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Teachers' Experiences Preparing to Teach a New Senior Secondary School (Psychology) Curriculum on the Eve of Enactment

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Abstract: This article explores teachers' experiences in preparing to enact a new senior secondary school subject, psychology, in Queensland, Australia, at a time of major curriculum reform. In this study, 62 teachers completed an online survey about their experiences on the eve of enactment. From an ecological lens, data were analyzed via descriptive statistics and content analysis before thematic analysis of open-ended responses. Teachers described their preparation in terms of excitement and anticipation in establishing a new subject; frustration and urgency for support to plan, collaborate and access professional learning and curriculum materials; and feelings of isolation and desire to connect with other teachers. Sustained efforts from schools, curriculum authorities and other external contexts to work in tandem with teachers are needed to enable teachers, as professionals, to prepare to enact the curriculum and set the foundations for establishing this new subject.

Introduction

Creating room for a new science subject requires a substantial and sustained effort as different stakeholders exert different pressures into what should be included in a curriculum and why such inclusions are important (Fensham, 2009). Therefore, the addition of a new subject is an achievement, one that required deep consideration and arguments to be seen as valuable, relevant and useful for learners in today's society. In the case of Queensland, Australia, recent significant senior secondary school (final two years of school) curriculum reform included the introduction of external examinations across many senior school subjects and the inclusion of psychology as a new science subject. Since this is a new subject, it is highly likely that teachers enacting this new curriculum will lack psychology teaching experience and may not have an undergraduate psychology education background nor teaching science experience. Consequently, the teachers will need a range of opportunities from school and external (curriculum authorities and other) contexts to support their professional learning needs to enact this new subject. The teachers' perceptions and experiences in preparing to enact the new psychology curriculum on the eve of its introduction is the focus of this paper.

Curriculum Context

In Australia, psychology has gained traction in school science over the last 30 years, with psychology now a very popular subject in senior secondary (final two years) schools in most places. For example, it has been in the top three most popular Victorian Certificate of Education subjects for over 20 years (Victorian Curriculum and Assessment Authority (VCAA, 2021). However, psychology is not included in the New South Wales curriculum, and psychology remains limited to senior secondary schools (final two years of secondary school) policy in the other Australian state and territories' curriculum jurisdictions.

In 2017, the Queensland Curriculum and Assessment Authority (QCAA) approved a 2-year senior Queensland Certificate of Education (QCE) Psychology syllabus to begin in 2019 (QCAA, 2018). The introduction of psychology is part of major senior secondary curriculum reform across all subjects and, for many subjects, the incorporation of external examinations for the first time since the 1970s. QCE Psychology shares a similar framework with the other QCE science subjects in terms of curriculum and assessment, in line with most other Australian states and territories. For instance, for each Unit 3 and 4 QCE science study, students complete the following internal (school-based) assessments: data test (10%), student experiment (20%) and research investigation (20%); and external assessment in the form of two examinations (50%). While the internal assessment is designed and implemented by the teachers in the school, it also follows a rigorous process of certification and external moderation by teacher-moderators. Psychology is introduced at senior secondary school, is not part of Foundation to Year 10 (F-10) science, and therefore does not get the same status as the other school sciences. The marginalisation of psychology to the senior secondary school can have flow on effects for the teachers who teach it (Marangio, 2019). Since students studying QCE Psychology are unlikely to have learnt psychology in their earlier years of schooling, and teachers are unlikely to have taught it before, there are likely to be a number of challenges that teachers will need to navigate as they prepare to teach the new subject.

Teachers' Professional Role Enacting External Curriculum Reform

Teachers are at the heart of curriculum reform (Ball et al., 2011). In external curriculum reform, too often teachers are 'given' the curriculum and then expected to 'deliver' it to their students as intended by the curriculum policy designers. But curriculum reform is not a straight-forward process. A key factor to successful externally driven curriculum reform is time and dialogue for sense-making of the curriculum by teachers but, as Pyhältö et al. (2018) have found, this is often overlooked. Teachers need to construct, interpret and translate the 'given' curriculum into their classroom practice, a complex, dynamic and ongoing process that Braun et al. (2011) refers to as enactment. Enacting a curriculum requires teachers to make professional judgements about how to teach it within their own classroom context. Since teachers play a central role in curriculum reform, their experiences in the lead up and during reform that influence their professional work deserve consideration.

