Journal of University Teaching & Learning Practice

Volume 17 | Issue 4 Article 10

2020

Non-Placement WIL: The Case of an Exercise Prescription Clinic

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Abstract

Universities globally have continued to strategically increase work-integrated learning (WIL) opportunities for students to enhance graduate employability. However, meeting the needs of the increasing number of placements in industry settings places challenges on employers and academic programme coordinators. This paper examines an innovative teaching and learning initiative demonstrating non-placement WIL practice on-campus and online through an exercise prescription clinic (EPC). The benefits provided by these opportunities have not only been for student learning, but for clients, in particular those impacted by neurological and/or muscular skeletal problems. The development of the on-campus EPC has focused on key elements of good practice in WIL highlighted by Agnew, Pill and Orrell (2017). The recent Covid-19 pandemic and the related government restrictions have resulted in the on-campus EPC being flipped online, requiring adaptability and flexibility of both students and clients. This paper reinforces the importance of developing WIL experiences that enhance the learning outcomes for both the student and the client. It also highlights the transferability of authentic industry non-placement WIL clinical experiences for future health professionals to both on-campus and online settings, which enable students the opportunity to engage with a range of clients in a safe environment, enhancing both personal and professional learning outcomes.

Keywords

non-placement work-integrated learning, exercise prescription

Introduction

Increasing WIL opportunities

Universities globally have continued to strategically increase work-integrated learning (WIL) co-curriculum opportunities for students to enhance graduate attributes and future employability (Oliver & Jorre de St Jorre 2018). Within the exercise prescription setting, meeting the needs of the increasing number of placements in industry settings places challenges on employers and academic programme coordinators. This paper examines an innovative teaching and learning initiative at a University in New Zealand, demonstrating effective non-placement WIL practice on-campus and online through an exercise prescription setting.

Massey WIL

In 2019, Massey University was one of 50 tertiary education organisation signatories of a Global Charter at the World Association (WACE) of Co-operative Education conference, hosted by the University of Cincinnati. The focus of the charter is to increase the number of new WIL opportunities for students. Massey has a long history of providing WIL opportunities for students across all its colleges, focusing on business, health, science, creative arts, humanities and social sciences. It also has students based on three campuses in Auckland, Palmerston North and Wellington, along with many students studying by distance either nationally or internationally. There are a number of non-placement WIL opportunities available, through on-campus clinics involving services and facilities, some of which are available to the public, for example, farms service, equine and companion animal clinics, psychology and speech language therapy clinics. Massey's Exercise Prescription Practicum (EPP) is an important non-placement feature and offers WIL opportunities for students on campus. Massey's WIL opportunities have developed organically with each subject area enhancing good practices to meet the needs of host organisations and the wider community, whilst aiming to optimise learning outcomes for students (Massey University 2020). Students have subsequently highlighted that one of the best things at Massey University is the applied learning opportunities (Massey University, student experience survey 2018). In the EPC, students enjoy working hands-on with clients in a safe environment, being able to put theory into practice. This non-placement WIL experience helps students become confident and comfortable working with individuals with chronic health problems, as well as improving their organisational skills (Hodges & Martin 2020). In 2018, some 4300 Massey students undertook work placements and internships, and in 2019, 6,420 students graduated. Student progression to employment has averaged nearly 90% over the past 5 years (Massey University, annual report 2019).

