



Student internships and work placements: approaches to risk management in higher education

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Abstract

The increased use of student internships and other forms of work placements in higher education programmes brings recognised benefits to students but also changes the risks for higher education institutions (HEIs) globally. This paper responds to the under-addressed problem for HEI managers of understanding the varying levels of risk of harm to students and HEIs, and the HEIs' strategic responsibilities to understand how to mitigate the risk for both parties. We develop a typology of the main types of internship placements and theorise their associated levels of risk according to the HEI's levels of responsibility and operational control. The risk types are then plotted in a model of risk mitigation, mapped against the frequency of their occurrence and the severity of their impact, with a focus on HEIs and students. We conclude with practical and policy implications for HEIs and their managers. Our paper argues that HEIs must balance their risks and responsibilities with the costs and benefits of student internships and work placements, and contributes to understanding potential gaps between HEI strategic decision-making and operational practice at the programme level, along with solutions to address these.

Keywords Internships · Placements · Risk management · Policy · Student safety · Typology

Introduction

Case one: A British student died falling from an apartment balcony in Spain following a party. The student was on a one-year internship at a Majorca hotel, as a mandatory component of his languages degree at a major UK university (Couzens, 2018).

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Case two: Taiwanese unions and lawmakers criticised an internship programme for prospective flight attendants involving a major airline and four universities. Tourism and hospitality students flew up to 60 hours per month and received scholarships of about \$ US 4800 per semester. Interns undertook similar work to paid flight attendants, who were expected to supervise them. Unions claimed this arrangement exploited both students and staff, and questioned whether the interns could cope in an emergency (Shan, 2018).

Case three: On the first day of his internship in the HR department of a large Illinois firm, a US student was one of five people shot and killed by a terminated employee. The intern was observing the termination meeting on an optional course-related placement arranged by his university (Ailworth & Barrett, 2019).

Case four: During a summer clerkship at a prominent New Zealand (NZ) law firm, five women interns were sexually harassed. The students' university and NZ Law Society became involved. Subsequent mishandling of the situation damaged the law firm reputationally, while the university's role in monitoring student safety in such internships was also questioned (Bazley, 2018).

The increased use of internships and work placements (Zilvinskis, 2019) by higher education institutions (HEIs) (Pinto & Pereira, 2019) (including public and private universities, polytechnics and tertiary vocational education providers) brings benefits for students (Silva et al., 2016) and hosting organisations (Vélez & Giner, 2015). Their use also changes the risks for HEI managers, students and faculty. While internships give students confidence and better critical thinking skills (Crossman & Clarke, 2010), make graduates more employable (Pinto & Pereira, 2019; Di Meglio et al., 2021) and build stronger university connections to industry (Hodge et al., 2011), questions around the risks of harm to the students and to the institutions and their reputations are under-addressed, yet increasingly relevant to HEIs. For instance, in the four cases above, what were the HEIs' responsibilities for student welfare? Could/should they have predicted and mitigated the risks? What aspects of the internships influenced the levels of risk and the HEIs' responsibility? To address such ill-defined areas of practice, this paper explores HEI management of student internship and work placement risks and provides a systematic approach for identifying and categorising those risks, along with recommendations for [risk mitigation](#).

A typical student internship has been defined as a:

term-length placement of an enrolled student in an organization – sometimes with pay, sometimes without – with a faculty supervisor, a company supervisor and some academic credit earned toward the degree (Narayanan et al., 2010, p. 61).

Accordingly, our paper addresses internships within HE programmes and distinguishes these from internships independently undertaken in the workplace by people seeking career progression (Hunt & Scott, 2020). Although some researchers include a wider range of “learning-at-the-job-experiences outside the academic campus” (Silva et al., 2018, p. 9), the common HE usage of “internship” embraces various student work experiences before graduation. Two common formats are “thin sandwich” courses, in which multiple, short internships are distributed over, say, a three-year degree, and “thick sandwich”, namely single, longer internships often at the end of the degree (Clark & Zukas, 2016). Practitioners also use the terms practicum (Ryan et al., 1996) and work placements (Wilton, 2012), and can include apprenticeships (Tynjälä, 2013) and vocational training (Kessels & Kwakman, 2007). Internships exclude extracurricular (such as those related to sport) and problem-based activities (such

as case study competitions), project-based learning (such as in-course consulting reports) and business or organisational simulations.

Internships create new and unique relationships between at least three parties; students, hosting organisations and the HEI (Vélez & Giner, 2015), and all three are potentially at risk. Additionally, damage may spread to otherwise-uninvolved employees of the host and faculty, and to fellow students. Internship risks are exacerbated by naïve, inexperienced and vulnerable students, and HEIs whose objectives may differ from those of hosting organisations. Placing increasing numbers of international students (OECD, 2018) may add to risk, along with internships requiring domestic students to travel abroad (Pinto & Pereira, 2019).

The purpose of this paper is to examine the broad range of risks that HEIs and students face in relation to internship programmes and to offer robust analytical guidance on their management by HEIs, where appropriate. The paper encompasses **risks to students** because HEIs are *prima facie* responsible for their students. Detailed risks to the host organisations are largely outside our scope, since hosts must manage risk within their own operating context. Our research questions are the following: (1) What types of internships entail what **risks to HEIs** and students, and with what HEI responsibilities? (2) What specific risks occur, and with what frequency and severity, especially in internships where HEI responsibility and risk are simultaneously high? (3) What strategies can HEIs adopt to mitigate these risks, especially in higher risk internships?

To understand the **risks to HEIs** of internships and their mitigation, we develop a typology of student placement experiences built on Silva et al. (2018) and Narayanan et al. (2010). We then introduce a risk management and analysis framework to distinguish how HEIs' responsibilities may vary by placement type, highlighting two that combine high responsibility with relatively high risk. We then explore internship risks that HEI managers and researchers may not have systematically identified and discuss how these map to the risk framework. Illustrating our arguments are examples from international postgraduate internship programmes at a large university in New Zealand (UNZ), where the co-authors draw on over 30 years' combined experience of setting up, operating, managing and evaluating internship programmes. We suggest actions to address risk, cautioning against over-managing some risks that reflect the inherent uncertainty in the modern world and which may be necessary to enhance internship learning, and conclude with practice and policy implications. The paper does not attempt an exhaustive list of specific risks (or indeed internship-type placements) because risks vary between internship programmes and new risks and internship forms will emerge, such as the risk posed by the Covid-19 pandemic in 2020–2021 and the corresponding rise in virtual placements (Al-Zhyri, 2020; Briant & Crowther, 2020).

Our paper contributes to pedagogical research by developing an original typology of key internship forms to help HEIs identify their overall risks and responsibilities in each. This typology can assist HE research by: introducing conceptual clarity in the field to distinguish different internships that are often mixed in the HE literature; guiding future research on the learning and employability outcomes of each internship/placement type; and informing curriculum changes that aim to improve action-learning. Our internship risk framework of frequency and severity, with examples of programme-level actions and strategic policies to manage these risks, contributes to HEI policy and practice and also provides a conceptual framework for future research into the prevalence of risks in various contexts.

