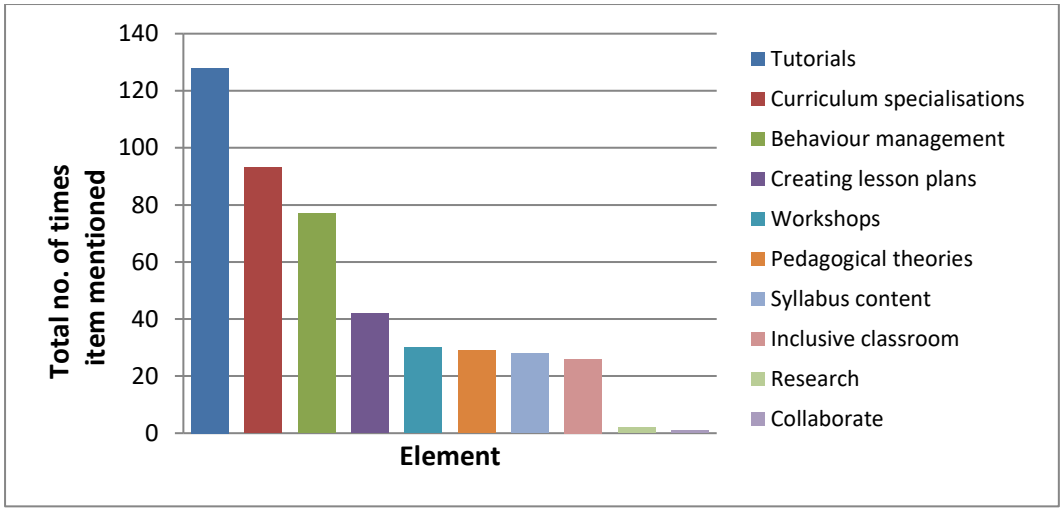

Figure 3. Elements of the course nominated by students nominated as contributing to 'classroom readiness' [in addition to their professional experience placement]

Here again the micro-teach assessment was singled out as a particular affordance of their course. Many students also nominated curriculum specialisation units in which discipline-related material is taught as having played an important role in assisting them towards becoming 'classroom ready'. One student stated that they had rated these units highly because of their capacity to "increase knowledge around the profession". Curriculum relating to behaviour management rated third highest in their responses as an element of their course that contributed to their classroom readiness. Conversely, and consistent with its low rating in relation to the previous two questions (refer Figures 1 and 2), research again rated low in students' estimations. Possible reasons for this are proposed in the discussion.

The fourth and final question asked students:

In addition to your practicum experience can you identify an element you would like to see introduced into the course to assist students to become 'classroom ready?

Students' responses to this question again signalled to us that they wanted to see more practical elements in their course. They nominated: more simulated 'real world' scenarios to engage with using learning strategies such as role-plays, mock classrooms and micro-

[8] This finding displayed the common wisdom that assessments should not be set while students are undertaking their professional experience placement (at our university rules prevent assessments being set for the duration of the professional experience placement period).

teaching. Their responses demonstrated that they desired more hands-on activities that prepared them for practicum and classroom practice and that teaching as a task/skill should be presented realistically, and not, as one student put it: "a walk in the park".

The students also demonstrated a strong desire to be in school classrooms more frequently, to have longer professional experience placements, and for professional experience placements to commence earlier in their course. One student put this particularly succinctly:

> *I believe many of us won't be 'classroom ready' until we experience more of the real classroom environment and work [things out] through trial and error as well as building on our strong points*

Another, alluding to action research cycles, stated:

> *We need to observe, then teach, then observe. Observation after teaching allows for greater reflection … knowing what to look for … knowing what to observe*.

A further significant element in relation to this fourth question was represented in the students' desire to have more time in their courses devoted to behaviour/classroom management. Students reflected that they needed more of the "nuts and bolts" of behaviour management strategies, and "fewer idealistic theories". Students also requested additional curriculum items that provided more understanding of "how students tick" and of "mental health first aid." Below we explore some of the implications of the above reported findings, and identify their influence on future approaches to course design.