Good WIL practice

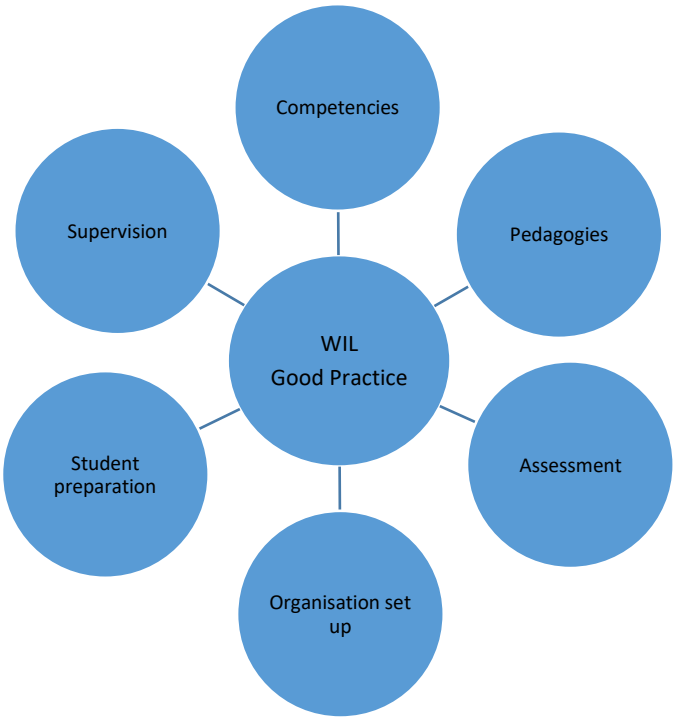
There are specific components that, when blended together, define an optimal WIL activity through the tripartite relationship between the student, the university, and the wider community (Martin, Rees, Edwards & Paku 2012). Martin et al.'s (2012) findings highlight the following specific components which, when blended together, enhance the WIL tripartite partnership of employer, academic staff, and student.

1. *Organisation set up*: includes placement requirements and support, risk management issues and placement selection and location
2. *Student preparation*: careers, interview skills, curriculum vitae preparation, readiness for practice theoretical basis and prerequisites

3. *Supervision*: on-campus academic and mentor, workplace university staff, workplace employer
4. *Competencies*: self-confidence, communication, people skills, teamwork, professional standards
5. *Pedagogies*: mentoring, project work, oral presentations, scenario-based learning, theory lectures and labs, and
6. *Assessment*: learning contracts, reflective journals, oral presentations, industry-based competency checks, final report (Martin, Rees & Edwards 2011).

Agnew, Pill and Orrell (2017) proposed an expansion of Martin et al.'s (2012) model (Figure 1) to include both partnerships (Fleming 2014) and post practicum debrief aspects (Leberman & Martin 2004).

Figure 1. *A template for WIL good practice (Martin et al. 2012)*



Discussion

The following discussion provides insights related to the EPP from a practitioner perspective (lead author), involving self-reflection of their experiences as the course coordinator, a professional development process advocated by Martin, Slade and Jacoby (2019). It follows the steps of WIL good practice highlighted above (Agnew et al. 2017; Martin et al. 2011). This experiential self-reflexivity (Dewey 1938) helped identify key aspects of the professional journey and potential learning epiphanies (Ellis 2012) related to their practicum experiences. These insights were also

activated through conversations with a 'critical friend' (co-author, and co-course coordinator), which Costa and Kallick (1993, p. 49) define as:

> "… a trusted person who asks provocative questions, provides data to be examined through another lens, and offers critique of a person's work as a friend. A critical friend takes the time to fully understand the context of the work presented and the outcomes that the person or group is working toward. The friend is an advocate for the success of that work."

A low risk ethics application related to this research project has been recorded by Massey University. The reporting of anecdotal student and client comments below has been undertaken anonymously.

Exercise prescription clinic on-campus

Traditionally a scaffolded pathway to an undergraduate WIL programme involves students undertaking pre-requisite theoretical papers leading to a final year capstone course. A co-operative learning approach then encourages students to apply theory to practice in an employment learning space (Von Treuer, Sturre, Keele & McLeod 2010). However, Massey's EPP is different in that students complete their non-placement WIL experience within the University environment in addition to working at an approved facility or with an approved sports team. Students complete this double semester 30 credit capstone paper for their three-year degree over the duration of eight months. Students exercise, test and train clients in an on-campus supervised clinic. Many of these clients are impacted by non-communicable diseases including cardiovascular, neurological and/or muscular skeletal conditions such as chronic fatigue syndrome, multiple sclerosis (Hodges, Nielsen & Baken 2018), or have had a spinal cord injury which substantially limits their physical activity. All clients have medical clearance before being accepted into the programme, and most clients return for multiple semesters to optimise their health and fitness outcomes.