Internship risk and uncertainty

Concepts of risk

Risk involves the likelihood of some—typically hazardous—situation occurring plus any damage or loss as a consequence (Kaplan & Garrick, 1981). The concept of risk is often confused with uncertainty; risk is a situation where managers do not know, with certainty, what an outcome will be but do know the possible outcomes, along with the probability of those outcomes occurring. Uncertainty exists when decision-makers know neither the possible outcomes nor their probability of occurring (Knight, 1921). Applying this distinction between risk and uncertainty to our discussion of HEI risk management implies that uncertainty cannot be managed because the probability of an unforeseeable occurrence cannot be known. In higher education (HE), risk has been associated with policy-led initiatives (Beck, 2014), marketing and reputational problems (Healey, 2015) and economic analysis, including marketisation, short-termism and market failure (Healey, 2015). Less research attention has been paid to the analysis of risks associated with student placements.

The literature around internship risk management in HEIs addresses concerns of legal liability, compensation and health and safety to the institution and faculty (e.g. Grenfell & Koch, 2018; Saunders, 2000; Schultz, 1992; Swift & Kent, 1999), and hosting firms or other organisations (e.g. McEvoy, 2013; Swift & Kent, 1999). However, it does not analyse the frequency or severity of these occurrences, so does not provide adequately robust, analytical guidance for managers. Moreover, those risks falling short of legal liability, **risks to students** themselves and institutions' moral or ethical responsibilities (which generalise more widely than legal obligations) are under-researched. Risk extends beyond injury or emotional harm to people, and damage or loss to physical or financial assets. Notably, as knowledge organisations built on intangible assets, HEIs rely on reputation for recruiting students and faculty (Power et al., 2009). Reputational risk differs from other types because it is a social construct derived from social interaction, and reputational damage affects organisations' legitimacy (Power et al., 2009).

Processes to address on-campus risks cannot be implemented with certainty or authority while students are offsite. Further, for most hosting organisations, overseeing an intern is an exceptional activity, so organisations' risk management processes may be unsophisticated or ill-prepared for that context. Thus, internships occur in situations where new relationships are formed, legal and ethical responsibilities are ambiguous and the attendant risks often undefined, unappreciated and therefore unmanaged.

Risk analysis model

Risk analysis represents a calculation of the costs associated with a hazardous occurrence weighted by the probability of that occurrence. Risk management often requires analytical models such as risk matrices to categorise and prioritise risks facing organisations in terms of their relative frequency and severity (Elmonsri, 2014). While matrices are simplifications, because often a range of severities is possible for a given occurrence (plus other incalculable uncertainties may be involved) (Elmonsri, 2014), we use risk matrices to illustrate internship **risk mitigation** in this paper as a systematic logic for unravelling risks and examining where they may lie, particularly where either the probability or the harm severity cannot be estimated with precision. Figure 1 shows a generic risk matrix, with frequency of loss on the x-axis and

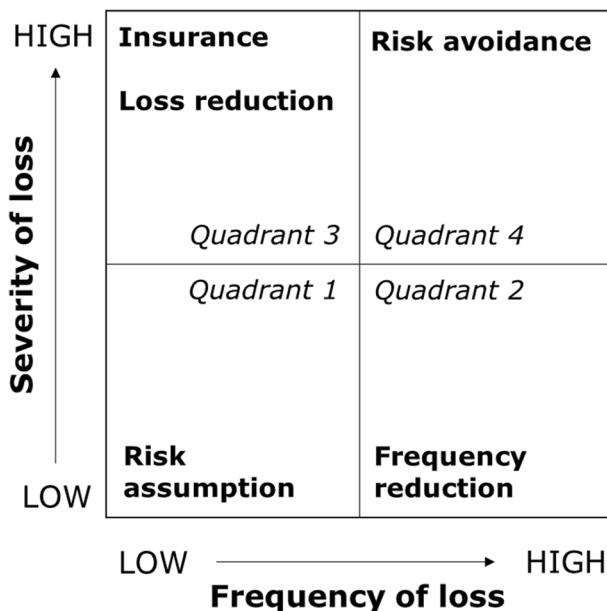


Fig. 1 Generic risk dimensions. Source: Authors, based on Elmontsri (2014) and Dorfman (2002)

severity of loss on the y-axis, rated as high and low. Risk mitigation approaches are associated with each resulting quadrant (Dorfman, 2002; Elmontsri, 2014): such as frequency reduction in quadrant 2 and risk avoidance in quadrant 4.

Typology of internships/placements

To analyse their exposure to risk, managers must conceptualise the nature and extent of their responsibilities, identifying their control, legal and moral accountability, and the riskiness of their activities (Power, 2006). Typologies are ways of conceptualising phenomena or ideas (e.g. Gale & Parker, 2014) as “deductive analytical categories” (Brotherhood, Hammond & Kim, 2020), as an organising matrix (Boehe, 2016), or as a framework “that makes the world easier to understand” (Healey, 2015, p. 2). Developing a typology is a “unique form of theory-building” (Doty & Glick, 1994, p. 231), particularly in mid-range theorising since it enables researchers to “identify multiple theoretical or ‘ideal’ types, each representing a unique set or combination of the attributes under investigation” (Benson-Rea et al., 2013, p. 719).

Typologies have been used in previous HE research related to risk. Healey’s (2015) contribution on risk in transnational HE partnerships constructs a typology on six dimensions to investigate risk within the theory of market failure. Underlining the value of typologies in HE, Healey argues for exploratory classification frameworks to “capture the diversity and complexity of the phenomenon” under investigation and that the underlying theories chosen to build it should provide a basis for a ‘better’ typology than alternative analyses (Healey, 2015, p. 7). He presents a typology for an HE risk phenomenon at the macro (transnational) level, which prompts us to follow up with a risk typology at the meso (institutional) and micro (programme, manager or student) levels.

Building the typology followed these steps: (1) define the theoretical assumptions informing the ideals within the range of types, (2) develop the types in between the theoretical extremes, (3) test each type with evidence from practice to sharpen the distinctions between the types, and then (4) check and verify by iterating between the three steps (Benson-Rea et al., 2013). In Table 1, we number and label each type by student experience as the column headings and elaborate on the differences between them by analysing the sources of risk and uncertainty in each of the theorised contexts. Our typology is not exhaustive (and new risks will emerge) but we use it to theorise the main boundaries of risk on which HEI managers can build approaches to decision-making and risk management. We assess the level of risk according to the HEI's levels of responsibility and control, and then populate the typology using measures of high, medium and low. We use these assessments of responsibility and control to theorise the approximate levels of risk arising from the different settings. We now explain the dimensions used to evaluate the overall risk/responsibility of the resulting eight types.

