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The provision of vocational education and training within contemporary political socio-economic conditions: a review of the literature

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ABSTRACT

This review is in response to numerous research, studies and other reviews that present the under-addressed, longstanding need to rethink vocational education and training delivered to secondary students (VETdSS) in Australia and in similar jurisdictions. Further, it is unclear how secondary schools in Western Australia are navigating the provision of vocational education and training within contemporary political socio-economic conditions. Therefore, this paper intends to review the most recent research about VETdSS and especially research that is pertinent to secondary schools in Western Australia. Ultimately, our aim in this paper is to develop a conceptual framework that will help us to understand what research and theory-making has already been conducted in Australia relevant to VETdSS and what gaps and needs remain wanting.

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Vocational education and training; conceptual framework; Australia; literature review; secondary schools

Introduction

This paper intends to review the most recent research about vocational education and training delivered to secondary students (VETdSS) and especially research that is pertinent to secondary schools in Western Australia (WA). WA is the focus of this paper because there is evidence that suggests a need for rethinking the provision of VETdSS in the state (Down et al., 2018; Education and Health Standing Committee, 2017; Office of the Auditor General Western Australia, 2016).

Further, given how well subscribed VETdSS is in WA, it is realistic for this review and other studies to be focused on the provision of VETdSS in a WA context. Figure 1 has been constructed using Tables 1.6 and 5.1 from secondary education statistics provided by WA's board of studies, the School Curriculum and Standards Authority (SCSA, 2023). From 2016, Figure 1 shows the percentage of 'typical' Year 12 students who have been successful in achieving their WA Certificate of Education (WACE) out of the proportion eligible has not fallen below 92%. In 2016, 45% of Year 12 students eligible to achieve

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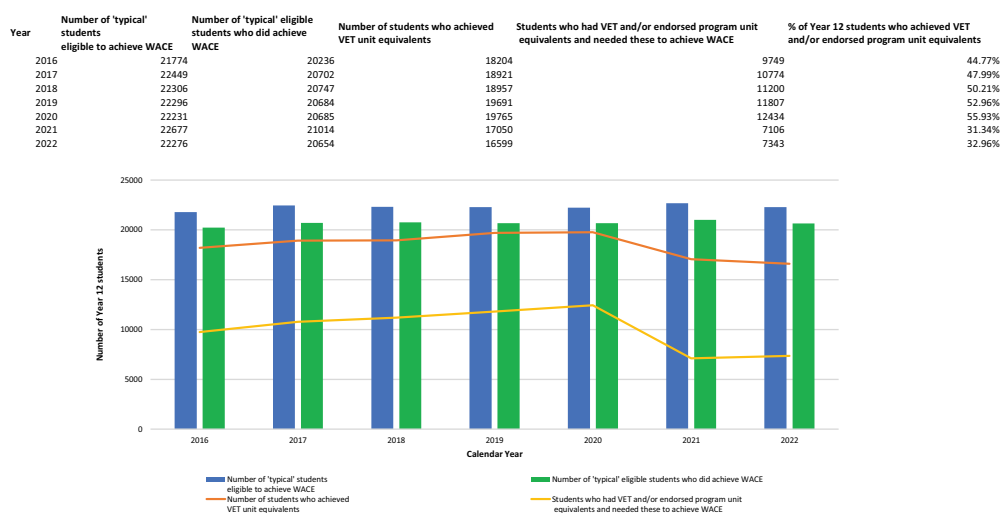


Figure 1. Graph (SCSA, 2023).

WACE needed VET and/or endorsed program unit equivalents to achieve their WACE. This percentage increased steadily over the four subsequent years with 2017 at 47.99%, 2018 at 50.21%, 2019 at 52.96% then peaking at 55.93% in 2020. When comparing 2016 to 2020, there was a significant decrease in 2021 and 2022 at 31.34% and 32.96%, respectively, the decline explainable by changes specifically related to VET and the WACE (Ellery, 2019). Despite these changes, the number of all Year 12 students who achieve VET unit equivalents in WA remains in the ten thousands.

We will explore this review, mindful of contemporary political and socio-economic conditions which have resulted in difficult and fast changing conditions for teachers of VETdSS in Perth and similar big cities around the nation. We will show there is a need for reconceptualising our thinking about VET research and practice as the provision of VETdSS still requires rethinking despite years of advocacy for change. We adopt the term, 'rethinking' and its meaning from Down et al. (2018); '... to signify a spirit of both critique and alternative possibilities' (p. 5) as we align ourselves with other critical research. Research such as Klatt et al. (2017) who argue for the need to rethink VETdSS in terms of purpose, target groups, offerings and provision as current approaches perpetuate disadvantage. An argument aligned with Corbett and Ackerson (2019) who assert a more strategic 'New VET' is needed, one that overcomes the false dichotomy between academic and vocational education and transcends human capital theory so that students may access meaningful educational experiences. Polesel et al. (2020) also claiming that, in its current form, VETdSS has reached the limit of its capacity in being able to serve students or its contentious labour market objectives and assert that both a more modern senior secondary curriculum and more '... consistent and coherent strategies to address the human needs of young people must take equal place alongside the strategies to address Australia's qualifications and skills needs' (Polesel et al., 2020, p. 580).