Typically, clients impacted by non-communicable diseases are often referred to a Clinical Exercise Physiologist for a 12-week programme, but when their programme is finished, clients are expected to fly solo and carry on with training by themselves. It is evident that a number of these individuals fall back to old ways, many not able to afford a personal trainer to keep them motivated nor the self-motivation to keep on with the exercise prescription required to meet their goals. The EPC allows clients' exercise programmes to be ongoing, affordable, and supported by the students. During the time that students are supporting the client, they develop a professional relationship helping their clients reach their health and fitness goals. Anecdotal evidence demonstrates that through working with their clients, students can improve their confidence, communication and organisational skills whilst applying theory into practice. A number of students have commented on the value of having a non-placement WIL opportunity such as the EPC.

> *"Working hands on with clients really helps put the theory into practice."*
> *"Having the course run for a full-year helped me become confident and comfortable working with individuals with chronic health problems."*
> *"Working with clients helped me not only put my skills into practice, but helped me to improve my confidence, communication and organisational skills."*

The EPC is important as it provides the opportunity for students to develop and learn to provide individualised exercise programmes in a safe environment where they can develop relationships with clients, as opposed to observing a personal trainer who has already completed these fundamental exercise prescription skills. Often students are inspired by the stories of the clients and

also the impact of their exercise programmes for their clients. The benefits provided by the EPC have not only been for student learning, but for clients, in particular those impacted by neurological and/or muscular skeletal problems. Anecdotal evidence indicates that clients find the program highly motivating and push harder to improve outcomes.

> *"I love the programme and find it very motivating… The students have so much to gain by being there, working, pushing and telling me off. I don't like letting people down so I push harder!"*

Many students taking the Bachelor of Sport and Exercise (Exercise Prescription major) are contemplating a role as a Clinical Exercise Physiologist. To become a registered Clinical Exercise Physiologist in New Zealand, students are required to complete 500 hours of testing, programme planning and supervision of individuals with non-communicable diseases. Students complete at least 200 hours of clinical practice at undergraduate level before they are able to move to postgraduate level where they complete a further 300 hours and can apply to become a registered clinical exercise physiologist. The development of the non-placement WIL opportunity allows the students to explore a 'real' and 'authentic' learning experience where students develop professional relationships and confidence whilst exploring the attributes required to be a Clinical Exercise Physiologist. During the non-placement WIL course, students apply theory to practice by designing their own fitness assessments and exercise programs, which are related to the goals of their clients, along with developing, exploring and sharing ideas amongst the class. These are checked by the course coordinator to ensure the programme is safe and appropriate for the client to complete.

Organization set up and partnerships

Massey's EPC is located in the Human Performance Laboratory on the Palmerston North campus. The placement requirements for the Bachelor of Sport and Exercise (Exercise Prescription major) are for the students to complete health consultations, fitness assessment, exercise programme prescription, supervision, reassessment and evaluation with three clients in addition to working at an approved facility or with an approved sports team. The EPC was established as a way that students could develop work ready skills without having to go out into the workplace, as often they would seek work placement opportunities at fitness facilities, but were unable to work with clients, as they were not registered nor employed by the facility. Therefore, students would often shadow or observe fitness instructors, but were not able to use and apply the theoretical knowledge they had learnt in class nor build relationships with clients. The EPC takes individuals from the local community who may have non-communicable diseases, such as, multiple sclerosis, cancer, cardiovascular disease, stroke, obesity, diabetes etc. The clinic is supported by external stakeholders such as Sport Manawatu, Multiple Sclerosis Central Districts, the Stroke Foundation, and a number of local Psychology clinics. Stakeholders refer clients into Massey's EPC.