Student experience type

Previous research into internships and placements identified the importance of such factors as the structure and nature of internships and their design (Silva et al., 2018), and whether they are mandatory, compulsory or facultative/voluntary (Bittman & Zorn, 2020). Accordingly, our types delineate student workplace learning between the two extreme ideal types of Pure HE (type 1), which would be an entirely on-campus classroom-type experience, and type 8, independent internship post-graduation, once HEI enrolment is complete. While field trips and study tours (types 2 and 3) are not necessarily workplace based, they are included as they represent learning experiences off-campus and can be calibrated by more or less control or risk. What we call “classic” internships are types 5 and 6, and are differentiated by a finer-grained analysis according to the attributes below.

Nature of student experience and assessment

We theorise that if the experience is mandatory, earns course or programme level credit and/or the student pays extra or the full costs, HEI responsibility significantly increases, although even optional placements facilitated by the HEI may imply some level of HEI responsibility.

Duration

We theorise that total and unbroken time off-campus heightens risk because there is longer for something to go wrong. A work placement (type 4), where students are only off-campus for short periods, is medium risk, because of the ongoing joint management between the HEI and the host, but otherwise similar internships (types 5 and 6) are high risk, because the HEI's control is more limited. Thus duration may affect HEI responsibility and risk.

Location

Locations further away from the home institution raise risk, as do inherently riskier locations such as factories or politically unstable countries, which may be precisely the locations

Table 1 A typology of student placement experiences theorising levels of risk for HEIs

Type → Dimension ↓	1	2	3	4	5	6	7	8
Student experience type	Pure HE (campus only)	Field study/trip	Overseas study tour	Work placement Apprenticeship Sandwich course	Mandatory internship	Facultative internship	Vacation internship	Independent internship post-graduation
Nature of student experience	Mandatory Student cost	Often mandatory Student cost	Optional or mandatory Student cost	Mandatory Paid or Unpaid	Paid or Unpaid	Student choice Paid or Unpaid	Student choice Paid or unpaid Not part of any course	Student choice Job try-out Paid or unpaid
Nature of assessment content	For-credit	Optional or for-credit	Optional or for-credit	For-credit	Compulsory, for-credit	Optional, for-credit	None, vocational or work experience	None, vocational or work experience
Duration	Multiple semesters	Short (days)	Short, days or weeks	One or more semesters, several weeks or regular day(s)	One or more semesters, or several weeks, or longer	One or more semesters, or several weeks, or longer	Weeks	Months or weeks
Location	On campus	Local to campus or domestic	International	Local to campus or domestic	Local to campus, domestic, or international	Local to campus, domestic, or international	Local to campus, domestic, or international	Domestic or international
Student vulnerability		Domestic & international			Both but higher risk for international or diverse cohorts		Domestic & international	Graduate
HEI level of operational control	Staff control Structured programme High	Accompanied by staff Structured programme Medium	Accompanied by staff or not Medium	Jointly managed with workplace Medium	Limited after negotiation and agreement with host Low	Limited after negotiation and agreement with host High	Limited to timing & possible advice or facilitation Low	
Theorised level of HEI responsibility		High					Medium	None
Theorised level of risk to HEI	Low High responsibility/ high operational control	Low-medium High responsibility/ medium operational control	Medium High responsibility/ medium operational control	Medium High responsibility/ medium operational control	High responsibility/ low operational control	High High responsibility/ low operational control	Medium Medium responsibility/ low operational control	None No responsibility/ no operational control

Source: Authors' conceptualisation

required for certain kinds of internships, such as those in engineering or hospitality, respectively. Types 5 and 6 may occur far enough from the campus to make HEI control, safeguards and intervention difficult. Distance incurs extra costs, may isolate the student and thereby lower control, which raises risk.

Student vulnerability

Based on potential vulnerability rather than control, we theorise that both risk and HEI responsibility will be higher for students unfamiliar with their work placement context, those who may be “different” in the sense of ethnicity, religion, disability or gender, or those with health constraints in some environments. For conceptual simplicity across the many possibilities for vulnerability, we highlight international student placements, or domestic students attending placements abroad. In unfamiliar situations far from home and support networks, international students take types 5 and 6 to high risk.

HEI responsibility/operational control

Responsibility means moral and/or ethical accountability for risks to the institutions and their students. Drawing on our experience and the literature, we theorise responsibility as high, medium or none based on a cumulative assessment of the other rows, and especially HEI control. Increasing control is the main factor raising responsibility, while potentially lowering risk, but not necessarily. Control and responsibility would be highest in Pure HE, and non-existent in independent post-graduation internships. Types 5 and 6 are high responsibility and high risk because the nature of the placement is a course or programme requirement, but with low levels of operational control once agreements with host organisations are negotiated and in force. We note that even where HEI responsibility is high, both hosts and students may also have responsibilities.

Risk to HEIs

To capture broadly how the types of student placements may alter HEI risk, we theorise combinations from high responsibility/low risk (types 1, 2), through high responsibility/medium risk (types 3, 4), to no responsibility/no risk (type 8). Nevertheless, HEIs must assess risks according to their individual programme, faculty and country situations. Of most concern for managers, and thus for our risk management framework, are the situations of high responsibility/high risk (the highest level) where HEIs simultaneously have high responsibility but low levels of operational control (types 5 and 6).

University responsibility in the four introductory cases is better understood using our typology. Case one, with a student on a for-credit mandatory international placement, best fits a type 5 internship, in which the HEI had high responsibility but low operational control. Case two described optional placements coordinated by the universities, so represents a type 6 internship. Case three, being for-credit but optional internship, also represents type 6 with high responsibility but low operational control. Case four occurred on an optional placement outside the university programme (and thus control) and represents a type 7 vacation internship, meaning medium level responsibility for the universities because they coordinated it.

The typology conceptualises the risks of internships, set against other forms of placement experiences and provides a basis for understanding internship and placement risk mitigation and management.

Application—risks in internships

The two parts of this section expand on the risks from internships for HEIs and students, respectively, particularly in types 5 and 6 internships. Other risks may exist in certain internships but those we elaborate are likely to be present in all internships to some extent. Detailing host risks is beyond our scope, although HEI managers need to appreciate that if host risks become too onerous, they may quite rationally avoid the risk entirely by withdrawing. The subheadings below bracket the authors’ qualitative categorisation of risk frequency (low/high) and severity (low/high/variable), based on their experiences with internships programmes over 30 years: they are “preliminary” as they are subject to individual HEIs’ circumstances. Also bracketed are the corresponding quadrants of Figures 2 and 3, which apply the generic risk matrix in Figure 1 to HEI and student situations, respectively, in internships. Hence, LF/HS denotes low frequency and high severity, implying Q3 in the risk matrix.