Ultimately, our aim in this paper is to develop a conceptual framework that will help us to understand what research and theory-making has already been conducted in Australia's VET field of research and what gaps and needs remain wanting. We also

want to focus on the conceptual framework to 'offer a more thorough appreciation of its role and function' (Leshem & Trafford, 2007, p. 94) in academic research and in doing so raise our 'level of conceptual thinking about research' (Leshem & Trafford, 2007, p. 94) on VETdSS.

The following is a brief explanation of how the policies for this part of our education sector have been instituted. This is to assist with forming context for readers unfamiliar with the Australian VET context, and/or more particularly, not aware that the state of WA is responsible for the registration and regulation of its training providers delivering nationally recognised training to local students (Training Accreditation Council, 2019).

Inaugurately named VET in Schools or VETiS, VETdSS nationally has transformed in framework and purpose since its inception (Department of Training and Workforce Development, 2014; Education Council, 2014). VETiS sought to address the emerging need for an increase in vocational options for Year 11 and 12 students as identified in the 'Finn review' (Australian Education Council Review Committee, 1991, p. 1), 'Carmichael report' (The National Board of Employment, Education and Training, 1992, p. 1) and again in the 'Mayer report' (Australian Education Council Mayer Committee, 1992, p. 1). The emerging need for an increase in vocational options was determined due to the incoming diverse demographic of students brought on by the new national education targets such as, 'by the year 2001, 95% of 19-year-olds should have completed Year 12 or an initial post-school qualification or be participating in education or training' (Australian Education Council Review Committee, 1991, p. 10). Therefore, senior secondary education was expected to cater for a broader range of student abilities and aspirations. According to the Australian Education Council Review Committee (1991), '... the need for broader and "more relevant" curriculum at senior secondary level was to be achieved both by expansion of the vocational programs offered by schools, and by extending school/TAFE cooperation' (p. 12). The envisioned extension of this cooperation involving the review of policies and practices at the intersection of school and TAFE to optimise credit transfer and establish a more seamless pathway from school to further education (Australian Education Council Review Committee, 1991). Australian states and territories had a staggered commencement of VETiS in the mid to the late 1990s with WA commencing provision in 1997 (Department of Training and Workforce Development, 2014; Steering Committee for the Review of Commonwealth/State Service Provision, 1995).

In WA, VETiS was initially considered an alternative to the traditional academic pathway. It catered for a small number of students who were considered at risk of disengaging from school (Department of Training and Workforce Development, 2014). The Department of Training and Workforce Development (2014) in WA identified that once the school leaving age was raised, the demand for VETiS increased and the demographic of students enrolling in VETiS expanded. VETiS enrolments were no longer limited to students considered at risk of disengaging from school. Instead, general pathway students (non-university bound) who typically left school prior to Year 12 for employment or further education and higher academic performing students who wanted to enhance their studies and develop their skills for employment also began to enrol (Department of Training and Workforce Development, 2014). This demand was exacerbated by the mandated completion of a Certificate II or higher to achieve the WACE, although this requirement has since been removed (Ellery, 2019).

VETdSS, according to the national VETdSS framework, is currently viewed as the integration of VET and mandated secondary school curriculum (Education Council, 2014). It is comprised of nationally accredited training packages containing units of competency, qualifications and assessment guidelines that define the skills and knowledge needed by learners as decided by the Jobs and Skills Councils (Department of Employment and Workplace Relations, 2023). Nationally, the aim of this integration is for students to develop the skills required for the workplace and to improve student engagement in secondary schools (Education Council, 2014).

According to the framework, the aim of VETdSS is centred around preparing secondary students for work (Education Council, 2014). However, there is research that suggests secondary students are not being adequately prepared for work through the provision of VETdSS and that its approach as well as Australia's education system more broadly continues to hinder positive social mobility (Chesters, 2018; Down et al., 2019). To further complicate matters, following an audit into the effectiveness and efficiency of VETdSS for year 11 and 12 students in WA public schools, the 'work readiness' stance of the framework appears to contradict the perception held by the Department of Education and WA schools who view VETdSS as a key part of the senior secondary curriculum offerings but is focused on education, '... work-readiness and settled career pathways is not the major outcome for most students' (Office of the Auditor General Western Australia, 2016, p. 3). Therefore, suggesting that the aims and expected outcomes of VETdSS are not aligned across key stakeholders. Further, a more recent national review found that VETdSS was of inconsistent quality, problematic to navigate, not well integrated into senior secondary studies and contains numerous challenges related to inequity (Education Services Australia, 2020).

