Identifying factors affecting work-integrated learning opportunities in exercise science and exercise physiology

JENA BUCHAN[1]
Southern Cross University, Gold Coast, Australia
CHRISTIAN PITCHER
Australian Catholic University, Melbourne, Australia
DEB PASCOE
Federation University, Ballarat, Australia
COURTNEY MCGOWAN
Southern Cross University, Gold Coast, Australia
KELLY CLANCHY
Griffith University, Gold Coast, Australia
REBECCA SEALEY
James Cook University, Townsville, Australia

Support from industry professionals is essential to meet the increasing demand for high-quality work-integrated learning (WIL) that forms a core component of university curriculum in various health professions. This qualitative study used an online survey to investigate the current landscape of exercise science and physiology WIL opportunities in Australia, building from a previous 2013 study. Factors were identified from 76 practicum supervisors that restrict and promote willingness to provide WIL opportunities, with recommendations made on how to better support and engage current and future supervisors. Fifteen factors were identified that influenced supervisor WIL engagement, with four factors reported as 'promote', six factors reported as 'restrict' and five factors identified as promoting and restricting. Using these findings, recommendations were made around five key issues related to supporting sustainable, engaging future WIL opportunities. An update was also provided on status of recommendations resulting from the 2013 research and remaining areas for action.

Keywords: Student placement, supervision, work-integrated learning, health professions, exercise

Work-integrated learning (WIL) is a core component of university curriculum and education in the health professions worldwide (McAllister & Nagarajan, 2015). Integrating industry experience with university theoretical knowledge, WIL has been defined as an activity used "to develop a coherent approach to build workforce capability, skills and individual prospects" (Universities Australia & Australian Collaborative Education Network [ACEN], 2015, p. 1). WIL is highly complex, contextually dependent and involves different pedagogies, which in this paper will refer to industry-based placements. WIL can accelerate workplace readiness and enrich students' understanding of professional practice, and enhance their employability as graduates (Billett et al., 2013). Depending on location, WIL may take many different forms. For example, many UK universities offer a sandwich program where students study for two years, complete a term or year on (often paid) industry WIL and return to finish a final study year, while North American universities may see students alternating between classroom and (often paid) industry WIL (Jackson & Collings, 2018). Within Australia, WIL is commonly unpaid and directly integrated into a student's course of study, particularly in degree programs accredited by an external industry regulating body (e.g. Exercise and Sport Science Australia [ESSA]; Australian Physiotherapy Association [APA]).

[1] Corresponding author: Jena Buchan, jena.buchan@scu.edu.au

Regardless of WIL structure, there is a growing need to meet the increasing demand for high quality WIL, with universities, regulatory authorities and industry stakeholders needing to overcome challenges posed by increasing student numbers, new program offerings, evolving scopes of professional practice and amendments to WIL governance procedures. Support from industry professionals is essential to enable WIL and develop the future workforce, as industry professionals are the primary intermediary responsible for integrating student learning into the world of employment. Industry professionals as supervisors are paramount for increasing student exposure to the industry, creating meaning from experiences, providing growth-supporting feedback, and offering authentic learning opportunities (Rodger et al., 2011; Våågstøøl & Skøøien, 2011). However, this requires a significant amount of time and resource investment from the industry-based supervisor and university (Reeve & Gallacher, 2005), to ensure WIL requirements and learning outcomes are achieved (Patrick et al., 2008) and supervisors are confident and competent in deeming students work-ready. As such, it is imperative to better understand the factors that impact industry professionals' ability to provide WIL opportunities, as an increased demand for WIL does not seamlessly correlate with an increase in WIL opportunities.

Within Australia, there has emerged a significant increase in the need for WIL offerings, with growing capacity for placements a key area identified within Australia's National WIL Strategy (Universities Australia & ACEN, 2015). This is of particular importance in programs which mandate placements to enable maintenance of professional industry accreditation for the program, such as in the allied health professions. A recent review (McBride et al., 2020) investigated placement capacity across five allied health professions from 2013-2016: medical radiation professions; nutrition and dietetics; occupational therapy; physiotherapy; and speech pathology. They reported a plateau in placement days offered in three of the five professions during that time, with all programs demonstrating student cohort growth at a rate greater than placement days offered and workforce growth (i.e. potential supervisors). Specifically, final-year students grew by over 100% from 2010 to 2016, while the number of placement days offered only increased by 39%.

Similar challenges exist within Australia in exercise science (ES) and exercise physiology (EP), where completion of WIL is mandatory to obtaining professional accreditation following graduation. While the number of accredited ES and EP professionals (and therefore potential supervisors) increased from 4594 in 2016 to 6636 in 2019 (Exercise and Sports Science Australia [ESSA], 2016, 2019a), this has not necessarily translated to increased WIL opportunities. Sealey et al. (2015) highlighted decreasing interest from supervisors in offering future EP WIL opportunities. The key issues impacting this included limited support and resources, the impact of administrative processes and poor student competency and motivation to learn. Such barriers are not unique to the ES and EP professions, or the Australian system, with McBride et al. (2020) finding similar restricting factors reported across allied health professions and Rodger et al. (2008) highlighting a range of shared issues related to WIL from an international perspective. Further, this research suggests significant work remains to be instated to better support placement supervisors and ensure sustainability of increasing WIL demands (McBride et al., 2020; Rodger et al., 2008).

There also continues to be comparative student and program growth in the Australian allied health disciplines of ES and EP, regulated by the national body ESSA (Smart et al., 2016). In 2013, 24 universities offered a total of 42 programs in Australia, including postgraduate, double degrees and dual-accredited ES and EP programs. This number has grown to 93 programs in 2020 across 32 universities, with over 30 other programs currently applying for accreditation (ESSA, 2021). While exact graduate numbers were not available for 2013, from 2016 to 2018 alone there was a 10% growth

in students graduating from accredited programs, (2210 and 2423 respectively) (Berkelmans, 2020, personal communication). Sealey et al. (2013) reported on this growth and potential implications for WIL capacity in the EP profession. They highlighted a range of common issues proposed to limit WIL and industry placement supervision capacity in the future, including procedural, resourcing and competency considerations (Sealey et al., 2013, 2015).

However, the exercise and sport industry, including university WIL within this area, has undergone significant changes since the 2013 research undertaken by Sealey and colleagues, which focused solely on EP WIL. Professional university accreditation courses have expanded to include Accredited ES (AES), Accredited EP (AEP) and Accredited Sports Scientist (ASpS) professions (ESSA, 2021), each with nationally mandated WIL requirements. Students seeking ES accreditation must complete a minimum of 140 WIL hours, with at least 80 hours involving exercise assessment, prescription, and delivery, and demonstrate competency across a range of graduate attributes. Students progressing to EP programs must complete the 140 ES hours plus an additional 360 hours across a range of clinical domains and demonstrate professional competency. Additionally, changes in the accredited professional standards, types of experiences gained on placement and supervisor qualifications in recent years have further impacted the available WIL opportunities (ESSA, 2020a, 2020b).

Given the recent changes and significant growth across the ES and EP industry in Australia since the 2013 study on WIL supervision (Sealey et al., 2013, 2015), there is a need to update and expand this earlier research to provide an understanding of barriers and facilitators to offering both ES and EP WIL opportunities and determine how best to support current and future supervisors. The aim of this study was to examine the current landscape of ES and EP WIL supervision. Further, it investigated factors related to supervisor willingness and ability to support future WIL capacity to enable universities and ESSA to develop and implement strategies to ensure the sustainable provision of sufficient high-quality WIL opportunities across the industry, and potentially within other allied health programs.

