

LITERATURE REVIEW INFLUENCE OF SUPERVISOR IN STUDENT WORK PLACEMENT ON LEARNING AND WELLBEING

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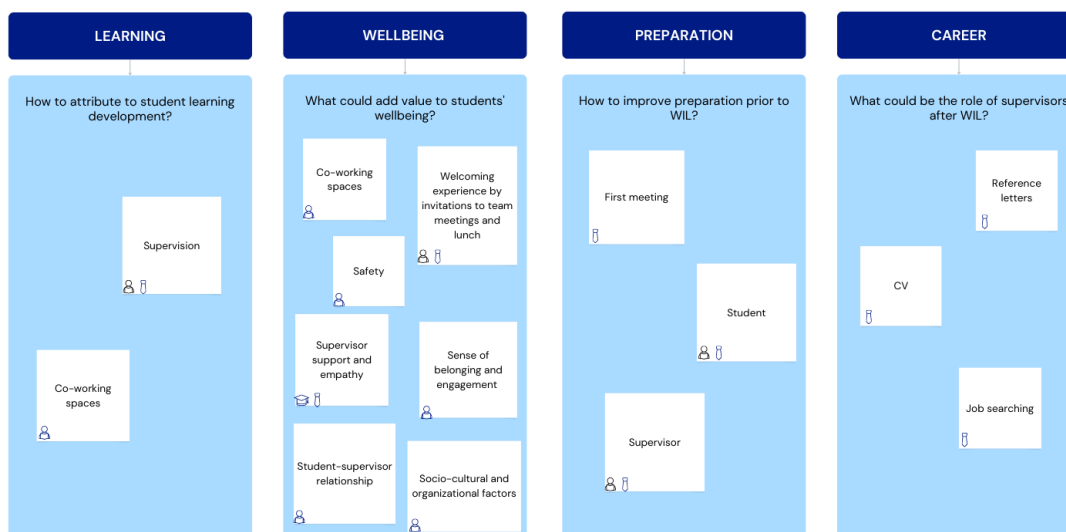


Abstract

Work Integrated Learning (WIL) is an educational tool used within universities to give students real-world work experience. Students go through a professional and personal development where they can bridge the gap between theoretical knowledge gained at university bring it into practice in the work placements. Research has mainly focused on the educational value of a WIL placement. However, little is known about the role of a supervisor within this placement. Therefore, this literature review focused on how students and supervisors could help to make the most of the work placement in terms of student wellbeing and learning. For this purpose, a systematic search in Scopus was conducted and articles on (post)graduate students, work placements, experiences of WIL from student and supervisor perspectives and learning and/or wellbeing were selected. The nine included studies were analyzed and categorized. The main findings showed the influence of supervisor support on student wellbeing and student development at professional and personal levels. Furthermore, preparation of the student and the supervisor before the placement could be beneficial to ensure the quality of the placement. In addition, the studies showed that setting clear expectations prior to the start of the placement is necessary to assess progress and provide feedback during the placement. Students also benefited from a co-working space to have more direct contact with their colleagues and the day-to-day supervisor. In addition, some supervisors stayed in touch after the placement, reviewing the students' CVs, writing letters of reference, and even helping them to find jobs. In the local context, the Graduate School of Life Science could use this in its WIL program to enhance the student experience. In conclusion, both students and supervisors could use the results of this literature review to get the most out of the placement in terms of student wellbeing and learning.

Student learning and wellbeing

What can graduate students and their supervisors do to contribute to an effective supervisory process within an internship in terms of learning and well-being?