Since COVID-19, the newly elected Federal Labor Government has taken steps to '... support a VET system that delivers a productive and highly skilled workforce' (Australian Government Treasury, 2022, p. 1). The Federal Government, States and Territories have agreed to take actions such as investing '\$1 billion [into a] one-year National Skills Agreement that will provide additional funding for fee-free TAFE in 2023, while a longer-term agreement that drives sector reform and supports women's workforce participation is negotiated' (Australian Government, 2022, p. 2). An investment reflective of the Governments' perception of the significant role VET is expected to play in Australia's recovery from the COVID-19 crisis and a necessity if we are to hope to improve its current complex and clunky state (Morrison, 2020; Pilcher & Hurley, 2020).

Despite there being longstanding critiques on VETdSS, it appears that challenges such as the academic and vocational divide, re-entrenched social disadvantage and conflicting objectives and understandings endure. Further, anecdotal evidence also suggests that there is limited accessible and contemporaneous educational research that might help those on the ground (school leaders, teachers, students) navigate VETdSS in an Australian context, a context that Klatt et al. (2017) explains has no equivalents, therefore, suggesting it may be challenging to learn from research from other contexts (Brown, 2019). We trust that this paper will provide an opportunity to grow knowledge in this area and disseminate it more widely with practitioners than is the current case.

Materials and methods

This review was conducted using an adaption of the state-of-the-art (SotA) methodology as described by Barry et al. (2022). 'SotA reviews create a subjectively informed summary of modern thinking about a topic' (Barry et al., 2022, p. 285). This particular review was guided by the question; given the under-addressed, longstanding need to rethink VETdSS, what is the current state of its provision? It focused on examining the methods and results of peer-reviewed empirical studies situated within political, historical and contextual material. It sought to synthesise ideas presented by predominantly critical researchers as, although VETdSS has the potential to serve students positively, it has considerable scope for improvement (Corbett & Ackerson, 2019; Down et al., 2018). Only double-blind peer-reviewed articles were considered with publication no earlier than 2015. The introduction of the Standards for Registered Training Organisations (RTO) 2015, numerous Australian Skills Quality Authority (ASQA) enforced provider closures across 2016 and 2017 in WA and the introduction and subsequent retraction of the mandatory Certificate II or higher for General pathway students to complete their WACE meant that literature previous to 2015 would be reflecting a landscape that no longer existed (; Australian Skills Quality Authority, 2020; SCSA, 2020; *Standards for Registered Training Organisations 2015 (Aus)*). Search terms used to uncover literature were 'school-based traineeships', 'school-based apprenticeships', 'VET in Schools', 'VETiS', 'VET delivered to secondary students', 'VETdSS', 'vocational education in schools', 'VET for secondary school students' and 'VETfSSS'. Using a University library service, the following databases were searched; Education Resources Information Center (ERIC), VOCEDplus, Education database, EdResearch Online, Google Scholar and A+ Education.

It is acknowledged that whilst a SotA approach to reviewing literature can be valued for its ability to define challenges, it can also present as subjective, therefore, limiting replicability (Tricco et al., 2016). However, this review is in response to numerous research, studies and other reviews that present the under-addressed, longstanding need to rethink VETdSS (Brown, 2019; Corbett & Ackerson, 2019; Down et al., 2018; Klatt et al., 2017; Webb et al., 2015). The reviewed studies have been selected to highlight that, despite years of advocacy for change, the field retains its many challenges and, therefore, need for a conceptual framework to guide further research. This is not to say that the field would not benefit from a more comprehensive systematic literature review that synthesises the state of knowledge (Page et al., 2021).

Both following and informed by the review is a conceptual framework in the form of a diagrammatic schema (Leshem & Trafford, 2007). The aim and process of developing a conceptual framework supports the understanding of what research and theory making has already been conducted in Australia's VET field of research and what gaps and needs remain wanting. The framework aims to visually portray the relationships between the key stakeholder groups involved in the provision of VETdSS as situated in contemporary political socio-economic conditions or, as described by Punch (2000), 'the conceptual status of the things being studied and their relationships to each other' (p. 54). To construct this conceptual framework, each article was subject to additional readings to extract the key stakeholders and contextual factors that exert influence over the provision of VETdSS.