METHODS

This qualitative research reports on industry supervisor practices and perceptions, using frequency-based content analysis and narrative-style reporting of emergent themes. The project was approved by Griffith University Human Research Ethics Committee (Reference no. 2019/569).

Participants

Survey respondents were ES and/or EP industry professionals within Australia who were previous or current university WIL supervisors, or had been previously contacted about future supervision of placement students. Individuals were invited to participate via an emailed information sheet and survey link, sent by university academic or professional staff who oversee WIL programs in ES and/or EP. University staff were asked to send the survey to their list of ES and/or EP WIL supervisors, regardless of whether they had previously or were currently offering student placements. Only universities with current or provisional ESSA accreditation in ES and/or EP (n = 32) were invited to participate. The number of supervisors across all university programs could not be determined, so sample size could not be estimated. Invited individuals were informed that all survey data were collected in an unidentified manner and completion of the survey was considered consent to participate.

Survey

The survey was designed using SurveyMonkey (SurveyMonkey Inc., California, USA), with an online link distributed via email to optimize dissemination and data collection. The survey design followed a three-step process which took participants approximately 20-25 minutes to complete. First, the original 41-question survey (Sealey et al., 2013) was adapted to ensure suitability for ES and EP. Next, placement staff at respective universities were sent a modified survey which included additional questions intended to explore future development of supervisor training and support resources. Finally, a revised survey was sent to participating Universities for final review and feedback. The final survey (42 questions) was then converted to SurveyMonkey, and participating universities distributed the information and link to industry-based WIL supervisors. A follow-up distribution was repeated eight weeks later, with the survey open for a duration of 16 weeks to allow for variation in university placement schedules and holidays.

The final survey was designed to capture supervisor demographics, practices, settings, related supervision self-efficacy and support needs (e.g. training, resources) within ES and/or EP placements throughout Australia. In line with the original research by Sealey et al. (2015), this paper presents selected supervisor demographic and supervisory experience data from participants. Also included is an analysis and discussion of two free-text questions:

1. Please detail any factors that promote your ability/willingness to supervise student placements; and
2. Please detail any factors that restrict your ability/willingness to supervise student placements.

Data Analysis

Survey data were analyzed using qualitative and quantitative frequency and proportional methods. For questions with set response options (e.g. gender, employment status), descriptive statistics were reported to provide data on the current supervision environment in ES and EP WIL. Findings were reported as response proportions (% of participants who selected the response from those who chose to answer the question). All analyses were completed with IBM SPSS software, Version 26 (IBM Corp., Armon k, NY).

With the two open-text questions, a thematic content analysis (Braun & Clarke, 2006) was undertaken using Excel, with three researchers allocating all responses to themes. Using key principles of qualitative data analysis, the researchers undertook data reduction, data display and conclusion drawing to determine themes and allocations which were then compared and verified to reach consensus on the final outputs (Miles & Huberman, 1994). There was no limitation placed on the number of themes established for each question and responses were allocated to themes irrespective of the direction of the response (promoting or restricting).

RESULTS

The number of eligible participants could not be determined (that is, any industry professional who has previously or currently supervises ES/EP students), but 95 supervisors provided data with 91 supervising students in 2018 and/or 2019. However, only 76 provided responses to at least one of the free-text supervision questions and were therefore included in analyses presented in this paper. There were 39 male (51.3%) and 37 female (48.7%) respondents, with over 75% aged under 40 years (Table 1).

The majority (80.3%) were employed by an organisation and worked as a Clinical and/or Sport Exercise Physiologist (78.9%).

All states and territories except the Northern Territory were represented, with most (75%) supervisors working in a metropolitan area. Participants supervised students from 36 different Universities (only 32 Universities had accredited programs), with 26 (34%) supervisors reporting oversight of 10 or more students in 2018 and/or 2019. Of the 76 supervisors, 28 (36.8%) reported having supervised both ES and clinical EP students. Additionally, most respondents had three or more years supervision experience (68.4%) and used a 1:1 student to supervisor model of supervision (60.5%) (Table 1).

TABLE 1: Participant demographic and employment information (*N*=76).

Variable	**Predominant response(s)**	**Proportion (*n*)**
Gender	Male	51.3% (39)
	Female	48.7% (37)
Age (years)	<40	78.9% (60)
Profession[a]	Exercise Physiologist (clinical and/or sport)	78.9% (60)
	Exercise Scientist	11.8% (9)
	Strength and Conditioning coach	11.8% (9)
Employment status	Employee	80.3% (61)
	Self-employed	10.5% (8)
Employment sector[a]	Private practice	34.2% (26)
	Public hospital	30.3% (23)
	Clinical (non-hospital)	11.8% (9)
Geographical location-self report[a]	Metropolitan	75.0% (57)
	Regional	19.7% (15)
	Rural	7.9% (6)
	Remote	1.3% (1)
National representation*	New South Wales	28.9% (22)
	Victoria	19.7% (15)
	Western Australia	21.1% (16)
	Queensland	18.4% (14)
Students supervised in 2018 and/or 2019[a]	Exercise Science students	48.7% (37)
	Clinical EP students	88.2% (67)
	Sports Science students	10.5% (8)
Supervision experience (*n*=75)	<3 years	30.3% (23)
	3 or more years	68.4% (52)
Supervision model**	1:1 (student: supervisor)	60.5% (46)
	2:1 (student: supervisor)	18.4% (14)
	Other	21.1% (16)

Note: Only the top three response categories listed. [a] Multiple responses allowed; *Australian State or Territory in which the supervisor practices; **Supervision model: ratio of students being supervised to number of supervisors at a given time.

A total of 15 factors were identified across both free-text questions, with nine factors identified in the 'promote' supervision and 11 factors identified in the 'restrict' supervision responses (Table 2). Five factors were identified as both promoters and restrictors of supervisory capacity. Appendix A presents a table outlining these factors, indicating the number of supervisors who identified them and whether they were deemed to be promoting or restricting. Participant response examples are also included, to

further demonstrate what contributed to the identification and classification of these factors. For example, staffing availability and workload allocation was deemed by some supervisors to be promoting (*n*=21), due to aspects such as designated clinical facilitator positions, administrative support, or working "in a team centered job, with other staff happy to assist" (Participant 62). Conversely, 28 participants reported this factor as a deterrent to offering placements, particularly in relation to either not having a role offering enough opportunities for student engagement (e.g. casual, self-employed business structure) or insufficient staffing to support multiple, if any, students: "Staffing demands restrict us to one student at a time" (Participant 23).

TABLE 2: Factors that promote or restrict supervisor willingness or ability to supervise placements.

Factor	Number of responses
Promote	
Supporting/expanding the profession	51
Future recruitment	25
Staffing availability, workload allocation*	21
Self-growth/professional development opportunity	18
Service benefit	16
Workplace support/structure*	12
Student learning experience*	10
University support and relationship*	3
Staff interest (prior experience)*	2
Restrict	
Timing and time availability	34
Staffing availability*	28
Student quality, knowledge and attitudes	14
Administrative processes	11
Workplace support/structure*	7
Facilities and infrastructure	7
University support and relationship*	7
Funding	5
Student learning experience*	3
Staff interest (prior experience)*	2
Industry restrictions	1

*Identified as both a 'promote' and 'restrict' factor

DISCUSSION

Supervisor willingness and ability to offer student placements in ES and EP is influenced by various factors, many of which were viewed as both promoting and restricting. These included staffing availability, workload support/structure and university support. Major factors promoting a willingness or ability to offer student placements were supporting and expanding the profession, future recruitment, staffing availability and workload allocation. Restricting factors commonly reported were timing of placements and time availability, staffing and student knowledge and attitudes. These findings were similar to research in other health disciplines, where common promoting factors included staff self-development (Rodger et al., 2008; Thomas et al., 2007) and benefits to both service offering and student learning (Barton et al., 2005; Johnson & Blinkhorn, 2013; Nedeljkovic et al., 2014).