Author: M. Rozeboom, 2023

Student
Supervisor
Faculty

Layman summary

Work integrated learning (WIL) is een vorm van onderwijs die breed wordt toegepast binnen universiteiten. Een voorbeeld van WIL zijn stages die studenten binnen bedrijven kunnen lopen. In de literatuur is al eerder gebleken dat WIL een effectief hulpmiddel is voor studenten om op zowel persoonlijk vlak als professioneel vlak te ontwikkelen. Zo kunnen ze hun theoretische kennis die ze hebben opgedaan tijdens hun studie op de universiteit, toepassen in de praktijk. Tot nu toe is het onderzoek veelal gericht op de educatieve waarde van een stage, maar is er nog niet veel bekend over de rol van een begeleider binnen de stage. Dit literatuuronderzoek richt zich daarom op wat de rol van een stagebegeleider is voor zowel het welzijn als de effectiviteit van het leerproces van de student. *Scopus*, een literatuur database, is gebruikt om geschikte literatuur te vinden. De studies die zijn uitgekozen moesten voldoen aan bepaalde selectiecriteria: gericht op masterstudenten, er moest sprake zijn van een stage, de ervaringen van de student en/of de stagebegeleider moesten gedeeld worden, en de studie moest gericht zijn op het welzijn en leren van de student. Na de selectie zijn de studies geanalyseerd en gecategoriseerd. De hoofdbevindingen laten zien dat de ondersteuning van de stagebegeleider zeker invloed heeft op het studentenwelzijn en leerproces waar de student doorheen gaat. Verder bleek de voorbereiding van de student en de stagebegeleider effectief te zijn op de kwaliteit van de stage. De studies lieten ook zien dat het belangrijk is om van tevoren de verwachtingen over de stage te bespreken om in een later stadium hierop te kunnen reflecteren. Eén studie liet zien dat co-working spaces ervoor konden zorgen dat studenten meer in contact stonden met hun dagelijkse begeleider en collega's, dit had een positief effect. Als laatste kwam in dit literatuuronderzoek naar voren dat sommige stagebegeleiders ook nog in contact bleven met hun student, om bijvoorbeeld te helpen met hun CV, het zoeken van een eerste baan of een referentiebriev schrijven. In onze eigen Graduate School of Life Sciences, kunnen we de opgedane kennis uit dit literatuuronderzoek toepassen op onze stages om zo de ervaringen van studenten te verbeteren. Samengevat, studenten en stagebegeleiders kunnen beide bijdragen aan een stage in termen van studentenwelzijn en leren.

Introduction

WIL and skills

Work-integrated learning (WIL), which includes internships and work placements, is a valuable component of graduate schools aimed at preparing students for their professional careers (Martin et al., 2010). WIL programs typically involve collaboration between educational institutions, employers, and allow students to integrate the theoretical knowledge they have acquired in their academic studies into real-life work. This facilitates a smooth transition from education to the professional world. In addition, WIL provides students with multiple benefits and opportunities for their personal and professional development. Through WIL, students not only enhance their disciplinary knowledge and expertise, but also develop graduate skills such as critical thinking, problem solving, communication, teamwork, leadership, and negotiation skills (Smith & Worsfold, 2015). In addition, WIL experiences significantly contribute to students' work readiness, increase their job prospects, facilitate career progression, potentially lead to higher salaries, and boost self-esteem and confidence as they gain real-world experience and recognition in their chosen field (Smith & Worsfold, 2015). In addition, these skills, it can also help students with their future careers.

WIL and future career

WIL has shown that students perceive work placements as an effective means of career exploration and self-development, which in turn has a significant impact on their long-term career goals (Chatterjee et al., 2019). Through their engagement in work-integrated learning (WIL), students strengthen their ability to effectively navigate their careers while increasing their familiarity with and understanding of the professional context (Jackson & Wilton, 2016). The

next sections highlight the importance of supervision for a successful WIL experience is highlighted as well as for student skills development and wellbeing of the student.

Effect of supervision on student skill development and wellbeing

Workplace supervisors are important during WIL, because they provide valuable feedback, use their expertise, share knowledge, and facilitate students social integration (Gribble et al., 2017; Stirling et al., 2016). Moreover, they play a crucial role in students' skills development and can help students find their passion for work (Jackson & Wilton, 2016). In the process of WIL, the interaction between student and supervisor is an important factor influencing the students' emotional intelligence skills. A positive work placement experience has been shown to have a long-term positive effect on students' emotional intelligence, while a negative experience has a long-term negative effect (Gribble et al., 2017). Next to skills development, supervisors also play a role in student wellbeing. Students who received high quality supervision, felt more empowered by the challenges of practice, which created a sense of satisfaction, confidence and efficacy in their fieldwork (Kanno & Koeske, 2010). On the other hand, poor mentoring and guidance can be a barrier to students developmental process (Jackson & Wilton, 2016). A mentor has a more informal relationship with the student and is primarily focused on the students personal and professional development of the student. A supervisor is more focused on the students' performance and monitors whether the tasks are being carried out. The relationship between the supervisor and student is more of formal nature. Poor quality of the supervision is associated with an increased risk of burnout and emotional exhaustion among students (Kanno & Koeske, 2010). Furthermore, a good relationship with the supervisor is important for work integrated learning as it serves as a channel for discovery and knowledge and provides students with care, support, guidance, and mentorship. The quality of supervision has a significant impact on a students' work, as stronger relationships lead to increased trust over time, enabling the student to engage in more individualized, challenging, and complex work assignments (J. Jones, 2007).