Results: literature review

The literature review results are ordered in the following section commencing with examining literature related to international contexts, followed by a focus on Australian VET at a national then state level with a specific focus on WA. The results of our review confirm that there continues to be limited published research available on VET in secondary school settings even though research that has been conducted shows there was an increasing uptake of VET in secondary schools around the world from the late 2010s (Corbett & Ackerson, 2019; Dæhlen, 2017; Doolan et al., 2016; Virolainen & Thunqvist, 2016). Further, the COVID-19 pandemic has disrupted political and socio-economic conditions underpinning education systems around the globe leading to emerging losses in learning (Engzell et al., 2021; Shmis et al., 2020; Tomasik et al., 2020). Therefore, there is a need for up-to-date research in the field of VET within countries, states and territories like WA who consider VET integral to economic recovery and for the development of the workforce (Department of Training and Workforce Development, 2022).

21st century vocational education in secondary schools: international context

Approximately 120 countries provide VET to secondary school students (Dunbar, 2015). There is a growing number of international studies focused on VET with an increasing number focusing in on delivery within secondary school settings and the school-to-work transition (Dæhlen, 2017; Pilz, 2018; Zhou et al., 2022). There are some qualitative studies in international contexts that have produced deep and rich descriptions and understandings of VET (Corbett & Ackerson, 2019; Doolan et al., 2016; Virolainen & Thunqvist, 2016). In the field of VET, political and socio-economic factors are prevalent and influential as shown by Corbett and Ackerson (2019), Dæhlen (2017), Doolan et al. (2016), and Virolainen and Thunqvist (2016).

Corbett and Ackerson (2019) conducted a comparative critical narrative inquiry on the approaches to VET in remote/regional Tasmania (Australia) and remote/regional Nova Scotia (Canada). They analysed how contemporary VET discourse presented neo-liberal ideas (Corbett & Ackerson, 2019). They argued that for secondary students to access meaningful VET that enhances their capabilities and creates new opportunities, it is essential to overcome the academic-vocational divide, therefore, supporting the necessity to rethink VET in secondary school settings (Corbett & Ackerson, 2019). Other studies also highlighted the academic-vocational divide and its association and influence over shaping students' learner identities, self-esteem and motivations and challenged its 'natural phenomena' type status (Brockmann & Laurie, 2016; Hegna, 2019; Nylund et al., 2017; Rosvall et al., 2016).

Another qualitative study is Doolan et al. (2016), they used interviews and focus groups with students, teachers and parents to understand how schools produced and reproduced class distinctions through status, how teachers perceived and interacted with students and the curriculum and organisational characteristics in schools. Doolan et al. (2016) found factors that contributed to the production and reproduction of class inequality; hierarchy between schools, social distance between students enrolled in three- and four-year VET programmes, prioritisation of practical

skill development over academic knowledge development, informal practices to address lack of resources, strict enforcement of student discipline and staff bending the rules to accommodate students.

In another study, to compare differences and similarities in the development and organisation of two country's school-based VET models situated in statist regimes, Virolainen and Thunqvist (2016) conducted analyses on empirical studies, historical reports and national statistics relevant to Finland and Sweden. The findings included insight into the endurance of the two school-based VET models, the ways in which each country's political and socioeconomic factors influenced and shaped VET and identified possible challenges for reforming VET systems internationally (Virolainen & Thunqvist, 2016). Another study set in Scandinavia using quantitative methods is Dæhlen (2017). Dæhlen (2017) aimed to examine the probability of child welfare clients (an acutely disadvantaged group of youth) dropping out of upper-secondary education after participating in school-based VET in Norway. To do this, they calculated the average marginal effects from multinomial logistic regression models using data from public registries in Norway. Findings from Dæhlen (2017) showed that differences in the observed characteristics could not explain the differences in drop-out rates between child welfare clients and the majority peers. Although, Dæhlen (2017) did identify that there was a need to better support disadvantaged youth in their transition from school-based training to post-school education and employment; a need also identified in an Australian study by Klatt et al. (2017).

The existing body of literature on the provision of VET to secondary overwhelmingly reflects a European focus, particularly in Scandinavian countries (Dæhlen, 2017; Doolan et al., 2016; Hegna, 2019; Nylund et al., 2017; Rosvall et al., 2016; Virolainen & Thunqvist, 2016; Zhou et al., 2022). Other countries who represent some of the largest education systems in the world such as the United States (US) remain wanting. A systematic literature review by Kim et al. (2021) highlighting the dearth of research in the field of career and technical education delivered to secondary students focused on the US whilst the limited amount of research in the field focused on India may have more to do with nearly 85% of schools in the country having yet to implement VET as part of their curriculum (World Economic Forum, 2022). Hao and Pilz (2021) also indicating that policy makers and practitioners in China acknowledge the importance of attracting young people to VET; however, very little empirical research has been carried out in a Chinese educational context.

