Promoting student readiness for work-life through internships: Challenges and support

Natasha Tan
Chue Shien
Cheryl Ong
Nanyan Technological University, Singapore

Stephen Billett
Griffith University

There are growing expectations that tertiary education graduates will be ready for working life, that is, possessing the capacities to participate effectively in an occupational practice in a specific work situation. Yet, graduates are often unprepared to fulfil this expectation. In response, tertiary education increasingly includes workplace experiences (i.e., practicums, internships, & work placements). It is necessary to understand these experiences' efficacy and their optimisation to promote work-life readiness. Drawing on students' experiences of internships, this paper discusses what constitutes the value of internships in post-secondary diploma courses in Singapore. A quantitative analysis of interview data identified the contributions afforded through these experiences in workplaces – students' intentional engagement, and their readiness for working life. Central here is how these contributions promote the development of the

adaptability required for effective participation in contemporary working life. The analysis identifies challenges including students' adapting to new work environments, navigating workplace practices, and developing occupational capacities. Workplace supervisors' and host educational institutions' support suggests interns' adaptability can be enhanced by promoting the relations between the support they received, on the one hand, and their engagement with challenges during internships, on the other. These findings offer an understanding about the experiences and outcomes of interns' learning through workplaces and offer implications for supporting and augmenting transitions into working life.

Keywords*: internship, capacities, work readiness, adaptability, support, engagementy*

Student readiness for work-life and tertiary education

Tertiary education has a dual role to play in the development of its graduates. Beyond offering educational experiences, tertiary education provisions are also tasked with preparing individuals who are not only academically proficient but also equipped with the essential skills to work effectively in the dynamic contemporary job market and global economy (Tymon, 2013). There is a growing global imperative for tertiary education (i.e., vocational, and higher education) students to be ready for working life upon graduation, and, in some instances, be job ready (OECD, 2010). This readiness often comprises students having the capacity to participate effectively in working life, in a specific occupational practice and work setting (UA, 2008). This paradigm shift in the tertiary educational landscape is reflective of the broader goals set forth by influential organisations and policymakers. For example, the OECD has emphasised the significance of job readiness as a key requirement of contemporary graduates (OECD, 2010). It is increasingly being expected for the outcomes of tertiary education to go beyond initial occupational competence to include being able to adapt to the requirements of workplaces where they are employed (OECD, 2019) and include the kinds of interpersonal and self-initiating capacities that permit effective engagement in working life, and the means to participate constructively and effectively in work. Whilst these stand

as demanding educational goals, they are, nevertheless, important for contemporary working life. Understanding how occupational practice is enacted in specific workplace settings is essential for working in teams comprising those from other occupations, as well as being punctual, reliable, able to work both independently and interdependently, and adaptive to solve problems (Billett, 2009). Whilst these are difficult educational goals to achieve, they are important for two reasons.

Firstly, a successful working life is more than having and effectively practising a body of occupational knowledge (Howe, 2008). It also includes the capacities required to be an effective individual employee, to work as a team and contribute to the viability of the workplace (Barrick et al., 1998). Secondly, is the ability to be adaptive with workplace conduct, occupational practice and the requirements of the work setting where tertiary graduates are employed. This adaptability is important, perhaps now more than ever, as ways of working and workplace practices are constantly changing, as are the requirements for occupations and those of work settings (Carnevale & Smith, 2013). So, more than initial occupational preparation reproducing existing competencies, it is important that the educational processes lead to graduates developing adaptive capacities.

Due to these imperatives, there is a noticeable shift in education towards reshaping curricula and pedagogical strategies to better equip graduates with the essential skills and competencies expected of them (Li, 2022). Central here is the inclusion of workplace experiences for students in the form of practicums, internships and work placements with varying durations and workplace arrangements (Asian Development Bank, 2017; Jackson, Fleming, & Rowe, 2019). It is through these kinds of experiences that these employability capacities are aimed to be generated. The aim of this paper is to appraise the educational potential of internships for postsecondary students as enacted in a particular institutional and national setting, i.e., the polytechnics in Singapore for developing these capacities. Importantly, we want to examine the ability of internships to generate the adaptive learning outcomes that are central to tertiary education graduates' transition to working life.