Local context of the present study Graduate School of Life Science

As previously mentioned in the introduction, WIL is a valuable tool for students' professional and personal development. There has been some research into the effectiveness of WIL, but not in the context of biomedical sciences. It is therefore interesting to look at WIL within the Graduate School of Life Sciences (GSLs). Within the GSLs at Utrecht University, most graduate programs include a nine-month research internship as part of a two-year programs. Students are responsible for finding a suitable research group for their internship. They can ask program coordinators, teachers, fellow students and alumni. Typically, the internships are in laboratories in hospitals or research institutes. The student has a daily supervisor, a PhD student or postdoc, and an examiner. Prior to the start of the placement, the student and supervisor agree on the content of the project and the student's involvement in the workplace, such as attendance at weekly meetings. Optionally, students and supervisors can use the Supervision Expectation and Evaluation Dialogue (SEED) tool to set expectations, evaluate progress and provide feedback. An interim assessment is conducted after two to three months, and a final assessment is conducted after nine months, during which the supervisor and examiner reflect on the student's performance. While this framework seems effective in theory, variations in the quality of supervision and negative experiences have been reported. After the internship, it is often observed that some students continue with their PhD in the laboratory where they were placed during their undergraduate studies. The supervisor could sometimes help in this application process by providing a reference letter. In this way, the supervisor could act as a bridge between the students' studies and their first job.

Therefore, the aim of this literature review is to explore and review studies that provide further insight into the perspectives of supervisors, students, and educational institutions regarding work

placements. The focus was on the impact of supervision within the placement on student learning and wellbeing. Furthermore, the supervision within the internship at the GSLS at Utrecht University will be discussed.

The research question is therefore:

- What can graduate students and their supervisors do to contribute to an effective supervision process within an internship in terms of learning and wellbeing?

Method

Search string

The database Scopus was searched for relevant articles. The search term was stated the following:

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TITLE-ABS-KEY ( "graduate" OR "postgraduate" OR "master" ) AND TITLE-ABS-KEY ( "student" ) AND TITLE-ABS-KEY ( "well-being" OR "mental health" OR "learn*" OR "develop*" OR "relation*" ) AND TITLE-ABS-KEY ( "Supervis*" OR "advisor" OR "adviser" OR "mentor" ) AND TITLE-ABS-KEY ( "work-based learning" OR "Internship" OR "workplace" OR "placement" OR "work integrated learning" ) AND TITLE-ABS-KEY ( "effectiv*" OR "succes" OR "impact" )
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The search was limited to articles published between 2000 and 2023, and only English written research papers. The search was conducted on 3rd of May 2023.

Search strategy

Firstly, articles were selected based on the relevance of the title and abstract. Articles were included according to the following criteria: 1) graduate students, 2) placement, 3) supervisor and/or student placement experiences, 4) learning and/or wellbeing. Exclusion criteria were 1) other level of education, 2) no placement, 3) no strategies or experiences from supervisor or student, 4) medical placements, 5) placements shorter than one month, 6) COVID-19, 7) international students. Rayyan was used for the first round of selection. The relevance of the selected articles was further checked by scanning the full text. Articles with wrong study approach, different study aim, placement shorter than 1-month, different educational level than graduate students or focus on international students were excluded. The full text of two of the selected articles was not available and was therefore excluded. After two rounds of selection, seven articles met all criteria. An overview of the entire selection process is shown in PRISMA (*figure 1*).

Inclusion and exclusion criteria

In the context of this review, it was important that the students were all master students so that we could reflect the findings back to our own graduate school. In addition, the placement should last 1 month or longer, as this is the minimum to be able to say something useful about the supervision process in terms of students' skills development and wellbeing. Studies that focused on COVID-19 were not considered because the placements are not representative of the current situation. All exclusion criteria can be found in *figure 1*.

Analyses

Subsequently, the articles were categorized in different themes; student wellbeing, student development, and learning, student preparation, supervisor preparation and characteristics, setting expectations, co-working spaces, and career. The review table contains the following information: the study design, the origin of the student and supervisor, and the participant perspective. Furthermore, positive and negative findings were summarized in the review table

and further explained in the result section. Findings included the experiences and recommendations of supervisors, students, faculty members and host institutes on the work placement.