In saying this, research on the provision of VET to secondary school students across international contexts has shown how VET requires rethinking to better serve secondary students, how it produces and re-produces inequality and is shaped and influenced by political and socioeconomic factors (Corbett & Ackerson, 2019; Dæhlen, 2017; Doolan et al., 2016; Virolainen & Thunqvist, 2016). In Australia, Brown's (2019) research 'back-grounder' highlights the lack of awareness regarding how VET teachers and school leaders handle political and socioeconomic factors while making decisions related to VET. Whilst there have been some attempts to address this issue both internationally and in Australia, numerous enduring challenges remain, therefore, signifying that there is still much work to be done (Andersson & Köpsén, 2019; Smith & Yasukawa, 2017).

21st century vocational education in secondary schools: Australian context

A range of empirical investigations have been conducted on VETdSS in an Australian context (Klatt et al., 2017; Misko et al., 2017, 2019, 2020; Webb et al., 2015). Themes arising from empirical research on VETdSS include the changing purpose of VETdSS and the need to understand VETdSS through stakeholder experiences which will be described next.

Changing purpose of VETdSS

Researchers have sought to understand more about who VETdSS serves and how it is experienced, the post-schooling destination of VETdSS students and how political and socioeconomic factors impact the aspirations and post-schooling education participation of students (Klatt et al., 2017; Misko et al., 2017, 2019, 2020; Webb et al., 2015).

Youth considered at risk academically and/or socioeconomically disadvantaged in secondary schools remain over-represented in VET, a challenge that has remained problematic and unresolved for over a decade when comparing current and early research (Fullarton, 2001; Klatt et al., 2017). Klatt et al. (2017) sought to develop a comprehensive profile of the school-based apprenticeship and traineeship learner by conducting a statistical analysis of two national datasets on secondary students and VET course selection. The study uncovered significant issues related to equity and possible policy challenges for the development of school-based apprenticeship systems that improved school transitions for young people, especially those from disadvantaged backgrounds (Klatt et al., 2017). The findings showed how students of socio-economic disadvantage were more likely to be enrolled in low-level qualifications that led to low wage and high-risk employment prospects. Gender-segregated participation in school-based apprenticeships and traineeships showed evidence of an over-representation of females in industries that led to poorer career opportunities and lower wages when compared to males who dominate alternative industries (Klatt et al., 2017). This concept of re-entrenched disadvantage was also shown in other Australian studies (Chesters, 2018; Polesel et al., 2020).

Research from the late 2010s investigated VETdSS as a means for students to become work ready. Key research included Misko et al. (2017, 2019, 2020) who conducted a series of national studies that focused on post-school employment destinations of VETdSS students in Australia. All three studies used statistical analysis on data from various databases including the National Centre for Vocational Education and Research's (NCVER) VET in Schools collection and the ABS Schools Australia dataset. Findings showed mixed results, just over half of the students were employed in a job related to the course they undertook, a subsequent analysis also suggesting that students' employment and education destinations appeared unrelated to their VETiS studies (Misko et al., 2017). Misko et al. (2019) found that Government schools had higher VETdSS participation rates when compared to non-Government schools, participation rates were higher for males and for Indigenous students when compared to non-females and non-Indigenous students, respectively, and Queensland had the highest participation rates followed by Western Australia. Misko et al. (2020) found employment and training outcomes had remained comparatively stable between 2006 and 2011 with higher employability success for those that had undertaken an apprenticeship or traineeship program at school. Those least successful in gaining

employment were Indigenous students and students from non-English-speaking backgrounds. In addition, there were no significant differences identified between VETdSS students and non-VETdSS students in gaining employment (Misko et al., 2020). Findings from Misko et al. (2017, 2019, 2020) showed various employment trends and participation rates in VETdSS relevant to gender, race and socioeconomic status. Suggestions and recommendations for further research contained aims with subjective dimensions such as student motivations, effectiveness of program approaches and stakeholder perspectives.

Whilst numerous national studies have used quantitative methods, Webb et al. (2015) used a mixed-methods approach to better understand how location and neighbourhood shaped young people's aspirations and post-schooling education participation. An in-depth analysis of Australia-wide quantitative data identified key factors (characteristics of schools, school leadership and teacher quality) that contributed to student outcomes. A subsequent qualitative study supported an in-depth investigation into the ways in which some people were able to overcome the effects of living in low socioeconomic neighbourhoods and engage in post-school education and training was conducted. The study was set across four regional, rural and urban fringe locations in South Australia (two) and Victoria (two) involving where 52 young people were interviewed and participated in focus groups. Webb et al. (2015) found that students located in regional, rural and urban fringe locations of low socioeconomic status were far more likely to study vocational courses than university courses and, in some cases, were also disadvantaged by state-based policies. In all four locations, young people were influenced by their familial education and careers (Webb et al., 2015). Encountering educational experiences that differed from their own was considered integral for young people in making career choices divergent from familial paths (Webb et al., 2015). In addition, VET was considered a vital pathway to further education and employment in these towns of low-socioeconomic status (Webb et al., 2015). Webb et al. (2015) show how qualitative methods can be used to take into consideration contextual factors.