The conceptual premise adopted for this appraisal is on the interactions between what has been afforded to students in terms of structured educational provisions and workplace internships, on the one hand,

and how students have come to engage with these experiences, on the other (Billett, 2001b). This duality of affordances and engagements provides a means to evaluate the combination of experiences that arise from these internships, by illuminating the challenges faced and the support provided for these students to develop the kinds of workplace, occupational and situational adaptability that will allow students to become ready for work-life.

In all, it is proposed that internships are crucial to achieving these goals, and perhaps most likely when the education provision is well structured to offer appropriate experiences, support and guidance and students engage with them. In making its case, the paper progresses by firstly discussing adaptability as a critical element of promoting student work readiness, then a description of a practical inquiry conducted in Singapore through interviews with student interns is used to appraise the provision of achieving these educational goals, followed by an elaboration of the quantitative findings.

The quantitative analysis of interview data sought to identify patterns of responses from the informant cohort about what was afforded through the workplace experiences and the interns' exercise of their agency leads to the development of readiness for engaging in working life within their occupational fields. It also gauged the development of the adaptiveness required for contemporary working life, including the transition from tertiary education to effective work performance, through these experiences. Drawing upon Giddens (1990) concepts of structure and agency, and of educational counterpart of affordances and engagement, it was found that efforts to provide environments in which interns can exercise their agency within the boundaries of workplace requirements, be supported and guided in that will most likely lead to effective and adaptable learning outcomes that are essential for the transition into working life and effective performance in workplaces.

Adaptability as critical element in promoting student work readiness

Fundamental to the broad project of education is that it should not just lead to the reproduction of the knowledge that has been presented and taught. Instead, its outcomes should have applicability to circumstances and situations beyond those in which it was learnt. Hence, the adaptability of what has been learnt becomes a benchmark

for what might constitute worthwhile education. The concern, therefore, is for the knowledge developed through tertiary education for work-life capacities, occupational competence, and situational performance requirements to be generated in ways that permit their adaptability to other circumstances and situations (Akkermans & Tims, 2017). That is, to assist students in adapting what they have learnt in tertiary education into workplaces and demonstrate effective practice. Consequently, developing adaptability is central to considerations of how educational provisions are organised, enacted, and evaluated (Savickas, 2005). A focus on adaptability is, therefore, quite central to making judgements about whether educational provisions are worthwhile in achieving those goals. Here, the focus is on specific educational interventions in the form of internships, and their ability to achieve these outcomes. That is, processes in which students are provided with experiences in which they engage in the workplace not as visitors or observers, but as active participants in the conduct of everyday work activities, albeit with the status of being a novice or new employee (Bhandari et al., 2022).

It is reasonable to suggest that most contemporary theories of education, as well as those associated with learning and development, adopt a constructivist perspective. The common delineation within this perspective is between one being more a product of individual constructivism alone (i.e., cognitivist perspective) or that which privileges the social contributions to the construction of knowledge (i.e., social constructivism). However, rather than adopting a binary approach, increasingly the contributions of both the individual and social are deemed inevitably important, often interdependent, and usually relational (Billett, 2006). This means that it is important to account for both the contributions that the person brings to the learning and that from the physical and social world beyond the skin, so to speak. As foreshadowed, at a meta-theoretical or explanatory level this is often captured in discussions about the contributions and tensions between structure and agency (Giddens, 1979). That is, what is structured by the kinds of experiences suggested to individuals by the social world, in the form of affordances. These affordances are invitations to engage in social settings and with interlocutors (e.g., co-workers, experts) who can provide access to the kinds of knowledge

required for effective performance (Billett, 2001b).

However, beyond what is afforded to individuals is how they come to engage with it. That is, how the invitations are taken up. Educational provisions albeit in hybrid institutions or workplaces are nothing more or less than invitations to change. It is how individuals take up that invitation that is central to how and what they learn (Billett, 2001a). Internships as enacted in workplaces can provide structure in the form of the activities and interactions that they provide for the interns to engage with, just in the same way that this occurs within the students' education institutions. According to Giddens, the term structure refers to "structural property" – "this can be understood as rules and resources, recursively integrated in the reproduction of social systems" (Giddens, 1979, p.64), of which both workplaces and educational institutions constitute. Hence, the workplace can be said to be a form of institution that provides affordances and opportunities for interns. Internships at the workplace serve as an invitation for interns to experience and learn from what they are afforded through those activities and interactions. This invitation includes opportunities to gain 'hands on' experience, develop new skills and expand their knowledge, which are of quite a different kind than those available in educational settings (Jackson et al., 2019). Giddens suggests that the workplace provides a structured learning environment that is more effective than classroom-based learning, as students can apply their knowledge to the work-related tasks and see the applications of their learning (1999).