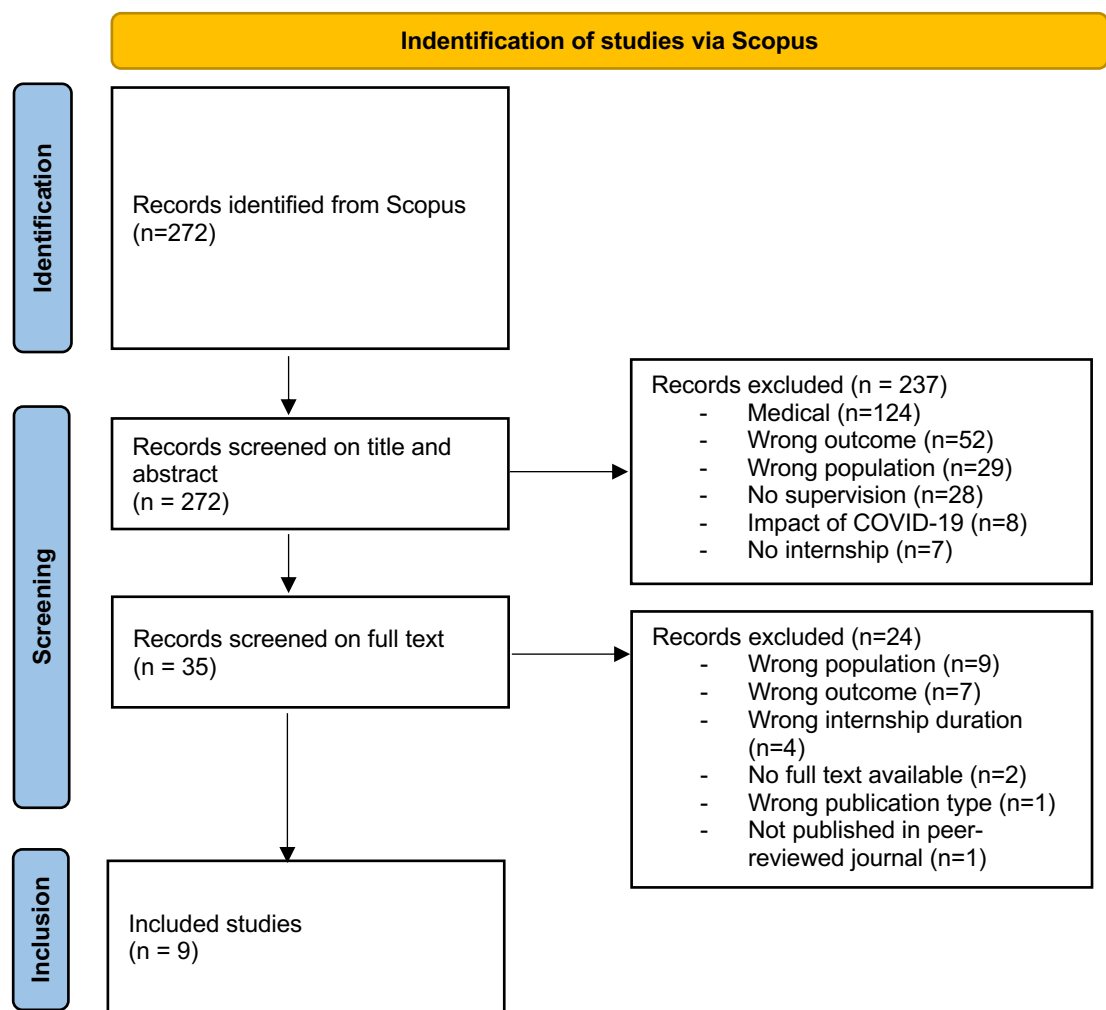


Figure 1: PRISMA: Screening: title and abstract: medical (medicine), wrong outcome (not focused on student wellbeing and learning due to different study aim, internationals), no supervision, impact of COVID-19, no internship.

Screening: full text: wrong population (non-graduate students), wrong outcome (not focused on student wellbeing and learning due to different study aim, focused on cultural differences of international), wrong internship duration (<1 month), no full text available, wrong publication type (autoethnography), not published in peer-reviewed journal.

Results

This literature review discusses the experiences and recommendations of students, supervisors, and faculty members regarding student work placements. The main interest of this literature review was to identify improvements to the placement supervision process in terms of student learning and wellbeing. The following sections discuss the different themes; preparation of students and supervisors prior to the placement, supervisor characteristics, setting expectations of the placement, the positive impact of co-working spaces, the wellbeing of the student, student development and learning, and post-placement careers. An overview of each topic can be found in the review tables.