From its infancy to more recent years, VETdSS has been used to provide for students of low-academic ability and often, those from low-socioeconomic status (Klatt et al., 2017). Towns of low socioeconomic status have been shown to be dependent on VET for majority of its further education and pathways to employment needs (Webb et al., 2015). VETdSS is also used to improve students' work-readiness and used to ensure a smooth transition from school to employment even though some view work-readiness and settled career pathways as a non-major outcome for most students (Misko et al., 2017, 2019, 2020; Office of the Auditor General Western Australia, 2016).

Consequently, there are a range of stakeholders and purposes VETdSS is expected to serve and fulfill; students, schools, the labour market and numerous political agendas. According to the national framework for VETdSS, students should be at the centre of decision-making in VET (Education Council, 2014). However, it is unclear how secondary schools are navigating the provision of VET in a landscape fraught with numerous stakeholders and competing interests. Recommendations for further research by Klatt et al. (2017) and in a literature review by Frawley et al. (2015) suggests that capturing stakeholders' actual experiences that take into consideration contextual factors has the potential to improve understandings around the provision of VETdSS.

The need to understand VETdSS through stakeholders' experiences

Impactful research conducted during the 2010s examined different aspects of VETdSS across Australian states and territories from a variety of perspectives. Polesel et al. (2016) aimed to evaluate the motivations behind schools forming partnerships with external organisations, the positive outcomes of these partnerships for students and the challenges they faced. Questionnaires were used to investigate school leaders' experiences and perceptions in Victoria, New South Wales and South Australia. They were then followed up by 30 in-depth, semi-structured interviews with school principals, teachers and programme coordinators in Victoria and New South Wales and 30 focus groups with 134 students across metropolitan and regional secondary schools in Victoria, New South Wales and South Australia. It was found that the motivations for forming the partnerships was driven by student demand and the efforts of 'champion' teachers with positive outcomes including increased student engagement and retention, increased student and school understandings of industry and the local and wider communities, reduction of the impact of student disadvantage and development of employability skills (Polesel et al., 2016). Challenges uncovered were in the organisation of work placements and the limited availability of financial and human resources (Polesel et al., 2016). In addition, it was found that the ability of schools to engage with external businesses and partners depended on the ability of school leadership to define and communicate the role of VET and workplace learning within the school and wider community (Polesel et al., 2016).

Studies that use qualitative methods can gain insight into complex educational phenomena from a variety of perspectives. By capturing a variety of perspectives, the impact of policy, political and socioeconomic factors on the provision of VETdSS can be better understood (Polesel et al., 2016). Capturing the multiple perspectives of key stakeholders aids in the development of thorough qualitative research. This has the theoretical and transformative capabilities to imagine new possibilities for VETdSS (Knowles & Cole, 2002).

Vocational education in secondary schools: Western Australian context

There is quite limited empirical research which has been conducted on VETdSS in WA schools. This is a gap that should be filled as WA's economy has a mining backbone. The mining sector depends heavily on VET and is an essential requirement for maintaining stable, peaceful and prosperous political and socio-economic conditions in WA.

A critical ethnographic study set in Western Australia examined 32 students' perspectives on schooling and transition to the adult world of work through the development and analysis of narrative portraits (Down et al., 2018). Findings included identification of a widening gap between how schools function and the needs of young people in the twenty-first century (Down et al., 2018). However, Down et al. (2018) suggested that schools have the ability to address many of the challenges from the ground up by asking questions of themselves, their functions around students' lives and experiences in and outside of schooling and education. Drawing from her work in Down et al. (2018), Robinson et al. (2018) argued that rethinking and reimagination should involve '... placing students at the centre of everything a school does' (p. 400). These findings are consistent with other research set in state-based, national and international contexts (Corbett & Ackerson, 2019; Dæhlen, 2017; Doolan et al., 2016; Frawley et al., 2015; Klatt et al., 2017; Misko et al., 2017, 2019, 2020; Virolainen & Thunqvist, 2016; Webb et al., 2015).

Further, it also aligns with the intentions of the national VETdSS framework (Education Council, 2014).

Whilst Down et al. (2018) have identified areas requiring improvement relevant to VETdSS, they focussed on outer-metropolitan and rural/regional contexts with no exploration into metropolitan and contained a limited diversification of participants with respect to socio-economic background and school classification (Government and non-Government schools). The most recent body of research suggests inequity is commonplace in VETdSS and that schools have the capabilities and opportunity to improve the situation (Down et al., 2018; Robinson et al., 2018). Down et al. (2018) have made recommendations on how schools could approach the issue of inequity. However, little continues to be known about how schools are navigating the provision of VETdSS or the challenges they face in doing so in a post-COVID-19 pandemic landscape.