Teachers' Experiences of Science Curriculum Reform

Ryder's (2015) review of 34 studies on teachers' experiences of enacting externally-driven science curriculum reform, inspired by Goodson's (2003) ecological approach, identified a wide range of personal, internal and external contextual factors that can influence a teacher's experience, not limited to only their subject and pedagogical knowledge. Importantly, "understanding teachers' responses to education policy reforms involves recognizing that such responses go beyond the individual" (Ryder et al., 2018, p. 556). However, such responses from other teachers, school leaders and curriculum authorities are not always experienced by teachers enacting the curriculum reform (Lynch et al., 2012). Consequently, Ryder (2015) argues the importance of school and external systems, including curriculum authorities, to recognise and support, rather than constrain, the professionalism of teachers as teachers enact externally-driven curriculum reform within their own classrooms to support quality student's learning.

Personal Contexts

Introducing a new subject requires careful consideration in terms of the teachers' personal context. In these cases, teachers are likely to be inexperienced at teaching the subject, may not have a tertiary subject background, and may not have taught a science subject before, although they could be open to the new teaching opportunity (Marginson et al., 2013). They are likely to have a range of teaching backgrounds and experiences, from new teachers to highly experienced and have differing professional learning needs which must be taken into account for supporting the work of teachers.

Teachers are often frustrated by science education reform (Ryder & Banner, 2013) and may not immediately take ownership of reform (Lynch et al., 2012; Ryder, 2015). They are more likely to accept a new curriculum when they perceive it as in line with learning goals they value, including their students' interest, motivation and learning needs (Connelly & Clandinin, 1988). However, making sense of a new curriculum and the intentions behind it is complicated. Professional development and curriculum materials to support teacher learning are helpful but unlikely to be sufficient when the curriculum reform is quite different to teachers' current work (Davis & Krajcik, 2005). Reform should support the professional work of teachers as they interpret, translate and enact the curriculum within their classroom contexts. As professionals, teachers therefore need opportunities of support that suit their learning needs for preparing to enact a new subject in their classrooms.

School Contexts

School contexts, including sound planning by school leadership, supports teachers professional work in response to curriculum reform (Adamson & Yin, 2008; Ryder & Banner, 2013). Earlier this century, Queensland Australia, the site of this current study, underwent significant Foundation to Year 10 (F-10) curriculum reform. Lowe and Appleton (2015) case study of the support and preparation of six teachers in two schools identified problematic issues for science teachers as they enacted the new Australian F-10 science curriculum. While the teachers were committed to do their best for their students, they were given limited resources and relevant professional development opportunities to build their capability to reform. Lowe and Appleton (2015) argue that "teachers by themselves can only do so much, unless there is more extensive and useful support at school and system levels."

(p. 885). Recommendations included providing teachers extended time to encourage more opportunities to comprehend the curriculum materials and reflect on what the curriculum intentions may look like in their own classroom. They also called for more professional development and provision of a science educator to support and mentor teachers as a way to provide professional learning opportunities within their own school context.

In the case of introducing a new science subject, a school needs to make choices about what sciences they will offer and possible implications as a result, such as staffing. For teachers without a science background, transition into teaching science can be difficult, even harsh, if not accepted and supported by their science teacher colleagues (Watson et al., 2007). Through case studies with teachers who were expected to teach a new subject from two Western Australian schools, Rennie (2001) found that sustained encouragement, respectful leadership and collaborative discourse around new learning and teaching ideas fostered the teachers' commitment to change, confidence, and knowledge within their classroom context. Du Plessis et al. (2019) give three clear messages to support teachers without the subject background. First is to recognise the broad ranging effects for these teachers beyond just learning content and pedagogy. Second is to create a culture of support, sharing and collegiality within the school; and third, to facilitate a culture of respect and appreciation for these teachers taking on a new subject. In doing so, there will likely be reciprocal and ongoing benefits for all teachers.

External Contexts

Curriculum authorities have a responsibility to provide opportunities of support and sufficient resources for curriculum reform, and "only then can teachers understand the scope and problem-solving nature of their curriculum development tasks well enough to fully or partially support the innovations" (Wallace & Priestley, 2017, p. 345). Other external agencies or providers can play an important role. These providers include publishers of curriculum materials, professional development providers, initial teacher education, professional teacher associations, tertiary discipline academics, conference facilitators, professional networks and mentors. They can act as brokers between school and curriculum policy to enable curriculum making can play an important role in enabling teachers to take active roles in shaping curriculum decisions and activities at this level (Priestley et al., 2021). Pyhältö et al. (2018) longitudinal research monitoring the strategies district level groups of educators used to collectively made sense of the curriculum showed the significance of shared sense-making through dialogue and negotiation with teachers. Processes to support teachers at school and external levels should work towards "an effective balance between external accountability and local autonomy; one that supports rather than constrains teacher professionalism." (Ryder, 2015, p. 166). Striking the balance between providing sufficient resources and opportunities to engage teachers in learning, and ensuring adequate scope for teachers, as professionals, to adapt and make sound pedagogical decisions for their classroom context, is required to enable teachers to enact the curriculum in ways suitable for their students.