Article	Journal	Study design	Study of student	Degree	Individual/ Group placement (n=)	Student perspective	Supervisor perspective	Faculty	Interviewee	Duration internship	Origin
Maher et al., 2015	Nutrition and dietetics	Qualitative: semi-structured interviews	Nutrition and dietetics	Graduate	n=1	✓	✗	✗	26 graduate students	13 weeks	Australian
Rowe et al., 2021	Journal of Vocational Education & Training	Qualitative: online survey open & closed questions	Business, sociology, and sport	Undergraduate & graduate	n=1	✓	✗	✗	151 undergraduate and postgraduate students	120 days in two internships	New Zealand & Australia
Martin and Rees, 2019	International Journal of Work-Integrated Learning	Qualitative: semi-structured interviews (45-60 minutes)	Sport, events, science, and engineering	Graduate	n=1	✗	✓	✗	21 graduate workplace supervisors	1-3 months	New Zealand
Scott and Richardson, 2016	AICOM Bulletin	Qualitative and quantitative: survey (students), semi-structure interviews (hosts) open and closed questions	Conservation	Graduate	n=1	✓	✓	✗	Participants from 3 universities (Melbourne, New Castle, Queensland), amount not mentioned	not mentioned	Australian
Hay et al., 2019	Clinical social work journal	Qualitative: focus groups & semi structured interviews (60-90 minutes)	Social work	Undergraduate and graduate applied university (master bachelor honours bachelor)	n=1	✓	✗	✓	27 faculty members and 35 students (undergraduate and postgraduate)	100 hours	New Zealand
Wang et al., 2023	Journal Teaching In Travel & Tourism	Qualitative: semi-structured interviews (30 minutes)	Tourism	Undergraduate and graduate applied university	n=5-8	✗	✓	✗	17 supervisors	100-150 hours spread over 13 weeks	Australian & Asian
Jackson et al., 2021	Higher education	Qualitative: online survey & semi-structured interviews	Business	Graduate	n=1	✓	✓	✗	11 graduate students	not mentioned	Australian
Khan et al., 2022	Information development	Qualitative: semi-structured interviews & constructive theory based (including proof of concept)	Library information science	Graduate	n=1	✓	✓	✗	22 graduate students and 21 supervisors	10 weeks	Pakistan
Carlless et al., 2012	Australian Psychologist	Quantitative: cross-sectional design: survey (online and hardcopy)	Nurses and psychologist	Graduate	n=1	✓	✗	✗	176 postgraduate students	not mentioned	Australian

Figure 2: Review table: nine reviewed studies.

Student preparation

Three out of nine studies explored whether students are prepared enough to execute a WIL placement. First, the studies of Jackson et al. and Scott and Richardson supervisors and students stated that they felt unprepared for their WIL placement (Jackson et al., 2022; Scott & Richardson, 2011). The students expressed they felt nervous and anxious about their placement and the level of expertise that may be expected from them. Supervisors acknowledged that they felt students couldn't handle the fast-paced work and particular social skills and discipline to finish work did not meet up the standards. Students noted that this led to low confidence and hindered their skill development and the emotional transition from university to placement learning. Student unpreparedness was as well underlined in the study of Maher et al. by the interviewed students (Maier et al., 2015). They felt that the work placement was a personal intense learning period, where they learned more about themselves and their future profession. However, some students also stated that they were as prepared as they could be for the work placement, especially in relation to their theoretical knowledge. The study Hay et al. used semi-structured interviews and focus groups to obtain the perspectives of students and faculty members (Hay et al., 2019). A total of 27 faculty members and 35 students (undergraduate and postgraduate) participated in the study which can also be found in figure 2. In this study students stated they wanted to have more supervision experience prior to their WIL placement. Furthermore students stated that the course that was given to the students prior to their work placement was not fulfilling (Hay et al., 2019). The faculty agreed, in the course there was a lot of talking about the concept of supervision. They suggested to have an opportunity to experience real supervision within their university, so they know what to expect. Supervisors in the study of Jackson et al. suggested that students need to be more prepared by university (Jackson et al., 2022). Next to this, Scott and Richardson found that some hosts of work placement expressed to want more information from the university faculty about the students, so they can tailor an

appropriate work program (Scott & Richardson, 2011). In conclusion, students, hosts, and supervisors all agreed that students are unprepared for their work placement and suggested having previous experience of supervision within the university and getting more information about the student to tailor a work program could help preparing students more.

Supervisor preparation and characteristics

Two articles highlighted the importance of supervisor preparation and the characteristics that a supervisor should have. In the study of Hay et al., one student mentioned that the quality of supervision was a matter of luck. Some students questioned whether the supervisor was qualified to supervise at all. Students suggested that supervisors should attend a one-day training session before the placement. In addition, students felt that the supervisor was not accessible enough to have regular meetings about progress. Wang et al. interviewed 17 supervisors who supervised a group of students (n=5-8) in a 13-week capstone project (Wang et al., 2023) (*figure 2*). Supervisors reported that proper mentor recruitment, allocation, training, mentoring templates, tutorial guidance and regular check-in meetings with course coordinators ensured the quality of mentoring. In addition, mentors reported that they acted as role models for the students who were experiencing the real world for the first time (Wang et al., 2023). They helped the group of students with the initial contact and meeting with the industry client, the assessment of the project problems and needs, the report writing and the final delivery of the product to the client. In conclusion, in both studies, students, supervisors and faculty members agreed that proper mentor training is necessary to ensure the quality of the supervisor.