We illustrate the risks with examples from the four introductory cases and postgraduate internships at UNZ. The latter were type 6 (facultative) for-credit internships that required students to work as a consultant for between five and eight weeks in a host organisation on a project addressing specific international business or marketing problems. Most were international students. These examples illustrate that the same underlying risk can produce different severity and types of damage to various parties, especially once we account for reverberation

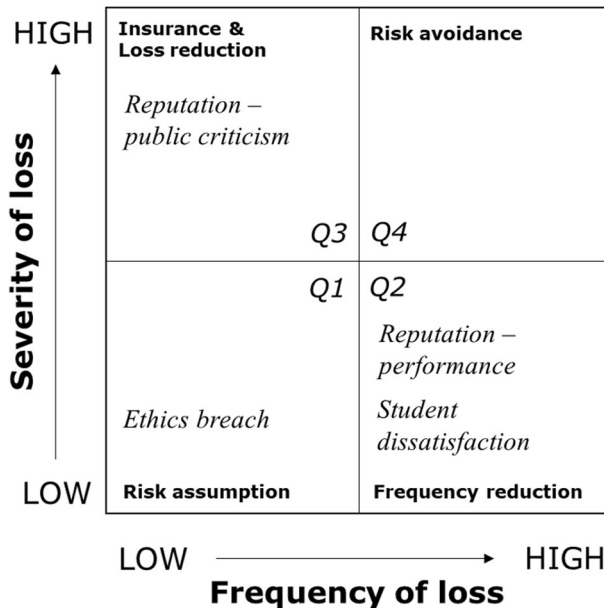


Fig. 2 Risks to HEIs and mitigation approaches. Source: Authors, based on Elmontsri (2014) and Dorfman (2002). No HF/HS cases as such programmes would be non-viable

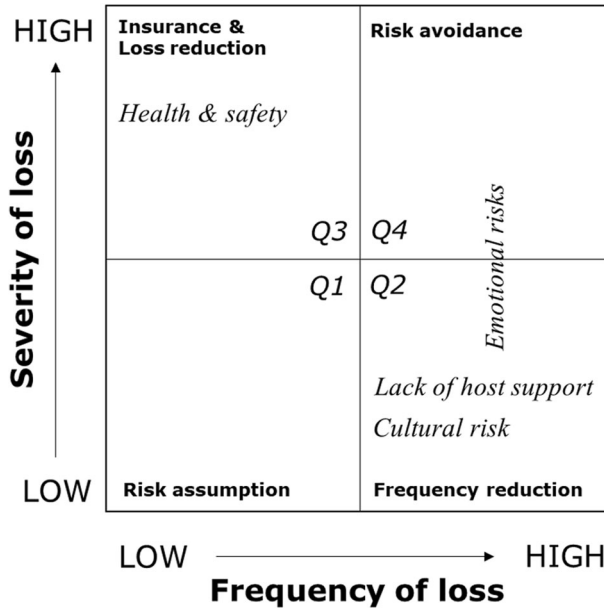


Fig. 3 Risks to students and mitigation approaches. Source: Authors, based on Elmontsri (2014) and Dorfman (2002). No HFHS cases as such programmes would be non-viable.

via reputational damage or the ethical extension of an HIE’s interests to cover those of its students. Nor are the following categories of risk isolated from each other. For instance, poor student performance during an internship may cause the host business damage, the student emotional stress and the HEI reputational harm.

Risks to HEIs

HEI and staff reputation with host (HF/LS) (Q2)

If interns perform unsatisfactorily, ignore hosts’ behaviour codes, or at the extreme are criminally dishonest, the reputations of the HEI and staff overseeing them suffer with the hosts. However, student off-campus performance and behaviour may be unforeseeable even to their teachers (Jackson, 2020). The internship may be a student’s first exposure to any workplace—and making sense of expectations in such contexts is a key learning outcome (Hodge et al., 2011). Nevertheless, hosts may question why the HEI sent ill-prepared interns. Fortunately, although the frequency of interns performing poorly is high, given that any cohort will have students of varying capability and motivation, the severity of damage is typically minimal because hosts are conscious of student inexperience and will adjust intern roles and their expectations accordingly.

HEI and staff reputation with public (LF/HS) (Q3)

More concerning to HEIs is criticism in the media for extreme acts committed on or by students. Thus in the case four sexual harassment example in the introduction, the main

university involved severed relationships with the law firm, including lucrative sponsorships, as did other NZ universities once the harassment was publicised (“Six NZ universities cut ties with law firm”, 2018). This distancing occurred more than a year after the main university learned of the problem, suggesting their responses were to the publicity, not student harm. Although potentially severe, a search of the media database Factiva (Dow Jones, 2019) using combinations of key words “internship; work placement; university; college; criticism; scandal” suggests such criticism, like that of the Taiwanese universities and flight attendants in case two, has been infrequent. While this may represent underreporting due to power differences between hosts and students keen to secure follow-up jobs, an increased willingness to speak up, evidenced by the “Me too” movement, means HEIs should take risks of student harm and subsequent reputational damage more seriously.

Research ethics breach (LF/LS) (Q1)

Many types 5 and 6 internships, especially in advanced degrees, may be deemed research because students gather data and write reports on their experiences, raising potential breaches of research ethics. During the placement, for example, students analysing proprietary data or interviewing staff must honour confidentiality, gain informed consent and avoid harming participants (e.g. British Sociological Association, 2017). After the placement, for example, if students quote, with attribution, a host staff member’s criticism of host management in written or verbal reports, this breaches research ethics and may harm that staff member. However, the few known ethics breaches in the UNZ programme were minor and without evident consequences for the university or host.

Student dissatisfaction with HEI (HF/LS) (Q2)

We are concerned here with student dissatisfaction insofar as it rebounds on HEIs. Internships may be stressful and students who do not stretch themselves will not only fail to realise benefits but perhaps end up dissatisfied with the programme overall. Interns’ (dis)satisfaction is closely tied to job characteristics and host work environment (D’Abate et al., 2009)—factors outside the full control of HEIs but perhaps reasonably foreseeable if they approve the placement. Students communicating their dissatisfaction to others in their cohort may breed further discontent, while communicating it to prospective students, for example via social media, potentially reduces future enrolments. Yet damage from dissatisfaction, while frequent, is no more severe than dissatisfied students in campus-only programmes and may be counterbalanced by positive word-of-mouth about internship benefits and continuous programme improvement.

Figure 2 summarises these [risks to HEIs](#) and applies them to the generic risk matrix.

Risks to students

We consider [risks to students](#) to the extent that HEIs are responsible for students. Students entering workplaces encounter various physical and emotional risks not faced on campus. Understanding these risks is important to HEIs if they are to act in students’ best interests.