Whilst Giddens's conceptions of structure and agency are seen as being seminal These ideas have been adopted within educational parlance as comprising affordances and engagements (Billett 2001b, Osman, Shaari & Hung, 2022). That is, what physical and social environments, albeit workplaces or education institutions afford individuals in terms of experiences from which they can learn: i.e., their invitational qualities. The degree by which they invite the learner to engage and participate and access the knowledge that arises from social sources and environments such as educational institutions and workplaces which in curriculum terms, refers to the enacted curriculum: what is provided for the student. Yet, on the other hand, how students come to engage with what has afforded them, the degree by which they elect to engage,

select which invitations to accept and through what means and with what degree of intentionality and agency. For example, in internships, students are afforded experiences within both the educational institution and workplaces. The quality of those affordances is premised on a range of factors associated with the kinds of experiences they are provided with, the opportunities provided by these two kinds of institutions, and the level and kind of guidance afforded by educators and workplace mentors. Yet, no level of affordances can guarantee the kinds of learning outcomes. This is because, ultimately, these are mediated by learners based upon what they already know, can do and value, their interpretations, intentions, and agency. Hence, there needs to be a consideration of both what is afforded the intern student, and how they come to engage with what has afforded them.

In the investigation presented and discussed here, agency and structure in the form of what is afforded to these interns and how they come to engage with them are used to evaluate the educational worth of internships. The quality of that worth is the ability to generate adaptability. This is used to evaluate the degree by which this combination of experiences and students' engagement with them are likely to be generative of adaptability and leads to conclusions about the educational worth of these provisions. These processes and outcomes are investigated here by gathering data from interns, educators and workplace supervisors associated with internships in post-secondary education institutions (PSEI) in Singapore. These PSEIs, also referred to as polytechnics, afford students a semester of compulsory internship in a selected workplace with the duration of over five months.

Through these student internships, the polytechnics provide opportunities for interns to participate in and attain workplace experience to promote their readiness for work-life, developing further their occupational and broader work-life capacities. This engagement allows for the occurrence of the kinds of transactional experiences referred to above, where interns are afforded opportunities to engage in workplace activities and interactions with a a focus on also developing adaptability. Through this process, interns can integrate their skills and knowledge learnt in the classroom into real-work environments (Baartman & Bruijn, 2011). The combination of experiences in PSEI and enterprise affordance, and importantly the students' transactions within them potentially allows interns to enhance their adaptability,

preparing them for the demands and challenges of working life. It is appraising that potential that is the focus of the practical investigation reported and discussed here.

Research Methods: Investigating internships at work

The practical inquiry investigated the development of adaptability from school to work in 20 young adults, aged 19 to 23, participating in internships provided by the polytechnics. Having gained their consent, participants were engaged in a semi-structured one on one interview to share about their internship experience. They were asked to describe in detail and their current job role, challenges faced, support provided, their feelings and expectations of the internship process.

The interview items were developed from an initial literature review and piloted with minimal change before the commencement of data collection. The qualitative data comprised interview transcripts which were carefully read and thematically analysed by two researchers independently, with guidance from members of the research team. Firstly, a six-phase thematic analysis, using a hybrid approach of inductive and deductive analysis (Braun & Clarke, 2006; Clarke, Braun & Hayfield, 2015), was conducted. A combination of 'theory-driven'/'analyst-driven' (i.e., deductive – producing codes relative to a pre-specified conceptual framework or codebook) and 'data-driven' (i.e., inductive - producing codes solely reflective of the content of the data) approaches was adopted. This process resulted in eight themes to be identified. The secondary process then involved the categorisation of these themes using dual coding measures aligned with each of the eight themes.

These processes were undertaken, and an interrater reliability exercise was conducted to verify the reliability of the categorisation of the data. Using the categorisation of one researcher as a baseline, the percentage agreement of the other researcher classifying the themes and associated dual coding is shown in Table 1. As shown in this table, there was 100% agreement for the categorisations of themes after consultation.