Set expectations prior to work placement

In six of the nine studies, supervisors, students, host institutions and faculty members agreed that it is crucial to set clear expectations prior to the placement. In the study of Wang et al., the supervisors created a mentoring plan that considered the students' needs, learning objectives, the purpose of the WIL program and the method of evaluation and feedback in the first meeting. The supervisors agreed these expectations with the industrial client. They mentioned monitoring students' progress, which allowed students to learn from the consequences of not meeting their expectations. In the study by Martin and Rees, 21 graduate workplace supervisors were interviewed for 45-60 minutes, the interviews were transcribed and analyzed by theme (Martin & Rees, 2019) (*figure 2*). In the Jackson et al. study, supervisors also mentioned the importance of setting expectations with their students about work placement performance (Jackson et al., 2022). Supervisors stated that students should choose their work placement supervisor carefully. Supervisors confirmed the importance of matching expectations with their students, as mentioned in the Wang et al. study, but they also wanted universities to be involved in the initial phase (Wang et al., 2023). The latter was also mentioned by host institutions who wanted more substantial feedback from universities on student performance (Scott & Richardson, 2011). The purpose, learning objectives, planning and organization and possible extended learning need to be agreed in the first meeting. Supervisors also stated that students should choose their supervisor carefully. The supervisor should be available and accessible to support students in their reflective skill development. This was also mentioned by lecturers and students in the Hay et al. study (Hay et al., 2019). Another aspect that a supervisor should match with their students is the style of supervision. Kahn et al. looked at the style of supervision preferred by supervisors and students (Khan et al., 2022). Students and supervisors were interviewed about different styles of supervision. Students preferred a reflective, progressive, and participatory style with reflective and collaborative techniques, whereas supervisors preferred an indirect and independent style with structured and developmental techniques. In addition, in the Jackson et al. study, supervisors indicated that they used a warm and supportive style where they adopted a sink or swim attitude and let students be independent (Jackson et al., 2022). Students found supervisors to be down-to-earth and willing to help. In summary, the above studies highlighted the

importance of setting expectations with students prior to the placement. The first meeting could be used to discuss the learning objectives, the purpose, the method of evaluation and feedback, the student's choice of supervisor and the style of supervision. Supervisors should be accessible and available to their students during the placement.

Co-working spaces

In the study by Jackson et al, they interviewed 11 students who had explored co-working spaces during their work placement (Jackson et al., 2022) (*figure 2*). The interviews took place pre- and post-work placement. They expressed several benefits of co-working spaces, such as the development of their skills, the support they received from their colleagues and supervisors, the positive organizational culture that fostered trust, confidence, and students' sense of wellbeing. In addition, students mentioned that they were more in touch with others in the workplace and could easily make contact about work. In conclusion, students felt that co-working spaces contributed to the development of students' skills and confidence.

Student wellbeing

Six of the nine articles reviewed are discussed in the context of student wellbeing and its impact on student development. The following studies used semi-structured interviews, with Maher et al. interviewing 26 students and Scott and Richardson interviewing host institutions, students, and university staff who completed questionnaires before and after the WIL placement (Maher et al., 2015; Scott & Richardson, 2011) (*figure 2*). Both studies highlighted the importance of empathic and supportive supervision in student placements to have a positive impact on students' learning journeys. Students also mentioned the need to feel welcome, which can be achieved through a range of socio-cultural and organizational factors, such as inviting them to lunch, team meetings and bringing them into the culture (Maher et al., 2015; Martin & Rees, 2019; Rowe et al., 2021). Building a strong relationship between student and supervisor can lead to a successful work placement. There are several factors important to build a strong relationship such as safety and guidance, clear communication, motivation and maintaining a relationship after the work placement (Martin & Rees, 2019; Wang et al., 2023). Next to safety and guidance, supervisors emphasized that clear communication with the student is a critical component in a sustainable relationship (Wang et al., 2023). Subsequently, the studies by Maher et al. and Hay et al. highlighted that students and faculty members felt that regular and consistent supervision ensured the safety and wellbeing of students on placement (Hay et al., 2019; Maher et al., 2015). Rowe et al. used surveys of 151 undergraduate and postgraduate students who had completed their WIL project in the previous 6 months (Rowe et al., 2021) (*figure 2*). It was clear from the Rowe et al. and Mahar et al. surveys that these students felt a sense of belonging when their supervisor and colleagues valued and supported them. Furthermore, it is important for supervisors to have a good relationship with their students by laughing and joking with them and sharing their enthusiasm for science to encourage students to be passionate about science (Martin & Rees, 2019). Carless et al. confirmed this in their interviews with 176 postgraduate students, where students expressed that this was an important factor in their satisfaction with their placement (*figure 2*) (Carless et al., 2012). In summary, studies have shown that supportive and empathic supervision, a good student-supervisor relationship, a welcoming experience, a sense of belonging, and supervisor support and safety are important for student wellbeing during the placement.