Host fails to support student (HF/LS) (Q2)

HEIs rely on hosts to deliver interns a valuable experience in a suitable and realistic working environment. Some organisations' willingness and ability to do so may fade once the intern arrives, possibly months after the organisation made the hosting commitment. The managers who made the commitment may have resigned or be consumed with more strategic matters. Organisations may underestimate the resources required, or delegate responsibility to a poorly disposed staff member. If so, students may gain little benefit from the internship.

These situations occurred frequently in the UNZ programme. One CEO delegated responsibility to a seemingly uninterested sales manager, who allocated the intern a distant desk then provided no data, access to firm systems or one-to-one time. Another firm had wanted an intern to conduct a market analysis but could not wait and hired an external consultant without notification, leaving the student with no project. Despite the high frequency, the repercussions of poor host support were typically limited to student dissatisfaction with the programme. To compensate, faculty would have to create additional tasks and provide extra student support, adding to their workload, so poor host support also damaged the HEI.

Health and safety breaches (LF/HS) (Q3)

Physical risks of intern injury include lifting heavy objects, using equipment interns are untrained for, or generally working in hazardous environments. Although health and safety risks are likely to be less frequent in humanities, arts and social science internships compared with those in science, engineering and medicine, and work placements like apprenticeships, injuries could nonetheless be severe. One UNZ business intern found themselves packing and lifting boxes in a factory for a week because the host's small firm culture dictated that everyone should help when a large order needed to be fulfilled.

Emotional harm (HF/VS) (Q2 and Q4)

Internships are often difficult because of the emotional changes which are integral to internship learning (Liu et al., 2011) but may create additional risks of emotional harm. Bullying or sexual harassment as in case four illustrate extreme emotional risk, but internships confront students with personal weaknesses such as poor self-motivation or time management (Bowen, 2018). Students may also recognise that they are unprepared for permanent work (Hodge et al., 2011) and experience a reconfiguration of their personal identities in relation to work (Bowen, 2018; Trede et al., 2012). Interns must manage their emotions in their new work context to achieve internship outcomes (Liu et al., 2011). Under these cumulative emotional pressures, some interns risk "failing" (relevant to our typology because students experience it as emotional risk), despite such mistakes often being the best teachers. The severity of damage may vary from poor performance in for-credit assessment, to withdrawal from the course, to, at worst, self-harm.

Hence, the risk is not that students will experience emotional stress, because pushing students beyond their comfort zones is implicit in the internship experience, but that this stress becomes damaging. Off campus and away from their teachers and other close adults (and possibly home country), students' emotional damage might not be noticed in time.

Cultural risk (HF/LS) (Q2)

Interns, especially international students, make cultural mistakes relatively often by miscommunicating (local language skills), misreading cues or misunderstanding local institutional systems (Conroy & McCarthy, 2019). However, the consequences are normally slight: loss of face rather than outright social rejection and delays while navigating the new context.

Figure 3 summarises the key risks to students from internship programmes.

Internship risks raise concerns for practice at the operational level of programme management, as well as more broadly for internship policies within the curricula. We next discuss actions to mitigate programme-level operational risks, particularly in types 5 and 6 internships.

Risk mitigation

A range of actions for mitigating internship risks is structured within the risk matrix framework—with some delivering both frequency and loss reduction (see complete listing in Table 2). Common themes are improving the match between students and hosts, better information, better motivation, ongoing communication and clearer accountability.

Table 2 Summary of risks and mitigation by HEIs

Risk	Mitigation action	Risk management approach	
		Frequency reduction	Loss Reduction
<i>Institution</i>			
Reputation – poor student performance	Student selection	√	-
	Project selection	√	-
	Preparation course	√	√
	Close supervision	√	√
	Matching event	√	√
Reputation – public criticism	Host & project selection	√	-
	Close supervision	√	-
	Host liaison	-	√
	Insurance	-	√
Research ethics breaches	Project selection	√	√
	Preparation course	√	√
	Ethics processes	√	-
Student dissatisfaction	Matching event	√	√
<i>Student</i>			
Host does not support student	Host selection	√	√
	Host liaison	√	√
	Host selection	√	-
Health and safety	Host selection	√	-
	Close supervision	-	√
	Insurance	-	√
Emotional harm	Student selection	√	-
	Close supervision	√	√
Cultural risk	Preparation course	√	√
	Matching event	-	√

Source: Developed for this study

Risk avoidance (Q4)

Not offering internship programmes at all (thus reducing frequency and damage to zero) would deprive both HEIs and students, and indeed hosts, of their benefits. As the matrices in Figures 2 and 3 show, most risks, whether to HEIs or students, are not in the high frequency, high severity category which would warrant withdrawal from internships. Only student emotional risks could in some circumstances extend into this category, although other actions are available to reduce their severity, as discussed in “Loss reduction (reducing severity) (Q3)”.

Frequency reduction (Q2)

Student selection

To reduce the frequency of poor performance, internships can be made either optional (self-selection) or by invitation (by selection). Students are less motivated in mandatory programmes (Silva et al., 2016, 2018) and selection based on coursework or an interview makes internships more exclusive and desired. For example, for one UNZ internship, students needed to self-select for the higher-cost, slightly longer programme and then maintain a specified GPA. Where it was known that students had recently suffered difficulty in their private lives that might contribute to poor performance or additional emotional stress in their internship, staff recommended desk-based projects on-campus instead to better monitor their well-being.

Host selection/communication

Host organisations must be carefully selected, and sometimes avoided, if the risk appears too high. For example, a UNZ policy to reduce the frequency of sexual harassment or misunderstandings in this area dictated avoiding host organisations based in home offices or with under three staff. Although this excluded interesting projects from start-ups and online firms, too many potential problems loomed in placing an international student unfamiliar with local culture into someone’s home, where the professional/personal line blurs. To clarify the requirements for hosting organisations prior to host acceptance, UNZ emailed both overviews and detailed documents on how organisations should work with interns, elaborated expectations by telephone and gained written agreements from hosts.

Project selection

UNZ academic supervisors screened internship projects proposed by hosts and helped rewrite them so they were neither too difficult (risking student underperformance) nor trivial (and lacking educational benefits). To reduce the frequency of interns deliberately or accidentally disclosing sensitive data, UNZ also rejected projects that organisations identified as significant to organisational success or highly confidential.

Such detail-intensive dual vetting of host organisations and projects required a 0.5 full-time equivalent staff member as industry liaison manager: recruiting host organisations, identifying and initially scoping projects and ensuring suitable conditions for all parties. The UNZ manager estimated that only 10% of organisations approached as potential hosts eventually took on an intern once they understood the demands, because they lacked either motivation or

the necessary resources and working environment. The 90% “dropout” rate emphasises the level of scrutiny and its importance for risk mitigation.

Preparation courses

For several years, UNZ ran compulsory workshops before the internships on expectations of student conduct. This later became a for-credit course called “consultancy practice” to help students think like consultants in addressing host organisation problems and covered negotiating project parameters and research questions, setting host expectations, asking for resources, research techniques and research ethics. For international placements, Conroy and McCarthy (2019) advocate pre-departure, post-arrival and repatriation support structures for students.