The creation of external networks, partnerships and collaborations with teachers outside their school can support teaching a new subject. For instance, Lieberman and Pointer Mace (2010) argue that informal online networks can create the potential for teachers to connect with and support each other with shared purposes in an atmosphere of openness and collegiality, and propose that such professional networks that make their practice visible to others can be transformative for teachers' practices. Teachers generally value networks that introduce new strategies and ideas for teaching and require active participation (Holmes,

2013). While there may only be a few teachers posting materials and communicating with each other, those who do not contribute may still find the network valuable (Avalos, 2011) and therefore helpful for teaching a new subject.

Purpose of this Study

This study, part of a larger project that explores teachers' professional learning journey as they enact the new curriculum, aims to capture a snapshot of the ways QCE teachers describe their preparation from teaching a new science subject and the kinds of support they have experienced and identify as most needed on the eve of enactment. In the initial stages of preparing to implement the QCE Psychology curriculum, this study asks:

1. How do teachers describe their preparation for teaching a new subject?
2. What kinds of support for teaching this new science subject have they experienced?
3. What kinds of support do teachers identify as most needed at this particular point in time?

Design

An online survey was constructed to capture an overview of the teachers' professional learning journey for teaching QCE Psychology at the very beginning of enacting this new externally driven (high stakes) curriculum. The online survey took a simple descriptive approach with the aim to describe the characteristics of the sample at one point in time (Creswell, 2013), in this case a snapshot of teachers' demographics, perceptions and experiences for preparing to teach this new curriculum. The construction of survey items were influenced by Ryder's (2015) research, framed by Goodson's (2003) personal, internal (school) and external (policy and other) contexts, to review science teachers' experiences enacting externally driven curriculum. We acknowledge the interplay between these contexts and recognise that what teachers say about their experiences of support may not necessarily be reflected in their teaching practice.

The online survey was designed to take 10 to 20 minutes. It was divided into two parts: Part A Teacher demographics and Part B Preparing to teach psychology. Part B consisted of closed (a 'select from a list' item and Likert scale items, reporting on activities to support their preparation to date and feelings about teaching psychology respectively) items, constructed with consideration to personal, school and external contexts (refer to Tables 1, 2 and 3) and two open-ended items; What support do you think will help you the most at this particular point in time? and Is there anything else that you would like us to know about your experiences to date preparing to teach QCE Psychology? Participants were also given the option to provide further comments at the end of each item.

A number of steps were carefully taken to construct the survey. To validate the survey, an expert check and a pilot test were conducted. To establish face validity (Creswell, 2013) and clarity of the survey, critical feedback from a QCAA Psychology representative was sought. Slight changes to the wording on items were made to align with the QCE terminology, such as the term syllabus replaced the term curriculum, and two Likert scale items were deleted to avoid confusion. A pilot study with two QCE Psychology teachers was then undertaken to check the time commitment and confirm the relevance and applicability of the survey for the targeted audience, with positive feedback received and the survey completed within reasonable time limits.

Participants

This sample was one of convenience (Creswell, 2013), with an invite to the study posted on a subscribed list for QCE Psychology teachers that is not open to the public. News of the survey also generated 'word of mouth' amongst QCE Psychology teachers, and anyone with the link could complete the survey. The survey could be completed anonymously, with the option of leaving their contact details if they wished to find out more about being involved further in this research.

A total of 62 teachers (58 female, 4 male) completed the online survey. The participants teach in a range of schools: Public (45%), Independent (24%), Catholic (31%); and located in Queensland's capital city, Brisbane (53%), and across regional (37%) and rural (10%) areas of Queensland. QCAA estimate just over 100 schools, the majority in the Brisbane area, were planning to introduce QCE Psychology in 2019 (personal communication with QCAA representatives, 12/11/18 and 9/5/2019) and similarly, about 100 teachers, almost all female, had subscribed to the QCE Psychology teachers list (personal communication with list moderator, 26/2/19). In summary, the participants in this study are likely to be a representative sample.

Method of Analysis

The demographic (Part A) data were summarised and used to describe the teacher participants' backgrounds. Preparing to teach psychology (Part B) closed items data were summarised, using basic descriptive statistics, and presented in Tables 1 (activities to date) and 2 (feelings about teaching psychology). The open-ended items and additional comments were considered in the following ways. First the open-ended item (What do you think will help you the most at this particular point in time?) was analysed using a directed content analysis (Hsieh & Shannon, 2005). All responses were organised in terms of the teacher's personal, school and external contexts in which they teach (Goodson, 2003; Ryder, 2015). In addition, since teachers reported that both other psychology teachers and external organisations were very important, the external focus was divided into two categories: External (psychology teachers) and External (curriculum authority and other organisations). Data were read a number of times and responses carefully coded into categories, taking considerable time revisiting initial codes. The first named author took the lead with the coding, and reliability of coding was checked carefully and discussed at length with the other author. Frequency counts for each category were undertaken and presented in Table 3. This approach was taken to identify the categories and ascertain the frequency of categories within each item.