Vocational education in secondary schools: research since COVID-19

Although there is emerging international empirical research that focuses on vocational education in secondary schools since the COVID-19 disease was declared a world-wide pandemic in March 2020 (Ferm, 2021; Han et al., 2020; Pylväs et al., 2022; World Health Organization, 2021); empirical research on VETdSS in Australian schools remains limited and in WA specifically, scant. A scoping study conducted by the Australian Skills Quality Authority (national regulator for Australia's VET sector) identifies '... a lack of data relating to the outcomes and pathways of VETdSS students' (Australian Skills Quality Authority, 2021, p. 62) and 'a desire to understand more about the outcomes of VETdSS and the longer-term benefits for students and employers' (Australian Skills Quality Authority, 2021, p. 62). These gaps and desires are also identified and shared by other reviews and researchers (Commonwealth of Australia, 2019; Zoellner, 2020).

Governments and international organisations continue to compile reports on the data that is beginning to be quantified about the impact of the pandemic on VET and schooling more generally (Australian Institute of Health and Welfare, 2021; NCVER, 2020; Sacks et al., 2020). A 2021 report from the Organisation for Economic Co-operation and Development (2021) warns that, 'the vocational education and training (VET) sector has faced particular challenges during the crisis, most notably the fact that the digital learning environments that most education institutions had to rely on during closures don't work as well for practice-oriented learning – a core component of VET instruction – as they do for academic learning' (p. 1). With a growing volume of reports, reviews, warnings and concerns over the impact of COVID-19 on education, vocational or otherwise, Australian Skills Quality Authority (2021) does identify along with other organisations that reform priorities must recognise and meet the needs of a post-COVID economy and look for ways forward with potential to capitalise on the momentum from the crisis (Jones & Seet, 2020; Pilcher & Hurley, 2020; Seet & Jones, 2021).

Discussion and concluding thoughts

The prevalence of inequity throughout VET in secondary school settings is a concern both internationally and in Australia (Dæhlen, 2017; Doolan et al., 2016; Down et al., 2018; Klatt et al., 2017; Virolainen & Thunqvist, 2016; Webb et al., 2015). Following the COVID-19

pandemic, ‘... early indications from global studies suggest that it will be students from disadvantaged backgrounds who suffer disproportionately’ (Sacks et al., 2020, p. 1). Consequently, we argue that there is a need to re-think VET in secondary school settings by conceptualising the possibility of a new type of curriculum and pedagogy, if powerful stakeholders act upon the decades long call for change (Corbett & Ackerson, 2019; Down et al., 2018).

The conceptual framework presented in Figure 1 is a diagrammatic schema offering a visual representation of the current state of key stakeholders and factors considered influential in VETdSS within Australia. Robson (1993) explains that the development of ‘... a conceptual framework forces you to be explicit about what you think you are doing. It also helps you to be selective; to decide which are the important features; which relationships are likely to be of importance or meaning; and hence, what data you are going to collect and analyse’ (p. 150–151). The conceptual framework in this paper is explicit about who the key players are thought to be according to the literature, decisive on what and who are considered important and influential and conveys which relationships are of significance in VETdSS. Finally, it looks to make meaning of the current state of research, so as to then, guide and inform the direction of further research projects.

This conceptual framework reflects the key factors and players of the WA VETdSS field. Even prior to the publication of the literature in this review, the process of streaming students (an action demonstrated by the arrows in Figure 2) into vocational or higher academic rigour pathways influenced by standardised curriculum, testing and national benchmarks, high-stakes testing, socio-economic status and numerous Government,