Ethics processes

Ethics requirements will vary by academic discipline and by HEI. To avoid delays seeking research ethics approvals for every internship, the UNZ ethics committee granted the programme a blanket approval after it determined that the risks were minor, on condition that only secondary research and interviews were permitted for data collection. Interviews were permitted because students were gathering primarily operational data and their subsequent reports remained confidential. Nonetheless, students still presented participant information sheets and gained signed consent forms from everyone they worked with. Students could not conduct focus groups, administer surveys or record interviews. Before final presentations to host organisations, host managers vetted student slides for confidential or sensitive data. Likewise, faculty checked final reports to ensure participant confidentiality and appropriate tone.

Despite these wide-ranging frequency reduction actions, risk frequency is not reduced to zero. Actions relying on individual perceptions are prone to human error, such as whether a project is “business sensitive”. Student selection based on on-campus academic grades poorly predicts performance off-campus (Jackson, 2020). Similarly, ideal internship hosts could be rejected over apparent resource constraints. Moreover, risks lurk in even highly reputable and well-resourced organisations as the cases in the introduction attest.

Loss reduction (reducing severity) (Q3)

Although the frequency of risks cannot be reduced to zero without ending the programmes entirely, i.e. avoidance, HEIs can act to reduce the severity of loss should an adverse situation occur.

Close supervision

At UNZ, the primary loss reduction action was assigning senior academics to closely monitor internships. Each week, students submitted a 500-word report, and then met their academic supervisor for 30 minutes. Besides guiding students, supervisors asked probing questions to monitor the emotional, health and safety, and cultural environment from the student’s perspective. With such intense supervision, one academic could supervise about 15 students. Academics with experience as industry managers could offer stratagems for overcoming interns’ problems in the workplace, while those with only arm’s-length understanding of organisations gained as researchers could not mitigate such risks.

Host liaison

UNZ's liaison manager telephoned the host organisation's nominated manager monthly to track the internship from the host's perspective. HEIs cannot assume host organisations are taking care of students, so staff (not necessarily academic) need to visit and audit the environment.

Matching event

The risk of student (and host) dissatisfaction stems partly from their matching. UNZ reduced this by transferring the matching process to students and host organisations themselves. Hosts wrote a summary about their organisation and project, and students nominated which they wished to interview for. Student CVs were forwarded to the host. During an evening event in the semester prior to the internships, organisations briefly interviewed each interested student and both then ranked their preferred matches; thus allowing diverse hosts and students to explore each other's suitability. About 90% of the students and organisations could be matched with their first or second preferences so responsibility for matching shifted to the parties best placed to optimise it. Although dissatisfaction still frequently occurred, harm was reduced because parties recognised their role in it.

Insurance

A further loss reduction action is insurance against low frequency, high severity risks. Examples include the medical costs of students injured in workplace accidents and professional indemnity insurance against claims by hosts or students against the HEI for internship-related damage. However, such insurance may not compensate for the reputational damage from public criticism.

Besides the limitations of insurance, the difficulty with these loss reduction processes is their resource intensity. Supervising 15 internship students, including meetings, preparation and follow-up, was typically a full-time teaching load for an academic. Organising matching events is time-consuming for administrators. Due to lengthy travel time, UNZ often skipped the self-imposed safeguard of host visits. Maintaining contact with hosts and monitoring their relationships with interns are similarly major tasks. Moreover, such actions curtail course scalability. Unlike classroom teaching, internship programmes and their management lack economies of scale: the marginal cost of adding more students into internship programmes remains relatively constant rather than reducing.

Risk assumption (Q1)

HEIs must recognise that by not specifically addressing internship risks, they implicitly assume them. That is, they accept they must address the consequences, insofar as these fall to them. Risk assumption is appropriate for low frequency, low severity risks such as ethics breaches (where HEIs have well-developed practices and policies to mitigate these) but may be problematic for risks with higher frequency and/or severity.

Table 2 matches the HEI mitigation actions in “[Risk mitigation](#)” to the risks identified in “Application—risks in internships” for HEIs and students in types 5 and 6 internships. Note that several actions mitigate more than one risk, especially those that close the gap between student, host and HEI expectations and ability to deliver.

Implications and conclusions

Our typology and the conceptual clarity it provides of the risks and responsibilities associated with work placements contribute to deeper understandings for pedagogical research in HE, and suggest further research which we outline below. Two policy implications also emerge from our analysis that deserve consideration by HEI senior management: risk management costs and over-managing risk.

Costs

HEI managers may be tempted to treat internships and placements as low-cost “outsourced” courses. However, running a low-risk internship programme incurs a very high cost for HEIs—primarily in staff costs—because many mitigation actions require close attention to detail for each student, host and project. All staff have limited time, and those with both the theoretical knowledge and industry experience required are typically higher paid. Staff with the skills to recruit host organisations, administer the placements and maintain close host communication may also be relatively highly paid. In other words, when the risks are appropriately managed, internships are likely to be a more expensive option per student than classroom learning.

When HEIs only acknowledge academic staff time in supervision meetings when calculating teaching load, ignoring all the other monitoring and control work needed to deliver lower risk, educationally beneficial internship experiences, they either overload staff or increase risk, depending on the individual academic’s response. The logic of risk management is balancing the cost of hazards with the cost of mitigation. Overloaded staff may not provide adequate risk mitigation, so HEIs are implicitly assuming responsibility for higher risks with this approach.

Over-managing risk

Only limited learning about risk mitigation is possible because each internship involves new students, hosts and tasks. Nonetheless, HEIs are expected to fulfil students’ and other stakeholder expectations and may bow to what Power (2007) describes as cultural pressure to *be seen* to manage risks. This means that although HEIs must demonstrate to boards and regulators that they have risk management policies in place (Power et al., 2009), they need not necessarily demonstrate that these policies have any effect in reducing harm (Power, 2006, 2007). Instead, risk management becomes a compliance process for legitimacy building—another form of reputation—that distracts from HEIs’ core purposes to teach and research, adds bureaucracy and cost, but renders internships and placements no safer. For example, in the tragic case three in the introduction where an intern was shot by a terminated employee, no policy could have mitigated that risk. Millions of difficult meetings occur daily in organisations around the globe yet only a tiny number each year end in violence, so the probability of violence in any one meeting is miniscule. Yet an already fearful public, anxious about the uncertainties in their modern environment and their own lack of individual control (Beck, 2014), and reinforced by media attention to the exceptional, may call for HEIs to be better prepared to “do something”.