Given the large number of responses to the open-ended items and additional comments to closed-ended items, we determined the need for further analysis. The responses to the open-ended items and additional comments were then pooled together for thematic analysis to explore deeper themes that might inform the ways teachers describe their preparation for teaching this new study (Braun & Clarke, 2006). As part of this inductive analysis to create latent themes, codes and categories were re-read, analysed and reduced on several occasions. At regular points, the categories were considered in light of the data represented in Tables 1, 2 and 3, highlighting the iterative process. Eventually, the categories were reduced to three themes: excitement and anticipation to establish a new study, frustration and urgency for support, and feelings of isolation and connectedness with teachers.

Findings

Teacher Demographics

As stated earlier, a total of 62 teachers completed the survey, working in a range of schools across Queensland. Most ($n = 40$; 65%) teachers did not hold at least a minor (2nd year) undergraduate psychology sequence. Additionally, it is assumed that most teachers had not completed Initial Teacher Education (ITE) psychology pedagogy (method) since it was not offered in any Queensland ITE programs. Very few teachers ($n = 11$; 18%; $M = 1.8$ years ranging from 1 to 6 years) had previous experience teaching psychology, with a total of 8 teachers having taught other senior secondary curriculum and 6 teachers taught Year 10 Psychology in 2018. The teachers teach across a range of other subjects, most often within Science (56%), Mathematics (31%), Humanities (21%) or English (19%).

In 2019, the initial year, some teachers will also teach psychology in the younger years: Year 10 (19%), Year 9 (6%) and Year 8 (2%) Psychology. For almost all the teachers (97%), psychology is placed in their school's Science Department. Just over half of the teachers (52%) were asked by their schools to teach psychology, others (42%) requested to teach psychology at their school, and 6% applied via an externally advertised psychology teaching position. While many teachers were asked to teach psychology, this survey did not specifically ask why they thought they were asked and whether or not the teachers wanted to teach it.

Activities Teachers have Engaged in Preparation to Teach this New Subject

Teachers reported that they had engaged in professional activities to prepare to teach the new curriculum, as outlined in Table 1. While only 7% of teachers stated that they are yet to start preparing, and the rest are undertaking self-directed learning, preparation with other teachers seemed limited for many teachers. Around a third of teachers had not attended a curriculum authority implementation workshop, a quarter had not connected to teacher networks, almost a half had not attended an external workshop/ conference and over two-thirds had not experienced planning with teachers within their school.

Activity	Number of teachers
Personal (teacher) contexts	
Learning psychology (self-directed)	94% (58)
Learning and planning to teach psychology (self-directed)	94% (58)
Internal (school) contexts	
Planning and developing materials with other science (non-psychology) teachers within their school	29% (18)
External (psychology teachers) contexts	
Subscribed to informal teacher networks (QCE Psychology teachers' dedicated sites)	77% (48)
Planning and developing materials with other psychology teachers	65% (40)
Joined a QCE Psychology teachers' expert group	19% (12)
External (curriculum authorities and other organisations) contexts	
Attended QCAA Implementation workshops	65% (40)
Attended other (non-QCAA) QCE Psychology workshops	57% (35)
Attended interstate teaching of psychology conference	2% (1)
Enrolled in a university teaching of psychology course	21% (13)
Joined a professional teaching association	5% (3)
Had not started to prepare	7% (4)

Table 1: Activities teachers have engaged in preparation to teach QCE Psychology. (N=62)

Teachers' Feelings About Teaching a New Subject

The teachers' responses to the 'How you feel about teaching psychology' items show that they felt very excited but unprepared about teaching senior secondary psychology (refer to Table 2). While the overwhelming majority reported being excited about teaching this new subject (97%), enjoyed learning psychology (97%) and enjoyed learning to teach psychology (92%), this did not necessarily equate to feeling prepared to teach psychology (58%) with a range of feelings reported. In terms of school context, the teachers reported that their schools show a positive interest in psychology (81%) with over two thirds felt connected to science teachers (69%) but almost all (97%) wanted more time for professional learning. For external contexts, just over half (57%) felt supported by a psychology teachers' network and a large majority (92%) wanted more opportunities to collaborate with other psychology teachers. Interestingly, a range of feelings were reported in terms of the curriculum aligning with the ways they desired to teach psychology, from misaligned (31%), unsure (34%) and aligned (35%).