Student development and learning

Five of the nine studies discussed student development and learning in their findings. Firstly, students' professional and personal development was linked to the placement. In the Martin and Rees, and Wang et al. studies, supervisors expressed that they encouraged students' reflective skills (Martin & Rees, 2019; Wang et al., 2023). The translation of theoretical concepts learned

at university into practical experience, enhance their reflective skills. In the Wang et al. and Jackson et al. studies, both students and supervisors emphasized that a supervisor's guidance in the application of theory to practice was important (Jackson et al., 2022; Wang et al., 2023). The supervisor could guide the student in client interaction, project evaluation and effective communication. Furthermore, students stated that the role of the supervisor was to help and support them in developing self-management skills, self-sufficiency, professional communication, and organizational awareness. In addition, supervisors and students described supervisors who acted as role models as contributing to students' development of a sense of teamwork and professionalism (Carless et al., 2012; Wang et al., 2023). Maher et al. even found a correlation between students' self-confidence and the development of compatibility, in which the supervisor's support played a role. Overall, the synthesis of these findings underscores the central role of supervisors in guiding students in their personal and professional development during WIL. Supervisors can guide students in translating their theoretical knowledge into practice by helping in client interaction, project evaluation, effective communication, creating organizational awareness by the students, acting as a role model, and supporting them, and encouraging them in their reflective skills.

Career

Three of the nine articles reviewed discussed students' career outcomes. In Martin and Rees study, supervisors stated that the placement contributed to the student's career (Martin & Rees, 2019). Similarly, Wang et al. expressed that work placements added value to real world experience and provided students with employability skills (Wang et al., 2023). Some supervisors mentioned that they kept in touch after the WIL and checked their CVs, provided a reference letter, and helped them to find a job. In the Hay et al. study, lecturers and students perceived the work placement as a link between their previous learning and preparation for their career after graduation.

Discussion

There has been a lot of research conducted on the impact of WIL projects in context of the educational value. However, less is known about what supervisors and students could contribute to learning and wellbeing outcomes of their WIL experience. The role of students and supervisors may be undervalued and could be improved, at least in the context of the UU Graduate School of Life Sciences. Therefore, the research question was: What can graduate students and their supervisors do to contribute to an effective supervision process within an internship in terms of learning and wellbeing? The results focused on wellbeing, students' learning, and development before, during and after the work placement. The main results showed the need for preparation of student and supervisors prior to work placement, the influence of a first meeting to set expectations prior to work placement, the positive effect of co-working spaces, the influence of supervisors on student wellbeing, student learning and development, and the future career opportunities.

As the review table shows, most studies used semi-structured interview, surveys, and focus groups. This qualitative research was mostly carried out with small sample sizes. This makes it difficult to draw firm conclusions from the research. In additions, the suggestions made by students, supervisors, host institutes, and faculty members, for example regarding student and supervisor preparation before work placement have not yet been tested over time. This is a major limitation about this type of research and a follow-up study may be a more reliable way of demonstrating the impact of placement preparation on learning and wellbeing.

Besides, supervisor and student preparation prior to work placement another important finding was that there should be a first meeting between supervisor to set expectations. The studies showed that not only the supervisor and the student were convinced by the importance

of such a conversation but also the host institutes and the faculty members. Likewise, semi-structured interviews were executed with the participants. It would be helpful to quantify these results in larger groups, where one group set expectations in the first meeting and the other group doesn't, so the effect of this conversation could be measured. In our faculty, Graduate School of Life Science (GSLs), the first meeting with the day-to-day supervisors takes place before the work placement starts. This is meeting is to set expectations, define the learning goals and which meetings the student joins. Furthermore, the optional SEED tool could be used by students and supervisors to set expectations, evaluate progress, and provide feedback. The SEED tool could be extended by creating a mentoring plan together that considered the students' needs and supervision style, set the learning objectives, discuss purpose of the WIL program and the method of evaluation and feedback. Next to that, it is important that the student carefully chose the supervisor and make agreements with the supervisor about their availability and accessibility.

In the reviewed literature they showed that students could benefit from co-working spaces. In the co-working spaces students and their supervisors and colleagues are working within the same place. In this way students can connect with their co-workers, and supervisor. Co-working spaces had a positive effect on their skill development, because of the positive organizational culture, and the direct support from their supervisor and colleagues. Also, the effect on their mental wellbeing expressed in a sense of belonging, confidence, and trust were stimulated. The research by Jackson et al. had a good study design where the students were interviewed before and after the placement. This gave an appropriate picture about how the co-working spaces were received by the students. However, since it was only 11 students who were interviewed the results may be not generalizable for a general population. In context for the GSLs it may be applicable for on the work placement.

Literature implied that work placements are a good tool to give students real world experience prior to their first job. They are developing employability skills within their work placement. The results showed that literature underscores the central role of supervisors in guiding students in personal and professional skill development. Sometimes supervisors stayed in contact with their students to help with their first job by writing a reference letter or check their CV or even finding them a first job. This showed the positive effect of the supervisor on their student. Only the studies of Martin and Rees, and Wang et al. mentioned the effect on the careers of the students. More research and follow up on the students who were once in a work placement could give more insight in the numbers of students who were helped by their supervisor after their studies.