Conversely, barriers included university support and guidance (Johnson & Blinkhorn, 2013; Nedeljkovic et al., 2014), student quality and competency (Rodger et al., 2011) and staff availability (Nedeljkovic et al., 2014; Rodger et al., 2008).

Of the 76 supervisors providing responses, there was a balance between male and female, reflecting the overall ESSA membership of 49.7% female, 48% male and 0.2% non-disclosed (ESSA, 2019b). The majority (79%) of respondents were under 40 years old and worked as an EP (60%) in a range of settings. These statistics differ from those reported in ESSA's recent *Future Workforce Report* (2019b), where over 90% of members were aged under 30 years and 90% were AEPs. Importantly this survey was purposefully directed towards known supervisors across ES and EP which may account for the slightly older demographic holding accreditations. Most respondents worked in a metropolitan setting (75%; ESSA Report: 78%) across all states and territories except the Northern Territory. While the demographic data in this study are similar to ESSA's *Future Workforce Report* (2019b), there are notable differences compared to the original work by Sealey and colleagues in 2011-2012 (Sealey et al., 2013). While they also reported older supervisors (only 39% <30 years of age), supervisors were less experienced than those in the current study (40% with two or fewer years compared to 68% supervising for three or more years respectively) and primarily working in private practice (42%). Participants in the current study worked in a diverse range of settings including public and private hospitals, private practice, community, and gym/fitness centers. This suggests a more experienced but relatively younger group of supervisors offering varying situational experiences in ES and EP, providing perspectives likely relevant to future students in both industries.

This research provides a follow-up and extension of the Sealey et al. (2015) work, which examined EP supervision in Australia. Since then, there has been considerable industry development and expansion of university programs, including formal recognition of AES and increased interaction between ES and clinical EP in both industry and university settings. Sealey et al. (2015) identified 14 factors that promoted and/or restricted supervisor willingness and ability to offer student placements, which also emerged in the current research. In addition, they highlighted five common procedural issues recurring throughout supervisor feedback which also emerged in the current research including: funding and staffing restrictions; the influence of student ability and enthusiasm and supervisor expectations; recognition of supervision work; burdensome administrative requirements and restrictive placement scheduling.

Issue One: Funding and Staffing Restrictions

> *Previous recommendation: Adoption of efficient supervision structures*
> *Update: Limited progress*

The most commonly identified factors reported to restrict ability and willingness to offer student placements centered on staffing restrictions, including having time and appropriate staff to provide supervision. This was represented in comments such as those suggesting students "can add a lot onto an already busy workload which can make it hard to manage at times" (Participant 66) and mentioning that "staffing demands restrict us to one student at a time" (Participant 23). Also highlighted were the potential funding implications of investing site resources towards placements and lack of funding to support placements. Specifically, supervisors reported lack of university and workplace funding and cost implications of allocating time to students instead of clients, as central to this restricting factor. Sealey et al. (2015) reported similar issues identified by clinical EP supervisors, including funding and staffing restrictions which have also emerged in other health professions (Barnett et al., 2008;

Nedeljkovic et al., 2014; Rodger et al., 2008). However, there were also supervisors within this and other studies who reported student placements provided financial benefits and actually enabled increased client services (Barton et al., 2005; Johnson & Blinkhorn, 2013; Nedeljkovic et al., 2014). Financial relations between universities and placement sites are complex and diverse and vary across States and Territories (Sealey et al., 2015), therefore, it is difficult to make a broad recommendation related to funding. An evaluation and cost modelling are warranted in future research and may provide a foundation for developing support and addressing resourcing issues which is supported in the *National WIL Strategy* published by Universities Australia and ACEN (2015).

Extensive recommendations were presented by Sealey et al. (2015) regarding staffing restrictions, that remain in the current landscape and encompass both sufficient staff capacity and time. Key components of previous recommendations from Australian and international perspectives have been proposed and warrant consideration in ES and EP. Examples include: greater use of non-traditional times including university breaks and holiday times (Health Workforce Australia, 2011; Sealey et al., 2015); alternative supervision models including variation in supervisor to student ratios; role-emerging placements where supervision is provided by professionals in other disciplines (Moore et al., 2003; Rodger et al., 2008); and use of simulated learning to provide placement experiences and preparation (Reeves & O'Shea, 2020; Rodger et al., 2008).

While a majority of supervisors in the current study (61%) reported primarily using a 1:1 student to supervisor ratio, some respondents reported exploring other models that enabled supervision of multiple students and integrated peer-assisted learning. However, while utilization of a 2:1 or higher student to supervisor model may increase placement capacity, research has not reported clear benefits of such approaches to actual student learning. A systematic review by Sevenhuysen et al. (2017) reported on 28 articles across five allied health professions which found inconsistent results related to benefits on learning and performance outcomes, as well as participant satisfaction. A key action is first providing industry professionals with training that provides guidance on how to adopt varying supervision models and offers support in helping them determine which model is most suitable for their setting. Additionally, regular feedback and evaluation should be collected from students on perceived effectiveness and implications for learning around these varying supervision models, including in relation to peer teaching and learning practices that may accompany some models.

Another factor impacting supervision capacity is related to accreditation requirements, which regulate who is able to provide supervision for accreditation-related placements. Specifically, the ESSA *Practicum Guide* (2020b) outlines qualification requirements for ES and clinical EP students, limiting who can supervise certain aspects of placement experience. For example, at least 200 of the 360 mandated EP WIL hours must be supervised by an AEP, while only exercise professionals with appropriate qualifications and accreditations can directly supervise ES students. However, with the health and fitness industry constantly expanding and evolving, including in the multidisciplinary space, there is great benefit from increasing cross-profession interaction and education opportunities. Key examples include greater multidisciplinary exposure and collaboration opportunities, enhanced service delivery and client care (Hammick et al., 2007) and increased exposure to other allied health professions (Wilhelmsson et al., 2009). Rodger and colleagues (2008) presented an international report on allied health placements, emphasizing that university programs need to incorporate greater exposure to broader health delivery systems and interdisciplinary care to enable benefit of these non-traditional placement settings. Further, the recent *Exercise Physiology Horizons Scanning Report* commissioned by the New South Wales Ministry of Health (2019) calls for enhanced interprofessional

engagement and learning opportunities to support development of adaptable, collaboration-driven industry professionals.

Issue Two: Student Ability and Enthusiasm and Supervisor Expectations on Site Productivity

> *Previous recommendation: Development and use of competency checklist.*
> *Update: Development of checklist, limited to EP; need for improved student pre-placement competency and preparation*

Survey participants reported placement students could be a service benefit, enabling greater client supervision, caseload sharing and addition of services. One supervisor highlighted "we can host more clients when we have students assisting with program delivery" (Participant 58). Johnson and Blinkhorn (2013) found rural supervisors viewed dentistry student placements as a benefit to waiting list patients, while psychology placement supervisors reported students had potential to provide a service to the organisation (Nedeljkovic et al., 2014). Further, Sealey and colleagues (2015) saw similar feedback from clinical EP placement supervisors, with professional practice educators highlighting a service benefit when students were engaged and competent.