Item	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
Personal (teacher) contexts					
1. I feel prepared to teach psychology.	2% (1)	36% (22)	5% (3)	47% (29)	11% (7)
2. I am excited about teaching QCE Psychology.	0% (0)	2% (1)	2% (1)	24% (15)	73% (45)
3. I enjoy learning psychology.	0% (0)	0% (0)	3% (2)	10% (6)	87% (54)
4. I enjoy learning about teaching of psychology.	0% (0)	3% (2)	5% (3)	24% (15)	68% (42)
Internal (school) contexts					
5. I feel my school shows a positive interest in teaching of psychology.	2% (1)	10% (6)	8% (5)	37% (23)	44% (27)
6. I wish I had more time to engage with professional learning.	0% (0)	2% (1)	0% (0)	16% (10)	82% (51)
7. I feel connected to science teachers within my school.	7% (4)	23% (14)	2% (1)	31% (19)	39% (24)
External (psychology teachers) contexts					
8. I feel supported by a QCE Psychology teachers' network.	2% (1)	24% (15)	18% (11)	32% (20)	24% (15)
9. I wish I had more opportunities to collaborate with other psychology teachers.	2% (1)	2% (1)	5% (3)	27% (17)	65% (40)
External (curriculum authority and others) contexts					
10. The ways I desire to teach psychology does not always align with the requirements of the QCE Psychology syllabus.	8% (5)	23% (14)	34% (21)	16% (10)	19% (12)

Table 2: Participants' responses to 'how you feel about teaching psychology' survey items. (N=62)

Kinds of Support Teachers Identify as Most Needed at this Point in Time

Teachers were asked “What support do you think will help you the most at this particular point in time?” A total of 90% of teachers responded to this question, and their responses highlighted the most immediate support they wanted from internal and external contexts on the eve of enactment (refer to Table 3). Support for learning and planning to teach psychology (60%), including time to learn and plan (24%), collaboration with other psychology teachers (40%), curriculum authority workshops and support (24%) and other resources (23%) were the most frequent requests.

Category	Number of teachers	Example
Personal (teacher) contexts		
Learning psychology	18% (11)	<i>Help learning the content material as I am not sure of the content. (Participant 48)</i>
Learning and planning to teach psychology	60% (37)	<i>I am unsure about teaching the research skills and incorporating them into my teaching, and need support. (Participant 11)</i>
Internal (school) contexts		
Collaboration with science and maths	10% (6)	<i>Working more with maths and science teachers. (Participant 57)</i>
Time to plan and learn	24% (15)	<i>TIME! Most teachers are on full teaching loads and are being expected to make such resources in their own time. (Participant 55)</i>
Other school support	8% (5)	<i>Having another teacher in my school doing this subject with me so I can split the workload would be the most help. Having clear guidance from senior leadership on the way to implement a new subject at our school would also help. (Participant 29)</i>
External (psychology teachers) contexts		
Collaboration with teachers of psychology	40% (25)	<i>Help with planning and ideas for teaching with other psychology teachers, sharing assessments. (Participant 33)</i>
Psychology teachers' networks (formal)	3% (2)	<i>Regular networking with other teachers to share ideas on how to implement the practicals (given budget/time constraints etc) (Participant 39)</i>
External (curriculum authority and other organisations) contexts		
Curriculum authority (QCAA)-led workshops & support	24% (15)	<i>More QCAA workshops for psych teachers. (Participant 4)</i>
Formal study	8% (5)	<i>Extra tertiary study in teaching senior Psychology. (Participant 40)</i>
Professional teaching association	3% (2)	<i>I would like to know about professional teaching association for psychology teachers. (Participant 61)</i>
Professional development workshops (aside from QCAA)	18% (11)	<i>More PD, especially in regional cities. (Participant 53)</i>
Mentoring	3% (2)	<i>Having a mentoring program of psychology teachers in Vic, taking one someone like me who is literally re-skilling myself to teach psychology which I have always wanted to do. (Participant 6)</i>
Teaching and curriculum resources (aside from QCAA)	23% (14)	<i>Teaching resources that are engaging. (Participant 7)</i>
Other		
Not sure yet	3% (2)	<i>Too early to tell. (Participant 38)</i>
Not needed	5% (3)	<i>I have all the support I need. (Participant 21)</i>
Did not answer	10% (6)	

Note. A response can apply to more than one category

Table 3: Support teachers identify as most needed on the eve of enacting the new subject (N=62)

How do Teachers Describe their Experiences Preparing to Teach this New Subject?