Instead, HEIs need to develop clear-eyed and realistic management plans for addressing the genuine risks of internships by deciding which mitigation actions and general risk management approaches to take—but also to recognise what not even to try to manage. Risk is

implicit in internships as practice-based learning: deliberately putting students into unfamiliar situations where learning involves shifting one's understanding of the world, which is stressful (Hodge et al., 2011; Liu et al., 2011). Interns need to feel emotional discomfort to learn and there are as many possible upsides—professional, educational, personal, cultural breakthroughs—as downsides. Thus, HEIs cannot entirely de-risk internships nor shelter students from workplace realities without destroying educational opportunities. Even where our typology attributes a high HEI responsibility, this is not necessarily a responsibility to eliminate the risk. Risks can be managed responsibly, and HEIs' primary responsibility to foster learning may justify that.

Limitations and further research

While the risks outlined in “Application—risks in internships” may be common to many internship types, some UNZ mitigation strategies in “[Risk mitigation](#)” may not be generalisable to different institutional structures. We have also noted limitations in the sense of feasibility and efficacy at the end of the frequency and loss reduction “Frequency reduction (Q2)” and “Loss reduction (reducing severity) (Q3)”. Although we have covered broad policy issues and focused on moral and ethical responsibilities, which are more generalisable than legal responsibilities, even these are not universal and local legal structures still matter, meaning HEI responsibilities and responses will vary by jurisdiction. The role of ethics in student placements may require further academic attention and scrutiny because these situations remain undocumented in HE research.

Further research is needed into how HEIs can balance the risks involved in giving students space to make mistakes and learn while keeping them safe. Building on our paper's conceptual approach and typography, more research can be done to identify and quantify common work placement risks by country and educational field. How do HEIs currently identify and manage such risks? Overall, better clarity is needed on HEIs' responsibilities; to understand, for example, whether the hazards of internships are greater for diverse students.

Conclusions

In a risk-focused climate, we continue to emphasise the broad benefits of student internships; integrated and applied learning, transitions to future as well as current employment, and connecting the academy with the community. Internships, nonetheless, clearly carry greater risk than on-campus learning. This paper demonstrates practical ways to mitigate risk without seeking to make internships completely safe by insulating them from the uncertainties, learning and growth opportunities they provide.

This paper contributes to HE theory and practice by conceptualising internship risks and HEI responsibility for them by theorising a typology of student placement experiences. Exacerbated by students' inexperience, project variations and host organisation imperatives, internship risks are impossible to eliminate. Our risk matrix analysis shows how the frequency or severity of many internship risks can be mitigated, but often at a high price in human resources. HEIs need to manage the risks that are worth managing and assume the consequences of others.

Data availability Not applicable.

Code availability Not applicable.

Declarations

Competing interests The authors declare no competing interests.

References

- Ailworth, E., & Barrett, J. (2019). Aurora shooter was terminated, then killed plant manager, HR and factory workers. *Wall Street Journal, USA*. <https://www.wsj.com/articles/aurora-shooter-was-terminated-then-killed-plant-manager-hr-and-factory-workers-11550340187#>.
- Al-Zhyri, S. (2020). Internships during COVID-19: Is a virtual internship worth it? *The All State*. <https://www.theallstate.org/internships-during-covid-19-is-a-virtual-internship-worth-it/>.
- Bazley, M. (2018). *Independent Review of Russell McVeagh*. <https://assets.documentcloud.org/documents/4575427/Independent-Review-of-Russell-McVeagh-2018.pdf>.
- Beck, U. (2014). Incalculable futures: World risk society and its social and political implications. In *Ulrich Beck: Pioneer in cosmopolitan sociology and risk society* (Online., pp. 79–89). Springer.
- Benson-Rea, M., Brodie, R. J., & Sima, H. (2013). The plurality of co-existing business models: Investigating the complexity of value drivers. *Industrial Marketing Management*, 42(5), 717–729. <https://doi.org/10.1016/j.indman.2013.05.011>
- Bittmann, F., & Zorn, V. S. (2020). When choice excels obligation: About the effects of mandatory and voluntary internships on labour market outcomes for university graduates. *Higher Education*, 80(1), 75–93. <https://doi.org/10.1007/s10734-019-00466-5>
- Boehe, D. M. (2016). Supervisory styles: A contingency framework. *Studies in Higher Education*, 41(3), 399–414. <https://doi.org/10.1080/03075079.2014.927853>
- Bowen, T. (2018). Becoming professional: Examining how WIL students learn to construct and perform their professional identities. *Studies in Higher Education*, 43(7), 1148–1159. <https://doi.org/10.1080/03075079.2016.1231803>
- Briant, S., & Crowther, P. (2020). Reimagining internships through online experiences: Multi-disciplinary engagement for creative industries students. *International Journal of Work - Integrated Learning*, 21(5), 617–628.
- British Sociological Association. (2017). Statement of ethical practice. Durham. https://www.britisoc.co.uk/media/24310/bsa_statement_of_ethical_practice.pdf.
- Brotherhood, T., Hammond, C. D., & Kim, Y. (2020). Towards an actor-centered typology of internationalization: A study of junior international faculty in Japanese universities. *Higher Education*, 79(3), 497–514. <https://doi.org/10.1007/s10734-019-00420-5>
- Clark, M., & Zukas, M. (2016). Understanding successful sandwich placements: A Bourdieusian approach. *Studies in Higher Education*, 41(7), 1281–1295. <https://doi.org/10.1080/03075079.2014.968121>
- Conroy, K. M., & McCarthy, L. (2019). Abroad but not abandoned: Supporting student adjustment in the international placement journey. *Studies in Higher Education*, (forthcoming). <https://doi.org/10.1080/03075079.2019.1673718>
- Couzens, G. (2018). Brit university student killed after plunging from Spanish flat balcony “following St Patrick’s Day party.” *Mirror, UK*. <https://www.mirror.co.uk/news/uk-news/brit-university-student-killed-after-12216621>.
- Crossman, J. E., & Clarke, M. (2010). International experience and graduate employability: Stakeholder perceptions on the connection. *Higher Education*, 59(5), 599–613. <https://doi.org/10.1007/s10734-009-9268-z>
- D’Abate, C. P., Youndt, M. A., & Wenzel, K. E. (2009). Making the most of an internship: An empirical study of internship satisfaction. *Academy of Management Learning & Education*, 8(4), 527–539. <https://doi.org/10.5465/AMLE.2009.47785471>
- Di Meglio, G., Barge-Gil, A., Camiña, E., & Moreno, L. (2021). Knocking on employment’s door: Internships and job attainment. *Higher Education*. <https://doi.org/10.1007/s10734-020-00643-x>
- Dorfman, M. S. (2002). *Introduction to risk management and insurance* (7th ed.). Pearson Education). <https://doi.org/10.1201/b15522-2>