However, these and other studies have also emphasized that unprepared, unengaged students often created a greater workload for the supervising team, with perceptions such as "student[s] focus only on hours to complete rather than knowledge to gain" (Participant 46). Rodger et al. (2011) found occupational therapy placement supervisors viewed student preparation as a key factor in placement success, while Chipchase et al. (2012) identified 57 characteristics clinical educators from a range of health fields reported as indicators of student readiness. While students completing EP placements have already undertaken at least 140 hours of WIL in the ES domain, ESSA accreditation requirements, do not include a standardized student pre-placement competency requirement or assessment, nor general placement preparation. The way each university prepares students may vary significantly, and students may commence placement at varying levels of competency both within and across universities. A key recommendation to address this issue is mandated national benchmarking and standardized measures across accredited universities to enhance student preparedness, professionalism and competency prior to undertaking WIL. While Sealey and colleagues (2015) recommended the implementation of a competency checklist into the placement process, this has not been implemented on a wider scale and is limited to clinical EP (Raymond et al., 2020).

Another recommendation to address this restricting factor is introduction of a first-year observational placement. This has recently been researched in ES, with findings suggesting factors such as engagement, motivation and industry awareness are enhanced with early WIL opportunities (de Hollander et al., 2018). Such findings align with research across other allied health professions, which have reported early industry exposure improves program expectations and student engagement (Thomas, 2012). Introduction of an early observational placement may also provide a better foundation for use of a pre-placement checklist when students prepare for their later-year WIL experiences. With early placement experiences correlating with greater professional self-efficacy and identity (de Hollander et al., 2018; Jackson, 2015), students may benefit from completing a perceived competency checklist with their professional practice as part of their orientation process. This would enable both parties to gain a clearer understanding of a starting point, and establish a baseline knowledge base, as well as discuss activities and areas for learning opportunities. Students are then afforded an opportunity to identify perceived strengths, weaknesses, and future learning needs (Boud, 2000), which could be complemented by revisiting and reflecting on this checklist throughout the placement,

supporting further WIL-based skills development and transition from theory to practice (Billett et al., 2018; Billett & Choy, 2014).

Issue Three: Recognition of Supervision Role

> *Previous recommendation: Enhanced recognition for supervision*
> *Update: Change continuing professional development points awarded; enhanced, standardized formal supervision training; re-framing of supervisor role*

Offering student placements as a way to support and expand the profession, including providing a chance to "give back to the profession that has supported me" (Participant 3), was the most commonly reported promoting factor in this study, which reaffirmed the foundational work by Sealey et al. (2015). This suggests current placement support is highly reliant on supervisor altruism and consideration is needed around ways to better support supervisors and ensure a continued willingness to offer student placements. This is especially relevant given that restricting factors found in this and other research includes lack of support, specifically financial and resources (Nedeljkovic et al., 2014; Sealey et al., 2015). While providing payment for supervision may not be a viable and/or, sustainable option, other recognition and support opportunities should be identified, such as access to library resources, professional development opportunities and university clinical facilitation involvement.

One key action is to reframe the supervisor role and recognize the significant education components central to supporting students. Multiple participants in this research highlighted their role is one of educator more than supervisor, in that there is a need to train and teach students rather than just oversee progress. This aligns with the overall concept of WIL, and central benefits that have been identified, including enhancing student learning and industry readiness (Billett, 2009; Billett et al., 2013). Therefore, it should be recognized that the role of supervisor is above and beyond traditional industry professional training and highlights a need for both professional recognition and training.

In relation to professional recognition, individuals supporting students in WIL are eligible to receive points towards meeting yearly professional development requirements. However, this process and value is not always made clear to industry professionals and requires additional paperwork from the university. As such, work is needed to evaluate if the awarded points are deemed beneficial and motivating, as well as streamline the process of gaining them. Other recognition may include access to university areas such as library resources and opportunities to increase involvement with academic activities (Rodger et al., 2008; Sealey et al., 2015).

Multiple participants in this research viewed their supervisor role as a professional practice educator role, given the recurring need to upskill students and teach them professional and client-related skills (e.g. giving feedback, coaching). Industry professionals across various health professions have highlighted WIL-related training as highly beneficial and a desired area of support (Nedeljkovic et al., 2014; Rodger et al., 2011). While universities have an accreditation requirement to provide training, multiple supervisors in the current study reported little to no training and support in supervising effectively. This may in part be attributed to the greater shift in the role to one requiring more skills in educating, rather than providing oversight and general guidance. Clinical psychology offers a framework for providing and mandating such training, with industry professionals required to complete training approved by the Psychology Board of Australia (Psychology Board of Australia, 2012) before supervising students. Addressing this issue will require a multi-faceted approach, incorporating greater recognition, resources and accredited training that is more extensive and accessible.

Issue Four: Burdensome Paperwork Requirements

> *Previous recommendation: Standardized placement paperwork and assessment tools*
> *Update: National evaluation, including standardization between ES and EP*

Administrative processes, including paperwork, were reported as a restricting factor to offer student placements. This may be compounded by supervisors having students from multiple universities, with no national standardized paperwork for evaluating student placement tasks and requirements or competency assessments, with one respondent highlighting "admin[istration] processing being different between universities" (Participant 28) was a significant restricting factor. Additionally, in a study supporting nursing student supervisors (Browning & Pront, 2015), these requirements may be presented in varying formats and more academic than clinician-friendly. This can be further compounded within ES and EP placements by the differing formats, policies and requirements between the two programs, even within a single university.

Multiple allied health programs currently employ a standardized student WIL performance assessment, including physiotherapy (Dalton et al., 2009), occupational therapy (Turpin et al., 2011) and speech pathology (McAllister et al., 2011). While work is being completed in the EP space with developing and trialing a standardized competency assessment tool (Raymond et al., 2019), this has not been extended into ES, nor adopted by all accredited University programs. Additionally, universities currently track aspects of placements such as student placement hours and performance in any preferred format (e.g. logbook), despite verified records being national requirements. Standardized paperwork and processes can reduce supervisor administration requirements, as well as support mandated accreditation processes such as cross-university benchmarking (Dalton et al., 2012; McAllister et al., 2011). There is a clear need for universities and ESSA to invest greater resources into streamlining WIL processes to provide further clarity. Development, evaluation, and endorsement of a national competency checklist would enable all Universities to provide supervisors with clearer expectations and requirements for supporting students in a consistent approach.

Issue Five: Restrictive Placement Scheduling

> *Previous recommendation: Broadening of placement scheduling*
> *Update: Primarily done on individual University basis; greater need now given increased potential of exercise science and exercise physiology placement interaction*

As a result of ESSA regulations and university program structures, many placements are undertaken in the final half or two-thirds of the degree, commonly in a block structure. While this approach enables students to complete the majority of university-based theoretical knowledge and practical skills development, it may further restrict supervisors ability to offer placements due to increased demand within a similar timeframe from multiple institutions, which is a particular concern for rural placement sites.. Such a situation has been reported in previous research within EP (Sealey et al., 2015), as well as other health programs (Barnett et al., 2008; Rodger et al., 2008). Additionally, an increase in multidisciplinary placements and interprofessional learning may place a further demand on supervisors from other professions (Rodger et al., 2008).