The thematic analysis identified three broad themes from the data that teachers used to describe their experiences preparing to teach this new subject: (1) Excitement and anticipation in establishing a new subject, (2) Frustration and urgency for support, and (3) Feelings of isolation and connectedness with teachers.

Excitement and Anticipation to Establish a New Subject

The teachers displayed a keenness to teach this new subject, viewing psychology as an important subject to establish in the curriculum and offering a valuable role in supporting their students' learning, as expressed by this teacher:

There is a sense of excitement and anticipation around teaching this subject, and also a real sense of humility/modesty from most teachers with regards to their assessment of their ability / background knowledge. I also see the teaching of psychology as a good challenge for my own teaching. I think that psychology was a missing factor in students' learning in QLD. (Participant 10)

Teachers recognised that it will take enormous effort to establish and teach this new subject. *"Only now at beginning of teaching it, I am getting more confident and enthusiastic to teach in a meaningful way."* (Participant 62) and many seemed positive about this challenge, *"It's a lot of work, but thoroughly enjoying it!"* (Participant 8). Some teachers noted their excitement in terms of the real-world benefits for their students:

"I am passionate about presenting psychology in an engaging and interesting way that facilitates students making connections between the content and the world around them." (Participant 18)

The introduction of psychology in the curriculum appealed to these teachers in terms of supporting students' learning. At this point in time, the teachers were committed to establishing the new subject in their school.

Frustration and Urgency for Support

There was an overall sense of frustration for the support offered by their school, curriculum authority and other external providers to date. Teachers generally felt underprepared to teach the new subject, and expressed a number of reasons for such feelings, including the following.

Time allocation for planning. While there were a couple of positive comments from teachers about their preparation to date, such as *"Our school has given a lot of time for the planning of this subject. This has been vital."* (Participant 43), this was not always the case *"I haven't had time for planning."* (Participant 2). Many teachers expressed angst about the heavy personal time commitment required, *"I feel like I am drowning in the amount of work I do"*. (Participant 46) and lack of time release for planning.

Appointment. Some teachers expressed concern about lack of preparation because of their recent and unexpected allocation to teach psychology, for example: *"I was informed that I was teaching this subject in the final week of school in 2018, many teachers have the same experience."* (Participant 36)

Overall teaching workload. Some teachers expressed their frustration in terms of their overall heavy workload. For instance: *"I have not been given time for planning and this is not the only new QCE subject I teach."* (Participant 45), which made preparing to teach a new subject more difficult

Availability and access to workshops. Only two thirds of teachers stated that they had attended the QCCA implementation workshops, and many explained why they were unable to attend, for instance *“I came into this late, and missed some important QCAA [Curriculum authority] sessions. Now feel a bit like navigating in the dark, and I’m not sure of the data test [assessment], or the content.”* (Participant 48). In addition, availability and access to QCAA implementation sessions and other workshops was problematic for some teachers depending on school location (regional and rural schools), inconvenient times or were quickly booked out.

Relevant published materials. Others felt roadblocks via lack of published resources and information *“Still waiting on QCAA assessment guidelines and textbook, not published early enough.”* (Participant 54), and that they needed free access to the prescribed journal articles that students are required to know for assessment, as the articles *“are under a paywall, which school’s cannot access and is not good enough when they [articles] are in the syllabus to teach.”* (Participant 27).

Nature and amount of content to teach. Teachers felt an urgent need to learn more about how to navigate the syllabus, especially in terms of meeting the assessment demands and the amount of content to teach, *“I feel like the whole syllabus is so jam packed, that it will be difficult to cover all the topics, in depth, well.”* (Participant 41), in line with their sense of frustration as outlined earlier.

There was a strong sense of urgency for further support. Comments showed that teachers, even with tertiary psychology background such as this teacher, can feel out of depth and desperately need help: *“Stats professional development for the stats-terrified and for the government to realise that the amount of info to cover is unachievable.”* (Participant 46). Such tensions were further highlighted by teachers who viewed the curriculum out of step with their values, interests and expectations, either with the inclusion of some content that they did not like or more strongly misaligned, such as the following teacher:

I am disappointed with this subject's direction. Far too much time is required in developing and undertaking experiments, creating graphs and writing reports. There are many mental health issues in students in schools today and students are not sufficiently equipped with understanding and insight into many of the underlying factors influencing these. (Participant 23)

In summary, teachers expressed their feelings of frustration due to a number of reasons related to opportunities for support from their schools, curriculum authority, and other external providers. The teachers tended to feel overwhelmed whether or not they had taught psychology in a different curriculum jurisdiction or had a tertiary psychology background. Their comments suggest that they were sensitive to the position they were in and their responsibility to their students and school community. They displayed a strong sense of urgency for opportunities to support their professional learning to enable teachers to interpret and translate the curriculum documents for planning to teach their students.