- Doty, D. H., & Glick, W. H. (1994). Typologies as a unique form of theory building: Toward improved understanding and modeling. *Academy of Management Review*, 19(2), 230–251. <https://doi.org/10.5465/AMR.1994.9410210748>
- Dow Jones. (2019). Factiva. Dow Jones. <http://www.dowjones.com/products/product-factiva/>
- Elmontsri, M. (2014). Review of the strengths and weaknesses of risk matrices. *Journal of Risk Analysis and Crisis Response*, 4(1), 49. <https://doi.org/10.2991/jrarc.2014.4.1.6>
- Gale, T., & Parker, S. (2014). Navigating change: A typology of student transition in higher education. *Studies in Higher Education*, 39(5), 734–753. <https://doi.org/10.1080/03075079.2012.721351>
- Grenfell, L., & Koch, C. (2018). Getting a foot in the door: Internships and the legal profession. *The Bulletin (Law Society of South Australia)*, (August), 28–30.
- Healey, N. M. (2015). Towards a risk-based typology for transnational education. *Higher Education*, 69(1), 1–18. <https://doi.org/10.1007/s10734-014-9757-6>
- Hodge, P., Wright, S., Barraket, J., Scott, M., Melville, R., & Richardson, S. (2011). Revisiting “how we learn” in academia: Practice-based learning exchanges in three Australian universities. *Studies in Higher Education*, 36(2), 167–183. <https://doi.org/10.1080/03075070903501895>
- Hunt, W., & Scott, P. (2020). Paid and unpaid graduate internships: Prevalence, quality and motivations at six months after graduation. *Studies in Higher Education*, 45(0), 464–476. <https://doi.org/10.1080/03075079.2018.1541450>
- Jackson, D. (2020). Applying academic selection criterion to work-integrated learning programmes: Risk management or perpetuating inequality? *Teaching in Higher Education*, 25(1), 98–115. <https://doi.org/10.1080/13562517.2018.1541884>
- Kaplan, S., & Garrick, B. J. (1981). On the quantitative definition of risk. *Risk Analysis*, 1(1), 11–27. <https://doi.org/10.1111/j.1539-6924.1981.tb01350.x>
- Kessels, J., & Kwakman, K. (2007). Interface: Establishing knowledge networks between higher vocational education and businesses. *Higher Education*, 54(5), 689–703. <https://doi.org/10.1007/s10734-006-9018-4>
- Knight, F. H. (1921). *Risk, uncertainty and profit*. Sentry.
- Liu, Y., Xu, J., & Weitz, B. A. (2011). The role of emotional expression and mentoring in internship learning. *Academy of Management Learning & Education*, 10(1), 94–110. <https://doi.org/10.5465/amle.10.1.zqr94>
- McEvoy, D. (2013, October). Unpaid work placements: Internships, trial periods, work experience and volunteers. *Keeping Good Companies*, 551–555.
- Narayanan, V. K., Olk, P., & Fukami, C. (2010). Determinants of internship effectiveness: An exploratory model. *Academy of Management Learning & Education*, 9(1), 61–80. <https://doi.org/10.5465/ambpp.2006.22898555>
- OECD. (2018). Indicator B6 What is the profile of internationally mobile students? In *Education at a Glance 2018: OECD Indicators* (pp. 218–230). OECD Publishing. <https://doi.org/10.1787/eag-2018-19-en>
- Pinto, L. H., & Pereira, P. C. (2019). ‘I wish to do an internship (abroad)’: Investigating the perceived employability of domestic and international business internships. *Higher Education*, 78(3), 443–461. <https://doi.org/10.1007/s10734-018-0351-1>
- Power, M. (2006). The nature of risk: The risk management of everything. *Balance Sheet*, 12(5), 19–28. <https://doi.org/10.1108/09657960410563540>
- Power, M. (2007). *Organized uncertainty: Designing a world of risk management*. Oxford University Press.
- Power, M., Scheytt, T., Soin, K., & Sahlin, K. (2009). Reputational risk as a logic of organizing in late modernity. *Organization Studies*, 30(2–3), 301–324. <https://doi.org/10.1177/0170840608101482>
- Ryan, G., Toohey, S., & Hughes, C. (1996). The purpose, value and structure of the practicum in higher education: A literature review. *Higher Education*, 31(3), 355–377. <https://doi.org/10.1007/BF00128437>
- Saunders, J. (2000). Paralegal internships: Assessing the risks and responsibilities. *Journal of Paralegal Education & Practice*, 16, 105–123. <https://doi.org/10.3868/s050-004-015-0003-8>
- Schultz, M. (1992). Internships in sociology: Liability Issues and risk management measures. *Teaching Sociology*, 20(3), 183–191. <https://doi.org/10.2307/1319059>
- Shan, S. (2018). CAA asks China Airlines to clarify internship program. *Taipei Times*, p. 1. Taipei. <http://www.taipeitimes.com/News/front/archives/2018/03/23/2003689852>
- Silva, P., Lopes, B., Costa, M., Melo, A. I., Dias, G. P., Brito, E., & Seabra, D. (2018). The million-dollar question: Can internships boost employment? *Studies in Higher Education*, 43(1), 2–21. <https://doi.org/10.1080/03075079.2016.1144181>
- Silva, P., Lopes, B., Costa, M., Seabra, D., Melo, A. I., Brito, E., & Dias, G. P. (2016). Stairway to employment? Internships in higher education. *Higher Education*, 72(6), 703–721. <https://doi.org/10.1007/s10734-015-9903-9>
- Six NZ universities cut ties with law firm Russell McVeagh in wake of sexual harassment claims. (2018). *New Zealand Herald*. <https://www.nzherald.co.nz/nz/six-nz-universities-cut-ties-with-law-firm-russell-mcveagh-in-wake-of-sexual-harassment-claims/B2JICFL4QQR4GRNEV5B7V244E/>

- Swift, C. O., & Kent, R. (1999). Business school internships: Legal concerns. *Journal of Education for Business*, 75(1), 23–26. <https://doi.org/10.1080/08832329909598985>
- Trede, F., Macklin, R., & Bridges, D. (2012). Professional identity development: A review of the higher education literature. *Studies in Higher Education*, 37(3), 365–384. <https://doi.org/10.1080/03075079.2010.521237>
- Tynjälä, P. (2013). Toward a 3-P model of workplace learning: A literature review. *Vocations and Learning*, 6(1), 11–36. <https://doi.org/10.1007/s12186-012-9091-z>
- Vélez, G. S., & Giner, G. R. (2015). Effects of business internships on students, employers, and higher education institutions: A systematic review. *Journal of Employment Counseling*, 52(3), 121–130. <https://doi.org/10.1002/joec.12010>
- Wilton, N. (2012). The impact of work placements on skills development and career outcomes for business and management graduates. *Studies in Higher Education*, 37(5), 603–620. <https://doi.org/10.1080/03075079.2010.532548>
- Zilvinskis, J. (2019). Measuring quality in high-impact practices. *Higher Education*, 79(4), 687–709. <https://doi.org/10.1007/s10734-019-00365-9>

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