Some universities have introduced multiple placements within the degree, whereby students are able to split up the mandated WIL hours over a longer time period. However, this approach may be counterproductive, with supervisors in this study and previous research reporting current placement durations are already too brief to sufficiently transition students to a more autonomous, engaged role

(Nedeljkovic et al., 2014). Particularly relevant to ES and EP placement opportunities is the potential integration of peer-assisted learning (Rodger et al., 2008). A key example would be placing an ES and clinical EP student together, whereby support and guidance is provided by the site supervisor as well as the EP student who has already completed their ES placement hours. This may not only provide greater placement opportunities and supervisor workload reduction, but also integrates learning and training of future potential supervisors and provides valuable peer-enhanced learning opportunities.

LIMITATIONS AND FUTURE RESEARCH

Findings from this study should be interpreted with consideration of existing limitations. Data were captured using an online survey, limiting ability to extract clarification around supervisor responses or further follow-up. Additionally, use of a content analysis relies on a subjective method of evaluation. Further, respondents were located throughout Australia, primarily working in metropolitan areas, which may limit transferability of these findings to other geographical settings, including other countries. Supervisors were also limited to those in the ES and EP WIL space, so care should be taken in extrapolating these findings to other allied health settings. However, of note is that the identified promoting and restricting factors were not directly tied to industry-specific processes and procedures, though future research in a broader range of allied health WIL settings is warranted. Finally, to allow for greater applicability and guidance, recommendations were kept broad and adaptable. As such, certain factors or suggestions may not be relevant for all WIL settings in relation to individual supervisors, workplaces, and universities. They do, however, provide multiple areas of focus for future research and work in the WIL space, in Australia and beyond.

CONCLUSION

This study presents the current situation within the clinical EP and ES WIL supervision space in Australia, addressing key changes in the industry and providing an update on previous recommendations (Sealey et al., 2015). It has also allowed feedback from industry professionals across a broader range of placement settings to be collated and analyzed. This work has highlighted significant areas for action to better support industry professionals in their ability and willingness to offer placement opportunities, such as recognizing workplace-related resourcing limitations, administrative barriers and student competency and motivation challenges. Further, it reports on existing promoting factors that may be leveraged to ensure future placement support, including offering placements for recruitment opportunities, enhancing the profession and creating links with universities. This study also highlights a persisting need to address various procedural issues originally outlined by Sealey et al. (2015) and escalated with the growing demands on industry to support WIL opportunities. Additionally, findings indicated an overlap of industry professionals offering both ES and EP placements, further supporting development of aligned, standardized WIL policies and procedures. In 2015, Universities Australia released a report outlining eight key strategies to action to enable expansion and sustainability of WIL across University Education. Factors identified in the current research demonstrate a clear need remains to address these strategies in the ES and EP fields. Key recommendations have been proposed with a view to enhance capacity for WIL informed by the perceptions of placement supervisors, which are envisioned to be relevant both within and beyond the ES and EP space. Future investment in WIL in the allied health professions must be informed by stakeholders from the accrediting body as well as those in the academic and private sectors to facilitate sustainable growth in high quality placements, both within and outside the Australian context. This is necessary to produce accredited professionals capable of advancing their industries into the future, and supporting the next generation of WIL students.

ACKNOWLEDGEMENTS

We acknowledge the support of the Council of Heads of Exercise, Sport and Movement Sciences for funding this research. The first author would also like to acknowledge Griffith University for their support of this research.

REFERENCES

Barnett, T., Cross, M., Jacob, E., Shahwan-Akl, L., Welch, A., & Berry, R. (2008). Building capacity for the clinical placement of nursing students. *Collegian, 15*(2), 55-61. https://doi.org/10.1016/j.colegn.2008.02.002

Barton, H., Bell, K., & Bowles, W. (2005). Help or hindrance? Outcomes of social work student placements. *Australian Social Work*, *58*(3), 301-312. https://doi.org/10.1111/j.1447-0748.2005.00222.x

Billett, S. (2009). Realising the educational worth of integrating work experiences in higher education. *Studies in Higher Education*, *34*(7), 827-843. https://doi.org/10.1080/03075070802706561

Billett, S., Cain, M., & Le, A. H. (2018). Augmenting higher education students' work experiences: Preferred purposes and processes. *Studies in Higher Education*, *43*(7), 1279-1294. https://doi.org/10.1080/03075079.2016.1250073

Billett, S., & Choy, S. (2014). Integrating professional learning experiences across university and practice settings. In S. Billett, C. Harteis & H. Gruber (Eds.), *International handbook of research in professional and practice-based learning* (pp. 485-512). Springer. https://doi.org/10.1007/978-94-017-8902-8_18

Billett, S., Sweet, L., & Glover, P. (2013). The curriculum and pedagogic properties of practice-based experiences: The case of midwifery students. *Vocations and Learning, 6*(2), 237-257. https://doi.org/10.1007/s12186-012-9094-9

Boud, D. (2000). Sustainable assessment: Rethinking assessment for the learning society. *Studies in Continuing Education, 22*(2), 151–67. https://doi:org/10.1080/713695728

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Browning, M., & Pront, L. (2015). Supporting nursing student supervision: An assessment of an innovative approach to supervisor support. *Nurse Education Today*, *35*(6), 740-745. https://doi.org/10.1016/j.nedt.2015.02.003

Chipchase, L. S., Buttrum, P. J., Dunwoodie, R., Hill, A. E., Mandrusiak, A., & Moran, M. (2012). Characteristics of student preparedness for clinical learning: Clinical educator perspectives using the Delphi approach. *BMC Medical Education*, *12*(1), 1-9. https://doi.org/10.1186/1472-6920-12-112

Dalton, M., Davidson, M., & Keating, J. L. (2012). The assessment of physiotherapy practice (APP) is a reliable measure of professional competence of physiotherapy students: A reliability study. *Journal of Physiotherapy, 58*(1), 49–56. https://doi.org/10.1016/S1836-9553(11)70054-6

Dalton, M., Keating, J., & Davidson, M. (2009). *Development of the Assessment of Physiotherapy Practice (APP): A standardised and valid approach to assessment of clinical competence in physiotherapy*. Australian Learning and Teaching Council. https://ltr.edu.au/resources/grants_pp_physiotheraphy_instrument_griffith_report_2009.pdf

de Hollander, C., McGuckin, T., Sinclair, K., Barnett, F., & Sealey, R. (2018). Front loading the curriculum: Early placement experiences enhance career awareness and motivation for students with diverse career options. *Student Success*, *9*(2), 39-48. https://doi.org/10.5204/ssj.v9i2.419

Exercise and Sports Science Australia. (2016). *Annual report 2016.* https://www.essa.org.au/Public/About/Annual_Report/Public/ABOUT_ESSA/Annual_Reports.aspx?hkey=d2479c18-64d0-4f7a-ad7e-c1fb6be71898

Exercise and Sports Science Australia. (2019a). *Annual report 2019.* https://www.essa.org.au/Public/About/Annual_Report/Public/ABOUT_ESSA/Annual_Reports.aspx?hkey=d2479c18-64d0-4f7a-ad7e-c1fb6be71898

Exercise and Sports Science Australia. (2019b). *ESSA future workforce report 2019.* https://www.essa.org.au/Public/Advocacy/Industry_Reports/Public/Advocacy/Industry_Reports.aspx?hkey=32619849-f189-4199-935b-b77d916d1f57

Exercise and Sports Science Australia. (2020a). *Accredited exercise scientist scope of practice*. https://www.essa.org.au/Public/Professional_Standards/ESSA_Scope_of_Practice_documents.aspx.