Feelings of Isolation and Desire to Connect with Other Teachers

The final theme related to the teachers' feelings of isolation with other teachers. While the survey did not ask directly about how many psychology teachers were in the school, being the only psychology teacher in the school and/ or working in regional and rural schools generated a feeling of isolation, with this first comment relating to their excitement about teaching psychology:

It is a joy to be able to teach psychology, although I feel isolated as the only teacher, with some opportunities not available to those outside the city. (Participant 61)

and this second comment to their feelings of frustration:

I feel I am swimming in the dark at the moment as I have not been able to connect to anyone. I don't know how to link into any QLD schools that are introducing psychology in 2019. (Participant 5)

Some teachers went further to express their separation from science (and sometimes mathematics) teachers in their schools: “*Psychology is excluded from other sciences. Don't feel as appreciated or accepted as other preexisting science subjects.*” (Participant 16) or commented on limited opportunities for planning with science teachers. However, there were exceptions, for instance “*While I am the only teacher of the subject, I am with a supportive base of science colleagues that value the subject.*” (Participant 35).

Similarly, there was a very strong desire to collaborate with other teachers of psychology, and this desire was even more evident for those who were also in regional or rural schools: “*I need help with planning and ideas for teaching with other psychology teachers, sharing assessments, especially in regional cities.*” (Participant 53).

While there were feelings of isolation, especially in terms of collaborating with others at their school, some responses suggest that there was a sense of connectedness with a community of psychology teachers, mainly via the informal social media sites recently created by QCE Psychology teachers and exclusively for QCE Psychology teachers. The following comment eloquently captures many of the teachers experiences in terms of feeling not only that everyone is in the same situation, but importantly in it together:

It has been great the sharing that has already occurred and feeling a part of a community outside of my own school. Knowing that others are in the same position and are willing to help has been comforting. (Participant 19)

Such comments suggest there were feelings of comradery forming between those teachers on the social media site because they shared understandings of the challenges preparing to teach this new subject in their schools. But mostly the teachers conveyed feelings of isolation and desired more opportunities to connect in meaningful ways with other teachers within their school and with psychology teachers outside their school.

Discussion

This study described the experiences and perceptions of teachers as they prepared to enact a new senior secondary subject, psychology, at a time of major curriculum reform in Queensland, Australia. On the eve of enactment, 97% of the teachers in this study were excited about teaching this new subject although they reported a range of personal and school contexts and areas of need to support their preparation and future teaching of psychology. The teachers described their experiences in terms of a sense of excitement and anticipation for establishing this new subject; feelings of frustration and urgency for support from schools, the curriculum authority and other external contexts; and feelings of isolation in relation to other teachers in their schools, and sometimes within the science department. While there was some connectedness with teachers via social media outside their schools, they desired to connect with other teachers in meaningful ways. Many teachers felt that opportunities for professional learning from school, curriculum authority and other external contexts to prepare to enact a new subject had been inadequate in the lead up to teaching, and they expressed an urgent need for time release to learn, plan and collaborate with other teachers. These findings offer a number of insights into the complexities teachers may experience when preparing to

enact a new subject in an externally-driven curriculum and at a time of major curriculum reform.

Notably, the findings indicated that teachers felt excited and committed to establishing this new subject in their schools despite a range of challenges within the personal, school and external contexts that they needed to navigate. The findings suggest that teachers have embraced the subject as they are about to start teaching, something not automatic but can happen for some teachers experiencing curriculum reform (Lynch et al., 2012; Ryder, 2015; Ryder & Banner, 2013) but not usually to this extent. However, there were mixed views in the ways the curriculum aligned with the ways they desired to teach psychology and their values, interests and expectations of the new curriculum. Early indications suggest that these teachers felt a sense of responsibility and ownership for establishing the new subject, despite negative feelings such as feeling frustrated, isolated and overwhelmed with the amount of work and lack of support. But these perceptions may change over time as teachers start enacting the subject. Teachers are more likely to feel a sense of ownership when they view the curriculum to be in line with learning goals they value, including the ways they perceive it to align with students' interest, motivation and learning needs (Connelly & Clandinin, 1988). Overall, the teachers' professionalism was evident, including their commitment and openness to the new challenges and experiences of learning to teach a new subject in meaningful ways for their students.