Student preparation, pedagogies, assessment, and post-practicum debrief

The Bachelor of Sport and Exercise is a scaffolded degree in which students build theoretical knowledge across two years before they enter the WIL capstone course. Important pre-practicum courses consist of learning about training principles and practice, kinesiology, anatomy and physiology of the human body, along with fitness assessment and exercise prescription for athletic individuals and those with non-communicable diseases. The courses are structured with a number of different assessment types to ensure that students are ready to practise. These assessments range from online tests, essay/report assignments, case studies, written exams and practical assessments where the students need to demonstrate their knowledge. Individuals can only enter the exercise

prescription WIL course once they have completed prerequisites such as training principles and practice, functional anatomy, exercise physiology, fitness assessment, exercise prescription along with fitness and athletic training courses. The non-placement WIL course allows the students to further refine their skills in fitness assessing, goal setting and providing individual programmes to clients in a monitored and supervised environment, thus allowing the students to apply theory to practice in a safe environment, but also in an environment where they can share ideas with other students.

A range of pedagogies may be used to provide students with content, knowledge and theory, linked to practical work through placements/practicum projects and allow both industry and skill development alongside behavioural soft skill development (Martin et al. 2011). Throughout the practicum, students are encouraged to keep a structured reflective weekly journal, which helps them record an account of the key work activity/tasks, learning related to self, the clients, the clinic and the broader sport and exercise industry. The weekly reflections are then turned into monthly reports, where students link theory to practise, citing and listing references, and critically reflect on the work that they have completed over the month and related learning. Post-practicum, students also reflect on the overall learning experience and personal and professional outcomes. In previous years, as part of their course assessment, students had been asked to produce a logbook containing information about the client, and fitness assessment and programme details. However, this task was often perceived as onerous and proved difficult. By changing this activity to a structured reflective journal, students more regularly reflect back on their practice and can gain further insights and improve their performance based on their academic supervisor's feedback and comments. This approach allows further personal and professional development throughout their learning journey of the EPP.

Supervision

The nature of providing exercise opportunities for these clients, comes with added risk, which needs to be managed. The academic supervisor examines pre-exercise screening questionnaires, needs analyses, fitness assessments and exercise programmes before the client is taken through them. The EPC supervisor, a postgraduate student who is working towards Clinical Exercise Physiology Accreditation, ensures that the EPC operates safely, students are adhering to their exercise plans and are not putting patients at risk during their exercise sessions. Their role also allows the student and client to develop a working relationship, rather being seen as 'supervised' by the academic supervisor, who has more of a 'super mentor' role (Martin, Rees, Fleming, Zegwaard & Vaughan 2019), and matches up the appropriate student with the needs and requirements of the client.

This role has been a learning curve and presents challenges at times. Students can bounce ideas off the academic supervisor rather than being challenged about their choices of exercise during the clinic, as students found that this caused problems and undermined their relationship when this was actioned in front of their clients. It is interesting that sometimes the needs of a client and the knowledge and expertise of a student match up but personality wise there is a clash. It is important that this does not happen, as for a number of clients, this will be their first experience of a personal trainer. For other clients within the EPC, they have been part of our programme for the past decade. Over the 10 years, they have had a number of different students who have been able to take them on their journey and advance their health and fitness goals.

Competencies

During the non-placement WIL opportunity in the EPC, students are encouraged to improve graduate attributes such as effective communication, self-management (character), enterprise (creativity), leadership (collaboration), networking (community of practice), and critical reflection, the 6 C's of deep learning highlighted by Fullen and Scott (2014). Students are expected to establish and manage professional relationships with clients, as well as completing work to help the clients achieve their exercise prescription goals. These attributes, along with the collaborative learning environment of the EPC allows students to become more job ready before they graduate from University, thus demonstrating a depth of understanding and expertise in exercise prescription, and also a range of boundary spanning competencies (Martin & Rees 2019a).

Students often struggle at the start of the EPP with their communication with clients. After being given the clients' contact details, the student will then text message their clients but may not receive a reply. They quickly realise that they need to call clients, be personable, and that there are other ways to communicate. Students not only learn effective communication with clients, but also to keep in touch with the EPC supervisor and academic mentor. By working with clients, it encourages students to become more proficient and professional, thus enhancing their character. In this non-placement WIL environment, students are giving back to the community by providing clients individualised exercise programmes. Therefore, they are establishing a community of practice (Harris, Jones & Coutts 2010) and enhancing their citizenship. They are also taking on leadership roles, by independently working with clients. They are collaborating and sharing ideas that work or don't work with other students, as well as critically reflecting on their practice. During the non-placement WIL experience, students develop individualised programmes for clients using their initiative, creativity and adding value where possible (Martin & Rees 2019b).