Exercise and Sports Science Australia. (2020b). *Practicum Guide.* https://www.essa.org.au/Public/EDUCATION_PROVIDERS/Practicum.aspx

Exercise and Sports Science Australia. (2021). *Accredited courses.* https://www.essa.org.au/Public/EDUCATION_PROVIDERS/Accredited_Courses.aspx

Hammick, M., Freeth, D., Koppel, I., Reeves, S., & Barr, H. (2007). A best evidence systematic review of interprofessional education: BEME guide no. 9. *Medical Teacher*, *29*(8), 735-751. https://doi.org/10.1080/01421590701682576

Health Workforce Australia. (2011). *Mapping clinical placements: Capturing opportunities for growth: Supply (clinical training provider) study*. https://www.yumpu.com/en/document/view/42236831/mapping-clinical-placements-capturing-opportunities-for-growth

Jackson, D. (2015). Employability skill development in work-integrated learning: Barriers and best practice. *Studies in Higher Education*, *40*(2), 350-367. https://doi.org/10.1080/03075079.2013.842221

Jackson, D., & Collings, D. (2018). The influence of work-integrated learning and paid work during studies on graduate employment and underemployment. *Higher Education*, *76*(3), 403-425. https://doi.org/10.1007/s10734-017-0216-z

Johnson, G., & Blinkhorn, A. (2013). Faculty staff and rural placement supervisors' pre-and post-placement perceptions of a clinical rural placement programme in NSW Australia. *European Journal of Dental Education*, *17*(1), e100-e108. https://doi.org/10.1111/j.1600-0579.2012.00768.x

McAllister, L., & Nagarajan, S. V. (2015). Accreditation requirements in allied health education: Strengths, weaknesses and missed opportunities. *Journal of Teaching and Learning for Graduate Employability, 6*(1), 2-24. https://doi.org/10.21153/jtlge2015vol6no1art570

McAllister, S., Lincoln, M., Ferguson, A., Davidson, B., Hill, A., Davenport, R., Brown, L., Kruger, S., & Tedesco, H. (2011). *Benchmarking COMPASS® for curriculum renewal: Establishing infrastructure and collaborative processes for cross-institutional benchmarking of student clinical performance in speech pathology, benchmarking resources handbook*. Australian Learning and Teaching Council. https://researchonline.jcu.edu.au/20795/

McBride, L. J., Fitzgerald, C., Costello, C., & Perkins, K. (2020). Allied health pre-entry student clinical placement capacity: Can it be sustained?. *Australian Health Review*, *44*(1), 39-46. https://doi.org/10.1071/AH18088

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage.

Moore, A., Morris, J., Crouch, V., & Martin, M. (2003). Evaluation of physiotherapy clinical educational models: Comparing 1:1, 2:1 and 3:1 placements. *Physiotherapy*, *89*(8), 489-501. https://doi.org/10.1016/S0031-9406(05)60007-7

Nedeljkovic, M., Chaffey, L., Murray, G., & Brennan, C. (2014). Postgraduate clinical psychology placements in Victoria: The experience of students and supervisors. *Australian Psychologist*, *49*(6), 348-357. https://doi.org/10.1111/ap.12067

New South Wales Ministry of Health. (2019). *Exercise physiology-horizons scanning and scenario generation report.* https://www.health.nsw.gov.au/workforce/alliedhealth/Documents/exercise-physiology-horizons-scanning-report.PDF

Patrick, C.-j., Peach, D., Pocknee, C., Webb, F., Fletcher, M., & Pretto, G. (2008*). The WIL (work integrated learning) report: A national scoping study*. Australian Learning and Teaching Council. https://eprints.qut.edu.au/216185/

Psychology Board of Australia. (2012). *Fact sheet for supervisors.* https://www.psychologyboard.gov.au/news/media-releases.aspx

Raymond, J., Sealey, R., Naumann, F., Rooney, K., English, T., Barry, B., & Groeller, H. (2020). Development of core clinical learning competencies for Australian exercise physiology students. *Journal of Clinical Exercise Physiology*, *9*(1), 1-9. https://doi.org/10.31189/2165-6193-9.1.1

Raymond, J., Sealey, R., Pascoe, D., Naumann, F., & McAllister, S. (2019). An assessment tool to judge exercise physiology student performance in a clinical placement setting. *Proceedings of the Conference of the Australian and New Zealand Association for Health Professional Educators*, 47-48. https://researchonline.jcu.edu.au/60778/

Reeve, F., & Gallacher, J. (2005). Employer–university 'partnerships': A key problem for work-based learning programmes? *Journal of Education and Work*, *18*(2), 219-233. https://doi.org/10.1080/13639080500085992

Reeves, N. E., & O'Shea, M. C. (2020). Simulation in exercise science and physiology—No longer a luxury but a necessity. *Journal of Clinical Exercise Physiology*, *9*(2), 83-88. https://doi.org/10.31189/2165-7629-9.2.83

Rodger, S., Fitzgerald, C., Davila, W., Millar, F., & Allison, H. (2011). What makes a quality occupational therapy practice placement? Students' and practice educators' perspectives. *Australian Occupational Therapy Journal*, *58*(3), 195-202. https://doi.org/10.1111/j.1440-1630.2010.00903.x

Rodger, S., Webb, G., Devitt, L., Gilbert, J., Wrightson, P., & McMeeken, J. (2008). Clinical education and practice placements in the allied health professions: An international perspective. *Journal of Allied Health*, *37*(1), 53-62.

Sealey, R., Raymond, J., Groeller, H., Rooney, K., Crabb, M., & Watt, K. (2013). *Current practice of clinical exercise physiology placement supervision in Australia*: *2013 report*. James Cook University. https://researchonline.jcu.edu.au/27725/1/Sealey_et_al_clinical_placement_supervision_report_2013.pdf

Sealey, R., Raymond, J., Groeller, H., Rooney, K., Crabb, M., & Watt, K. (2015). Supporting placement supervision in clinical exercise physiology. *Asia-Pacific Journal of Cooperative Education, 16*(1), 53-69.

Sevenhuysen, S., Thorpe, J., Molloy, E., Keating, J., & Haines, T. (2017). Peer-assisted learning in education of allied health professional students in the clinical setting: A systematic review. *Journal of Allied Health, 46*(1), 26-35.