The findings highlighted the critical and interrelated roles that curriculum authorities and schools play in supporting the professional work of teachers as they navigate the challenges that go with preparing to enact and establish a new subject in an externally driven curriculum within their schools. The range of personal backgrounds and school contexts was predictable. The majority of teachers did not have personal experience teaching psychology, content and/or pedagogical backgrounds for teaching psychology, and almost half had not taught a science subject, which tends to be the case when a new subject is introduced (Marginson et al., 2013). Within school contexts, further challenges included being the sole teacher of psychology in their school, new to teaching within a science department, students have not studied psychology before, not knowing other teachers who had taught psychology before, and teaching in a range of schools outside the capital city across the state. Some teachers felt isolated in their schools and even undervalued within their science department, while some were late appointments. School processes and people to support quality teaching of external curriculum reform were often not in place in the lead up to the start of the initial teaching cycle. Unfortunately, such findings are not a one-off occurrence, with previous experiences of science teachers in Queensland (Adamson & Yin, 2008), the same place as this study, had also seen significant gaps in supporting reform. Equally, curriculum authorities needed to be mindful of the challenges that go hand-in-hand with the establishment of a new subject, and start communicating with schools, other external providers and teachers well ahead of time. In this study, the curriculum documents and one-shot implementation sessions were not sufficient to support the range of teachers needs and school contexts. Opportunities for shared curriculum sense-making across external and school contexts were rare. As Wallace and Priestley (2017) argue, such support for curriculum reform should include professional learning opportunities to understand the nature and intentions of the curriculum and provide sufficient resources and dialogue to allow for teacher innovation.

Finally, this study highlighted the important role of informal teacher networks, and the teachers' strong desire to collaborate with other teachers outside their schools. Social media channels allowed many teachers to feel connected with other psychology teachers, although the degree of communication is unclear at this point of time. Others had connected with small groups of teachers, rather than on an open platform. For these teachers, the

networks showed that all teachers, whether or not they have experience teaching or an undergraduate background in the subject, are in similar situation in terms of navigating ways to enact this new subject. Such networks can convey a shared purpose and experiences (Lieberman & Pointer Mace, 2010), and therefore offer potential opportunities for shared curriculum-sense making activities and a valuable source of collegiality and comfort for those teaching a new subject from scratch.

This study provided a snapshot into the experiences of teachers as they prepare to enact a new subject with external assessment in a time of major curriculum reform. It provided valuable information into the different personal, school and external (curriculum authorities, teacher networks and others) contexts and shows that preparing to enact curriculum should never be seen as a simple process. It highlighted the many challenges for QCE Psychology teachers on the eve of enactment. It did not consider school, curriculum authority or other external providers perspectives. It did not focus on why schools allocated these teachers to establish a new curriculum in their school, the ways these teachers make meaning of the curriculum, and the ways they teach or how their perceptions and experiences change over time. These are potential areas recommended for future research. As part of a larger study, the findings offer a baseline for follow up research as teachers enact the curriculum in the initial two years. It will be interesting to follow these teachers' journeys into teaching the new subject, as they continue to build their content and pedagogical knowledge and start to work with students in their school setting.

This study offers considerations for curriculum jurisdictions and schools introducing a new subject to support the professional work of teachers. The curriculum authority has a responsibility to adequately support and communicate with schools and teachers and other external providers as they prepare to introduce a new subject in an externally driven curriculum reform. Such support requires understanding that teachers professional work preparing to teach a new subject at a time of major curriculum reform adds extra layers of complexity. Supportive processes and people need to begin well ahead of time and be sustained to allow ongoing communication with schools, teachers and other external providers. These processes and people need to be mindful of the teachers' backgrounds, facilitate opportunities for time and dialogue to make sense of the curriculum, both individually and collectively, and consider ways the new subject progresses students' learning from earlier years. Within schools, time release for preparation and providing teachers opportunities to suit their professional learning needs, such as allowing teachers to initiate, find and construct relevant support, have mentors within the science department and create or join networks of teachers in their local area. Such support in the form of people and processes is likely to build a culture of mutual support, collegiality, respect and appreciation within the school (du Plessis, et al., 2019). Collaboration with other teachers in schools, particularly within science departments, could support teachers who do not feel connected with other science teachers, especially for teachers without a science background, and navigate possible issues in terms of discussing progression of learning from previous years and accessing professional learning opportunities specifically related to teaching and learning psychology and the science curriculum. Outside schools, both informal and formal teacher networks have the potential to develop into innovative communities and offer leadership opportunities to support the work of future new teachers as this subject becomes more popular. In terms of curriculum policy, creating space for a new subject because it is seen as valuable, relevant and useful for learners in today's society is to be commended. Careful consideration is then required to create the new subject's curriculum policy, ensuring that it is reasonable, appropriate and accessible for the intended students and their learning needs and capabilities, working with and communicating this work with teachers, schools and other external providers well ahead of time. Strategic and sustained approaches from school,

curriculum authorities and other external contexts are required to work in tandem with teachers and their students to support the professional work of teachers and the establishment of a new subject.

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