In the light of this literature review, the focus was on improvements of wellbeing and learning of students, and what could be done by their supervisors. First wellbeing of the student is mainly predicted by a supervisor who is supportive and empathic, and in that way have a good student-supervisor relationship. It helped when supervisors were welcoming by for example inviting students to lunch and meetings. Also, when students felt a sense of belonging and safety it had a positive effect on their wellbeing. All studies in the result section of *student wellbeing* executed semi-structured interviews or surveys. The study of Rowe et al. had a sample size of 151 students, this sample size is the most representable for the population. The other studies had lower sample sizes. For future research it might be interesting to conduct more research with larger sample sizes to be more generalizable. Within the GSLs there is increasingly more attention for mental wellbeing. In this literature review the results showed that mental wellbeing is important for student development. Furthermore, it demonstrated what supervisors and students could undertake to improve students' wellbeing and development during work placement. This may be helpful to tell supervisors prior to work placement so they can already apply it within the internship.

The review table highlights that the majority of the studies are conducted in Australia and New Zealand. The reason that in these two countries a lot of research is done, is because of governmental laws. In New Zealand for example, a 120 hour work placement is obligatory for

social work students in which students have a right to 1 hour formal supervision (Hay et al., 2019). There have been major reformations in Australia since the late 1980s by the Federal Labor Minister John Dawkins. Universities were required to make a change in their curricula to align more closely with industry. This included the introduction of competency-based learning frameworks which are characterized by for example work placements. Since then, universities needed to report on the performance to the government their established quality metrics (Scott & Richardson, 2011). The new laws allowed students to be more prepared for the transition between university and their first real-world job by enlarging their practical skills and competencies which are directly applicable in the workforce. Since this introduction of legislation there has been a lot of research conducted. In this way there can be a lot learned from the universities of Australia and New Zealand and applied to other universities world-wide including the Utrecht University.

Lastly, since the GSLS has a lot of international students who are placed in work placement, cultural differences are appearing. These cultural differences could be a next subject to research, while communication on the work placement and the relationship a supervisor and their student have is different. There has already been a little bit research done in this area. In the research of Dawn et al. they showed that workshops to prepare international students on their work placement helped to gain knowledge, skills and understanding before going out on their placements. Another study showed four key strengths that international students could use to enhance their learning and performance during their work placements. This included intercultural competencies, personal attributes, transition skills, and situational awareness. By using effective reflection with a supervisor could facilitate these skills (L. Jones et al., 2018). Also, the application of the results of this literature review on the work placement curriculum and supervision in the future could be beneficial.

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Reflection on writing assignment

Before the start of this writing assignment, I only had experience within my own discipline, Biomedical Sciences with a specialization in Regenerative Medicine and Technology. I decided to write my writing assignment in a whole new area, social and educational sciences. This was a whole new experience in which I had to learn again how to search for literature, how to read and interpret the literature, and how to find a different manner to write a review in this field. The reason to explore this new field, was to broaden my horizon and develop different skills on a personal and professional level. Next to that, the subject interested me by my own experience and experience from other students within their internship. I heard a lot of people around me about their supervisors and negative associations with it. This meant that we are still not there in the education where we want to be. I wanted to stand up for these students, and students in the future who will execute an internship. Therefore, I found intrinsic motivation to find literature which the GSLS could benefit from. I met my supervisor, Renske de Kleijn, during the profile “Translational Life Sciences”. She gave a workshop about feedback, which she was very enthusiastic about, this contagiously. Directly after the workshop I asked her if she had time to be my supervisor for the writing assignment. In the process of searching, I noticed that the studies were of a whole different nature than the studies I was used to. The methods were different, and

I came across new terms I had not seen before or at least I was not familiar with. Therefore, it took me little bit more time to come in. After searching and including the articles in a systematic manner I read more into the articles. It was interesting to notice that I could follow the rationale very easily which made it quite doable to analyze the articles. However, it took me a while before I could identify different themes in the articles that were similar. Also, the inclusion more in depth (full text) was difficult. Sometimes I lost a bit of my original goal/research question and found it hard to think whether the article was compatible. I enjoyed the most to combine in the end the literature to my own study. This gave me the feeling that I could make an impact, a difference for students in the future to get most out of there internship. I was fulfilled with energy, after the process of writing. In the beginning it was awkward to convert my writing style from biomedical science to social science. However, when I came in the writing, it went quite alright. Overall, I had a great experience where I learned how to do social sciences and educate myself more multidisciplinary. Next to this it was for my much more valuable than writing a assignment on biomedical sciences, since I had already done this three times! I would recommend anybody to write in a different field than your own to explore other studies, and educate yourself more in a multidisciplinary way.

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