Smart, N., Williams, A., & Lyndon, K. (2016). The role and scope of accredited exercise physiologists in the Australian healthcare system. *Journal of Clinical Exercise Physiology*, *5*(2), 16–20. https://doi.org/10.31189/2165-6193-5.2.16

Thomas, L. (2012). *Building student engagement and belonging in higher education at a time of change: Final report from the What Works? Student retention and success programme.* Paul Hamlyn Foundation. http://www.phf.org.uk/wp-content/uploads/2014/10/What-Works-report-final.pdf

Thomas, Y., Dickson, D., Broadbridge, J., Hopper, L., Hawkins, R., Edwards, A., & McBryde, C. (2007). Benefits and challenges of supervising occupational therapy fieldwork students: Supervisors' perspectives. *Australian Occupational Therapy Journal*, *54*, S2-S12. https://doi.org/10.1111/j.1440-1630.2007.00694.x

Turpin, M., Fitzgerald, C., & Rodger, S. (2011). Development of the student practice evaluation form revised edition package. *Australian Occupational Therapy Journal*, *58*, 67-73. https://doi.org/10.1111/j.1440-1630.2010.00890.x

Universities Australia & Australian Collaborative Education Network. (2015). *National strategy on work integrated learning in university education.* https://acen.edu.au/wp-content/uploads/2015/11/National-WIL-Strategy-in-university-education-032015.pdf

Vågstøøl, U., & Skøøien, A. (2011). A learning climate for discovery and awareness: Physiotherapy students' perspective on learning and supervision in practice. *Advances in Physiotherapy 13*(2), 71-78. https://doi.org/10.3109/14038196.2011.565797

Wilhelmsson, M., Pelling, S., Ludvigsson, J., Hammar, M., Dahlgren, L., & Faresjo, T. (2009). Twenty years experiences of interprofessional education in Linkoping – Ground-breaking and sustainable. *Journal of Interprofessional Care, 23(*2), 121-133. https://doi.org/10.1080/13561820902728898

APPENDIX A: Factors identified as promoting and/or restricting for supervision

Factor identified (Number of responses)	
1. Supporting and expanding the profession (51)	
Promoting (51)	Supervisors commonly reported an opportunity to support the profession as a key factor promoting willingness to offer student placements. This included contributing to the overall growth of the profession, ensuring a high industry standard and developing work-ready graduates. Some respondents considered student placements as an opportunity to support growth within specific areas of the industry, such as "promoting health workforce retention in rural and remote areas" (Participant 32) or within a specialized practice field "we want the cardiac science world to grow and want to help students do this, so even if there are no [job] positions available we still take students all year round (Participant 19). Responses also included a desire to "give back to the profession that has supported me" (Participant 3) as a motivator to supervise student placements.
Restricting (0)	
2. Staffing availability and workload allocation (49)	
Promoting (21)	Supervisors reported staffing and workload allocations as key factors in both promoting and restricting willingness or ability to offer student placements. Ability to offer placements commonly relied on having sufficient, willing staff to support and guide students, both in relation to staffing numbers and supervision competency. One participant reported "both clinicians skilled in face to face supervision and senior skillset in coordinating/organizing student placement" (Participant 7) as their main promoting factor, while another commented they worked "in a team centered job, with other staff happy to assist" (Participant 62) or supervision was a component of the role, such as a "dedicated clinical educator position for the EP profession" (Participant 49) and having "additional admin[istration] time to allow for successful supervision and feedback" (Participant 65).
Restricting (28)	In relation to staffing and workload as a deterrent to offering student placements, the most common response related to insufficient staffing to support students, was: "Staffing demands restrict us to one student at a time" (Participant 23). Additionally, a few supervisors reported the nature of their role did not offer enough capacity for regular placement opportunities. "In this role I only work one day per week, and we have limited full-time equivalent in general to support placements…[and] I have been limited by the circumstances of my self-employed business set-up" (Participant 3).
3. Timing and time availability (29)	
Promoting (0)	
Restricting (29)	A common theme reported as restricting the ability to offer student placements centered around supervisor time availability and timing of placements. One key area was in relation to balancing clinical workload with sufficient student support. One respondent indicated they were "responsible for full time clinical workload in addition to students" (Participant 48) and another felt students "can add a lot onto an already busy workload which can make it hard to manage at times" (Participant 66). Timing and duration of placements also emerged as a deterrent as well as scheduling around clinic and practitioner schedules. One supervisor reported "placement blocks a minimum of 5 weeks" were required to make it worthwhile (Participant 69), while another found the "time/logistics of student availability with our availability" restricted the ability to offer placements (Participant 34).

4. Future recruitment (25)	
Promoting (25)	Many supervisors reported future recruitment as a motivator for willingness to offer student placements. It was viewed as offering an opportunity to provide hands-on training to potential future employees, as well as ensuring the development of work-ready graduates. One supervisor highlighted that student placements were an opportunity to provide "free training of potential employees" (Participant 38). Another mentioned that "future recruitment is always a possibility with our students and those that perform well often gain a casual position" (Participant 19).
Restricting (0)	
5. Workplace support / structure (19)	
Promoting (12)	Workplace support and structure was reported as both promoting and restricting willingness and ability to support student placements. Promoting factors identified by supervisors were a small clinic, diverse activities/clients and support for workload reduction to supervise. One individual had a "supported reduction in clinical workload to support clinical education/supervision" (Participant 49), while another reported "having an education department within the workplace and working in a team-centered job [with] other staff happy to assist" as affording a greater ability to support placements (Participant 62). One supervisor reported clinic size and structure afforded greater opportunity to support placements. 'My practice is a small clinic allowing a more hands-on opportunity for the students to actively be involved with patients both supervising their programs and designing them, including their home programs." (Participant 1).
Restricting (7)	In relation to workplace support/structure restricting placement ability or willingness, individuals reported a lack of designated education support, higher-level processes and small departments as key. For example, the "workload of inducting [students] into hospital setting limits the number of students" (Participant 27), while another reported "higher-level…bureaucracy" (Participant 11) as a limiting factor. Additionally, minimal support was reported in a hospital setting, with "no dedicated EP Clinical Educator, which every other allied health discipline has" (Participant 7).
6. Self-growth, professional development (18)	
Promoting (18)	Supervisors reported the opportunity to grow and develop professionally and further their own learning promoted willingness to support student placements. There was a shared view that supporting students helped "enhance my own self growth and knowledge" (Participant 4). Supervising placements provided mentorship and leadership development opportunities, "for my own learning as a teacher/leader" (Participant 5). These learning and development opportunities were not limited to the responding supervisor only but having student placements afforded opportunities for multiple staff members to enhance professional and leadership skills. One individual highlighted the "best way to learn is to teach" (Participant 18).
Restricting (0)	
7. Student quality, knowledge and attitudes (14)	
Promoting (0)	
Restricting (14)	Another restricting factor directly related to students, and their perceived knowledge, motivation to learn and general attitudes. Multiple supervisors felt students often lacked motivation and displayed limited engagement, reporting "poor student attitudes" (Participant 24) and "student[s] focus only on hours to complete rather than knowledge to gain" (Participant 46). Some supervisors felt students came unprepared and displayed insufficient competency to enable supervision and integration into many workplace activities. Participant 5 reported the "ability of students to be at a competent level" as a key factor reducing willingness to offer placements, and another felt students displayed a "lack of