Exercise prescription clinic online

The 2020 Covid-19 pandemic and the related government restrictions resulted in the on-campus EPC being flipped online, requiring attributes of resilience, adaptability, flexibility and creativity from both students and clients. Initially, clients were kept in contact via phone and e-mail and were given exercise sessions to complete via a YouTube page, which was set up during the global pandemic. Students were assigned clients at the usual stage in the course, and in the usual way by the academic supervisor, matching up the needs of the client to the expertise of the student. Students then contacted clients in the usual way via phone to begin the programme. Initially students were apprehensive of the online approach and were unsure of how to contact and communicate with the clients. Once students had contacted the clients, they began to get to know them and started forming a relationship, figuring out the needs of the client as well as creating specific, measurable, attainable, realistic, and time-bound (SMART) goals.

Students were required to consider how they could communicate and deliver fitness assessments and exercise programmes to their clients. Many students considered online forums such as Zoom©, Microsoft Teams©, Google Meet© or Facebook Live©, however, many of the clients are older, and there were a range of needs in delivery of the service, with a few clients not having computer technology. Students commented how they thought they would need to explain in detail how they were going to manage their session online including providing detailed information about these online forums. However, the students were very surprised to hear from (their older) clients who already knew how to use such systems. Clients have been very receptive to undertaking exercise prescription using online technology. It has been challenging for many in respect to exercise testing, however a number of students asked clients to video themselves, where appropriate, whilst

completing their fitness assessments. This feedback allowed the students to then review the fitness assessments and create and revise a more comprehensive individualised exercise plan for many of the clients. Most of the clients in the programme are low risk, so this plan was acceptable.

While the online EPC has not been without its challenges, it allowed students to enhance their capabilities and develop self-confidence working with clients. There is no doubt that running an EPC online is challenging and there are times that students could not do some of the activities that they would normally have planned for at the clinic, however, most students made a plan to complete exercise prescription classes via video calls. Throughout this process students enhanced their belief in their own capabilities and developed confidence and experience of working with clients out of the clinic setting. The period working online reinforced the importance of students recognising the individuality required for exercise prescription based on the goals and needs of their clients. An important learning outcome for students was to trust what they know and also accept that some activities might work, but others may not be so effective. Whilst many of the clients may not have had access to standard gym equipment, it allowed students to adapt, become creative and develop other functional bodyweight programmes for them. Hence, students have developed skills such as flexibility, adaptability and resilience with regards to preparing their fitness assessments and delivering their exercise programmes. An important learning outcome from the online delivery is that it may be necessary to explore whether there are apps that could be utilised to measure and record electrocardiogram (ECG) heart rate and/or blood pressure for our clients whilst they are engaged in such physical activity. It is good practice to take these measurements during exercise, so it would be worth examining for the future in terms of insurance implications.

Conclusions

The WIL experience is increasingly providing a point of difference for higher education students in enhancing their employability. Structured preparation and clear guidelines allow more effective WIL as part of the whole program. Martin et al.'s (2011) template for good practice highlighted that there are a number of considerations to be addressed in the resourcing of effective WIL programs (see Figure 1). This current paper has presented an innovative teaching and learning initiative involving non-placement WIL practice on-campus and online through an EPP. The benefits provided by these opportunities have not only been for student learning, but for clients, in particular those impacted by neurological and/or muscular skeletal problems. The findings reinforce the importance and value of non-placement WIL experiences that are 'real' and 'authentic', thus allowing students to develop professional positive client relationships, realise the potential of the impact of their programmes on the clients' health and fitness goals, and the clients' impact on the students' learning outcomes. It also highlights the transferability of authentic industry non-placement WIL clinical experiences for future health professionals to both on-campus and online settings, which enable students the opportunity to engage with a range of clients in a safe environment, enhancing both personal and professional learning outcomes.

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