Discussion: What we learnt

This research set out to explore our students' perceptions and critical consciousness of the dynamics and relations of their developing teacher knowledge and skills. In order to maintain coherence and authenticity of their voice in relation to these things, our key findings are organized into the following four key themes arising from the data coding methods previously described.

(1) 'Classroom Survival Skills' are Paramount

The acquisition of classroom survival skills was clearly uppermost in students' thinking in most of the qualitatively oriented questions in the post-course questionnaire. It is only natural that students would rate elements relating to 'practical teaching skills' so dominantly in their thinking about the qualities beginning teachers should possess, with the four most commonly cited desirable elements in this category being:

- communication skills;
- behaviour management;
- KLA syllabus knowledge; and
- classroom planning and organisation skills.

In addition, the personal quality of emotional intelligence was nominated by approximately a quarter of students over the four-year survey period. Students also identified the importance of confidence: "we need confidence x 1000"; while others were seeking to "understand the language of learning," to "think fast, think in the moment," and to know when it's time to "pull the pin on your lesson plan".

Perhaps indicating a short term gaze for these beginning teachers, those aspects associated with lifelong learning skills received the lowest ranking. For most beginning teachers, their first year or so in schools is very much about survival, and it is often not until they are a few years into their careers that they start to make the bigger links between what they learnt in their teacher-education course to their everyday experiences as classroom teachers. It is at this point that they start to leave behind their 'cherry picking' days (Kosnick,

2015), and begin to strengthen their evolving and longer-term personalised, praxis-based frameworks, assimilating new professional information and ideas.

(2) 'Doing Research' Rated Low

One of the most contested curriculum elements from the students' point of view was a staged action research assessment coinciding with the first survey period, and involving data collection during two sequential professional experience placements. Accordingly in the pre-course survey students gave a low rating to the item 'opportunities to engage in research', and additionally students demonstrated to their tutors (in classes and in online discussion forums) they saw little value in undertaking research during a teacher education program. We found this perplexing because in their 'post' survey responses students had asked for more professional experience-based authentic tasks and experiences. However anecdotal feedback outside of the survey (comments, conversations etc.) suggested that students do not like doing assessment whilst on professional experience placements; they see it as an imposition on their time and focus, as do many of their teacher-mentors, despite the 'golden opportunity' of the placement to collect data or execute a small action research project.

In accounting for this dissonance, Kosnick (2015) has suggested that pre-service teachers view their practicums as a *performance* for their teacher-mentors and university visitors, and do not appreciate distractions from the focus thus required. The students' responses supported this interpretation, for example one student observed: "We need more opportunities to show our skills as teachers", and another: "Teaching is basically about acting, acting, and acting."

(3) 'Practical Assessments' Desired

It is unsurprising that our pre-service teachers in the early stages of developing mastery, crave opportunities to both observe practice, and to practise in environments where they have the opportunity to gain direct feedback on their performance. In our courses, we ensure that this occurs in balance with the more lofty theoretical and research-based assessments. The coordinator of the unit that containing an embedded micro-teach assignment that continually received positive comments in the survey, reported that students initially strongly objected to this task, finding it confronting and located too early in their course.

That the students' strongly articulated a desire for more opportunities to practice and observe classroom and behaviour management strategies, and indeed be in practical settings, is not a surprising finding for teacher educators who repeatedly hear this from new teachers, and see it in related research (for example, Clark and Byrnes, 2015). Nor were we surprised by the students' insistence on their desire to be given more practical assessments and spend more time in a face-to-face learning environment, as essential pieces of teacher preparation in their view. One student reflected: "I thrive when everyone teaches each other and learns from each other". Yet pushing back against the move for less face-to-face teaching is the reality that neoliberal institutions across Australia, schools, and faculties of education are moving rapidly towards online programs (Cutcher & Cook, 2016). However as we have found, this phenomenon is in direct contrast to the distinct and articulated learning preferences of our students.