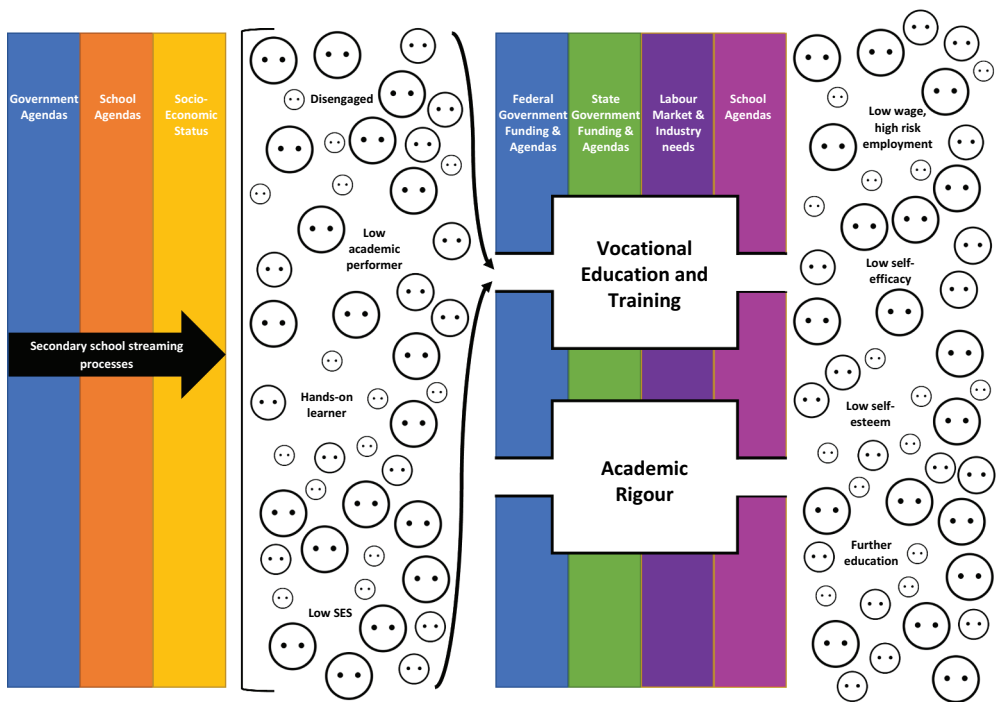


Figure 2. Conceptual framework.

school and labour market type stakeholder objectives has been a longstanding issue (Australian Education Council Review Committee, 1991; Clarke & Polesel, 2013; Polesel & Clarke, 2011; The National Board of Employment, Education and Training, 1992). The absence of students' mouths in Figure 2 conveys that students are largely voiceless in how and where they end up after being subject to what Sassen (2014) describes as a '... "savage sorting" machine for the labour market... (p. 4)'; a machine with processes that transforms students into instruments of policy with institutional, Government and/or labour market vested interests (Clarke & Polesel, 2013).

Students who do not fit the academic mould are typically assessed and viewed as stereotypes such as disengaged learners, low academic performers or/and are labelled 'hands-on learners'; they are viewed as capable of being 'doers' and less likely to be considered 'thinkers' (Corbett & Ackerson, 2019). They are then subsequently guided or forced into VET and are often informed they are unable to access courses of any substantial rigour (Corbett & Ackerson, 2019; Down et al., 2018). Further, inequity and socio-economic status are cyclically reinforced with students of low socio-economic status more likely to be low academic performers or are assumed to be less academically capable and motivated than their wealthier counterparts (Down et al., 2019; Klatt et al., 2017). In short, to borrow from Kincheloe (1999), VET has become the 'dumping ground' for those that do not tick the achievement boxes of the traditional school system.

In saying this, we do not debate the potential for positive outcomes of VET for secondary students, nor do we challenge the essential role VET has been given to play in realising a prosperous future for Australia (Brown, 2019). Secondary students have reported positive experiences in a VET context, including increased motivation, the development of resilience and the opportunity to witness and experience their own growth from initial work experience placements to later ones (Baartman et al., 2018). However, we do believe that something needs to be done regarding the limited prospects and the low self-efficacy and self-esteem for many secondary school VET graduates and this is what is being communicated by Figure 2 (Down et al., 2018; Klatt et al., 2017).

Studies conducted in international settings provided insight into the complex nature of VET in secondary school settings (Corbett & Ackerson, 2019; Doolan et al., 2016; Virolainen & Thunqvist, 2016). Findings from these studies supported the argument that VET requires rethinking (Corbett & Ackerson, 2019; Dæhlen, 2017; Doolan et al., 2016; Virolainen & Thunqvist, 2016). This claim is further supported by Australian studies at a national level that indicate that VETdSS is over-represented by students from disadvantaged backgrounds (Klatt et al., 2019; Webb et al., 2015). Further, we argue that to disregard or reduce the significance of political and socio-economic factors in research is to ignore the realities of those that are impacted by them (Kincheloe, 1995). Consequently, reducing the researchers' desired and expected commitment to moral purpose and holistic quality (Knowles & Cole, 2002). Thus, we argue that the most effective way to take these factors into consideration is through a qualitative lens. Studies have shown how qualitative methods can provide a better understanding of the experiences of learners (Corbett & Ackerson, 2019; Doolan et al., 2016; Polesel et al., 2016; Virolainen & Thunqvist, 2016; Webb et al., 2015).

The findings from WA research agreed with international and national studies that VET requires rethinking, particularly for students from disadvantaged backgrounds (Down et al., 2018). However, WA research focusses on outer-metropolitan and rural/regional contexts with limited exploration into metropolitan schools (Down et al., 2018). With over 75% of secondary students in WA public schools being based in metropolitan areas, there is a need to examine and evaluate how metropolitan schools in WA are navigating the provision of VET within the complex landscape of factors related to politics, socioeconomics and the COVID-19 pandemic (Department of Education, 2021).

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