	training or applicable skill, drive to work in the industry" (Participant 25). Student suitability to the actual work setting was also mentioned as a deterring factor. There was limited "suitability of students to rural and remote areas" (Participant 31).
8. Service benefit (14)	
Promoting (14)	Service benefit emerged as a promoting theme, whereby student placements were viewed as an opportunity to expand client services, support practitioners' workloads and improve ability of the site to meet client demand. Multiple supervisors reported students enabled increased supervision of clients within the clinic/gym. There were also reports of student placements providing assistance in actual service delivery, such as "assistance with clinical loads (group settings)" (Participant 41) and "assisting in coaching" (Participant 55). One supervisor highlighted "we can host more clients when we have students assisting with program delivery" (Participant 58). There was also a perceived client benefit, whereby individuals mentioned the enjoyment clients gained from interacting with students as a promoting factor in offering placements. One supervisor reported "the driver is the benefit our mental health clients gain from some access to a clinical exercise program" that resulted from having placement students (Participant 74).
Restricting (0)	
9. Student learning experience (13)	
Promoting (10)	Student learning experience was viewed as both a promoting and restricting factor related to ability or willingness to offer student placements. As a promoting theme, supervisors reported placements were a beneficial opportunity to provide valuable learning experiences and a desire to offer placements as a way of affording these learning experiences. There was a sense that placements were "important to provide students with good learning experiences across many areas" (Participant 2). Others viewed placement as a unique opportunity for exposure to "realistic work life" (Participant 21) and a chance to "mould the students' clinical ability to be ready and employable the moment they leave university" (Participant 12). Another supervisor felt supporting student learning through placement opportunities "enhances the skills of future exercise physiologists" (Participant 74).
Restricting (3)	From a restricting view, responses were in relation to sites having limited activities or opportunities to provide a sufficient student learning experience. One respondent felt their "changing role would not allow me to provide the types of experiences that students need to encounter" (Participant 2). Other supervisors reported a limited "availability of suitable patients" (Participant 45) or potential of only being able to place a student with a single clinician, so "they don't get to observe different clinicians work styles" and experience alternative valuable learning opportunities (Participant 66).
10. Administrative processes (11)	
Promoting (0)	
Restricting (11)	Feedback about administrative processes was reported as reducing ability or willingness to offer placements. Both University and workplace processes were mentioned, although it was not always possible to determine which of these related to the feedback provided. The most common response was that 'administrative processes' restricted a supervisor from having students. Restricting factors included "paperwork is a factor" (Participant 56) and "time spent with admin[istration]" (Participant 5). One comment highlighted University-related processes as a barrier, specifically "admin[istration] processing being different between universities" (Participant 28).
11. University support and relationship (10)	
Promoting (3)	In relation to support from, and relationships with, Universities, supervisors reported both promoting and restricting factors. Offering student placements was viewed as an opportunity to grow University connections, as well as support the University staff in their job. One supervisor

	viewed placements as a chance for "assisting University affiliations" (Participant 55), while another reported placements enabled "links with universities" (Participant 41). The opportunity for "supporting uni[versity] staff in fieldwork placement" was also included as a factor in promoting willingness to have student placements (Participant 16).
Restricting (7)	Conversely, a lack of support from the University was reported as a restricting factor which included financial and information-related support. An example was that a lack of "remuneration from Universities to cover [time spent with students/admin[istration]]" decreased their willingness to have placement students (Participant 5). There was also a desire for more information from the Universities, with individuals reporting "no guidance from uni[versities] on what the students need or what type of clients they can see" (Participant 14) and "Universities not being well prepared of providing detail of where student level of competency is at prior to starting placement" (Participant 65).
12. Facilities and infrastructure (7)	
Promoting (0)	
Restricting (7)	Multiple supervisors reported space and equipment limitations restricted their ability to offer student placements. Facility size limitations reduced opportunities to support student placements such as working in a "small department (space limited)" (Participant 17), or multiple practitioners but limited rooms: "We have nine clinicians and five rooms, sometimes this makes it hard with students" (Participant 4). Respondents also mentioned equipment limitations as a restricting factor, where "students are being exposed to assessment/regression of exercises, exercise prescription without equipment."
13. Staff and prior experience (4)	
Promoting (2)	Some supervisors reported that staff interest and prior student placement experiences impacted their willingness to offer placements. As a promoting factor, supervisors reported enjoyment of supervision and "teaching and helping students develop" (Participant 31).
Restricting (2)	As a restricting factor, staff interest based on prior experience resulted in a reduction in willingness to offer student placements, "reduced AEP's in the area willing to take students" (Participant 16). Another supervisor highlighted that they "can't just counsel ad nauseum" and placements were often a burden on clinicians and their private business (Participant 55).
14. Funding (5)	
Promoting (0)	
Restricting (5)	Funding emerged as a theme in relation to reported loss of income or lack of workplace financial support for managing student placements. A few supervisors felt taking students negatively impacted their ability to see clients, reporting placements had an associated "cost of decreasing own clinical list" (Participant 21) and "loss of income" (Participant 14). Also mentioned was "no financial support for the time required to manage students" (Participant 13) and "cost of staffing" to provide sufficient support for student placements (Participant 43).
15. Industry restrictions (1)	
Promoting (0)	
Restricting (1)	One supervisor mentioned industry restrictions as a restricting factor. This was specifically in relation to "DVA new guidelines" (Participant 53), which outlines services that will not be funded if delivered as part of student placements.

International Journal of Work-Integrated Learning
ISSN: 2538-1032
www.ijwil.org

About the Journal

The International Journal of Work-Integrated Learning (IJWIL) publishes double-blind peer-reviewed original research and topical issues dealing with Work-Integrated Learning (WIL). IJWIL first published in 2000 under the name of Asia-Pacific Journal of Cooperative Education (APJCE).

In this Journal, WIL is defined as "*an educational approach that uses relevant work-based experiences to allow students to integrate theory with the meaningful practice of work as an intentional component of the curriculum. Defining elements of this educational approach requires that students engage in authentic and meaningful work-related task, and must involve three stakeholders; the student, the university, and the workplace*". Examples of practice include off-campus, workplace immersion activities such as work placements, internships, practicum, service learning, and cooperative education (Co-op), and on-campus activities such as work-related projects/competitions, entrepreneurships, student-led enterprise, etc. WIL is related to, and overlaps with, the fields of experiential learning, work-based learning, and vocational education and training.

The Journal's main aim is to enable specialists working in WIL to disseminate research findings and share knowledge to the benefit of institutions, students, co-op/WIL practitioners, and researchers. The Journal desires to encourage quality research and explorative critical discussion that leads to the advancement of effective practices, development of further understanding of WIL, and promote further research.

The Journal is ongoing financially supported by the Work-Integrated Learning New Zealand (WILNZ; www.wilnz.nz), and the University of Waikato, New Zealand, and received periodic sponsorship from the Australian Collaborative Education Network (ACEN) and the World Association of Cooperative Education (WACE).

Types of Manuscripts Sought by the Journal

Types of manuscripts sought by IJWIL is primarily of two forms: 1) *research publications* describing research into aspects of work-integrated learning and, 2) *topical discussion* articles that review relevant literature and provide critical explorative discussion around a topical issue. The journal will, on occasions, consider good practice submissions.

Research publications should contain; an introduction that describes relevant literature and sets the context of the inquiry. A detailed description and justification for the methodology employed. A description of the research findings - tabulated as appropriate, a discussion of the importance of the findings including their significance to current established literature, implications for practitioners and researchers, whilst remaining mindful of the limitations of the data, and a conclusion preferably including suggestions for further research.

Topical discussion articles should contain a clear statement of the topic or issue under discussion, reference to relevant literature, critical and scholarly discussion on the importance of the issues, critical insights to how to advance the issue further, and implications for other researchers and practitioners.

Good practice and program description papers. On occasions, the Journal also seeks manuscripts describing a practice of WIL as an example of good practice, however, only if it presents a particularly unique or innovative practice or was situated in an unusual context. There must be a clear contribution of new knowledge to the established literature. Manuscripts describing what is essentially 'typical', 'common' or 'known' practices will be encouraged to rewrite the focus of the manuscript to a significant educational issue or will be encouraged to publish their work via another avenue that seeks such content.

By negotiation with the Editor-in-Chief, the Journal also accepts a small number of *Book Reviews* of relevant and recently published books.

International Journal of Work-Integrated Learning
ISSN: 2538-1032
www.ijwil.org

Publisher: Work-Integrated Learning New Zealand (WILNZ)
www.wilnz.nz