(4) Transitions and Teacher Knowledge

Some aspects of desired/desirable teacher knowledge increased significantly in importance in the students' reckoning over the four survey periods, for example the skills of collaboration. Others slid in the opposite direction (e.g. viewing the course as an opportunity to improve academic skills), while some remained significant to them across the survey period (e.g. communication skills). When reflecting on these findings, we are reminded of Nilsson's observations concerning the inherent complexity of teacher knowledge (2012, p.238/9), however we would also argue that there is nevertheless more than enough space for

future studies that include the voices of pre-service teachers in exploring this complexity; indeed it is vital that teacher educators do this more often.

This inquiry also revealed valuable insights into our students' expressed need for more elements in their courses that endow them with the "freedom to apply creative, innovative solutions", and for "assessment that encourages us to monitor our own learning." As teacher educators we must endeavour to find ways to connect with our students along their journey *through* teacher education, and this ultimately means actively seeking out and involving our students in course and assessment design, indeed in an authentic 'democratic' education (after Freire, Dewey, Illich and Giroux).

Conclusion

Our research was set against a context of ever-increasing contemporary professional and political demands on the teaching profession and therefore on the education of teachers, including escalating numbers of accreditation cycles, caveats, and standards regarding what pre-service teachers must know and be able to do. Not only are teacher educators feeling the stresses of keeping up with budgets, governance, accountability frameworks, and timelines of their our own institutions, they are also experiencing increasing pressure from external agencies to cram more and more content into their courses. However in so doing, we have not been finding the time to listen to our students; indeed, we have not really asked them about their needs and their lived experiences of our courses.

Our aim with this inquiry was to ask students directly, thereby engaging with their perceptions and critical consciousness of the dynamics and relations of their developing teacher knowledge and skills. We wanted to know if and how our students were engaging with elements of our curriculum design, and whether there was a dissonance between our students' and our own valuations of the constitutive knowledge and skills comprising effective teacher education.

Into this complex mix is the reality that contemporary pre-service teachers' needs are more complicated than in previous generations; there are myriad competing demands upon their time and ways of engaging in learning material. Although the variety of offerings available to students has increased in order to bundle online learning into ergonomic packages, it has been the experience of the authors that contemporary students find the vagaries of studying under such conditions to be demanding in the extreme. Ultimately for them, real learning is about positive relationships developed in face-to-face teaching settings.

Our students signalled to us their belief that teaching is a performance, real, space-based profession, and that they desired the same in their preparation. They were direct and consistent in their desire for more practice; for more practicalities; and for more exploration of the issues of importance to them as they face their first years in the classroom. These young teachers were seeking more guidance and enlightenment on classroom management, behaviour management, curriculum understandings and pedagogical development. In relation to these findings, Kosnick (2015) has reported from her own research that what pre-service teachers consistently related was that they wanted fewer topics and in more depth, and this is certainly the message we received from our inquiry. Perhaps in our dedication to the sector and the profession, we are attempting to cover too much, and in the process, we are doing so ineffectively and inefficiently. We have not been providing a clear line of sight through the course for the students around the elements they value.

Rather than reacting to anecdotal feedback from our students, or to the at best questionable data we receive from the university-wide student evaluations of our units, we believe we now have better data to inform our future course design. It may not be within

teacher educators' powers to halt the juggernaut has been the rapid move towards on-line delivery of teacher education, but we do have the opportunity through our surveys to learn from the students, and to reflect and capitalise on their ongoing feedback. Our research has signalled to us the importance of creating a channel flow through our curriculum to assist students to conceptualise and ultimately shift to sustained and longer term learning agendas, and to assist them to monitor and evaluate their own learning experiences. Engaging in deep and critical evidence-based reflection in teaching and learning design on our part is crucial, but as we have found, it is also vital that we involve students in this process as they clearly have much to tell us.

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