Table 1: Inter-researcher agreement over categorisations of themes and associated dual coding before and after consultation.

Theme	Variable	Agreement after initial categorisation (%)	Agreement after consultation (%)
Experiences	productive/unproductive	90	100
Engagement	rich engagement/ superficial participation	75	100
Intern expectations	fulfilled/partially fulfilled	80	100
Workplace scaffolding	expansive/restrictive	65	100
Workplace provision of experiences	directed and engaging/unstructured and peripheral	85	100
PSEI lecturer scaffolding	expansive/restrictive,	65	100
Interns' responsiveness to challenges	fulsome responses/measured engagement	95	100
Intern adaptability	demonstrated adaptiveness/limited adaptive approaches	85	100

Further to the descriptive analysis is the bivariate analysis between affordances and engagement to be undertaken. That is, correlation analysis of the variables (i.e., themes) described above was conducted, using Pearson correlation (Science Direct, 2021), to explore the relationships and patterns between these variables. Pearson correlation allowed for a comprehensive examination of whether a relationship exists between variables (e.g., affordances and engagement) then determining the magnitude and action of that relationship thus allowing for the understanding of the factors influencing the outcomes and experiences of interns. Essentially, it is the quantitative analysis of the qualitative interview data that is how the data were analysed for appraising patterns in how these key thematic elements were able to describe what was afforded through workplace experiences and support and also that provided through the educational institution, on the one hand, and also measures of how the interns engaged with their experiences in the work setting, on the other.

Findings about support and engagement

Interviewing student interns about their internships provided valuable insights into their experiences and challenges they encountered, and how they responded to them (i.e., affordances and engagements).

Descriptive and correlation analysis was generated through SPSS statistical software version 27 and presented in Table 2 and Table 3, respectively. Table 2 presents an overview of the categorisation of the data under the eight themes, dual values through which the variables were categorised, the number of responses to those variables and the percentage of respondents whose contributions were aligned with that variable. Some of these variables are aligned with affordances (i.e., workplace and educational scaffolding, quality of workplace experiences), whilst others are more aligned with the agency of the interns (i.e., intern responsiveness and adaptability). The variable is presented in the left-hand column and the value attributed to it by the participants is presented in the column to the right of it and in the right column, the number of participants indicates the corresponding value.

Table 2: Descriptive overview of thematic data

Variables	Values	N
Experiences	Productive	19
	Unproductive	1
Engagement	Rich engagement	15
	Superficial participation	5
Intern expectations	Fulfilled	10
	Partially fulfilled	10
Workplace scaffolding	Expansive – open and positive	11
	Restrictive – closed and specific	9
Workplace provision of experiences	Directed and engaging	9
	Unstructured and peripheral	11
PSEI Lecturer Scaffolding	Expansive – open and positive	14
	Restrictive – closed and specific	5
Interns' responsiveness to challenges	Fulsome responses	12
	Measured engagement	8
Intern adaptability	Demonstrated adaptiveness	14
	Limited adaptive approaches	6

These analyses provide indications of key contributions and the frequencies with which they were reported by the informants, which are now discussed in the following sections.

Experiences

The interns' reporting on the quality of their experience was classified **as being either "productive" or "unproductive". Productive experiences** were those classified as when the intern reported them as being beneficial and insightful in so far as they have learnt productively from them. This classification suggests that the interns had worthwhile **learning experiences, developed new skills and that their expectations were met through the internship. An unproductive experience, on the** other hand, implies that the interns found limited benefits of value **of their internship. This could be due to the lack of guidance, limited opportunities for skills development, or a mismatch between interns'** **expectations and the tasks assigned. This may cause interns to feel** dissatisfied with their internship experience. As indicated in Table **2, overwhelmingly, the interns reported that their experiences were productive.**

Engagement

The interns' responses about engagement were classified as being either "rich" or "superficial" depending upon the levels of involvement and **participation by the intern during the internship. Rich engagement** was classified when high levels of involvement such as the intern **seeking out opportunities to actively participate in the work tasks given** were reported. Conversely, data was classified as being of superficial **participation when a lower level of involvement was reported, suggesting** **that the intern is less proactive, showing limited initiative and** **maintaining a more passive role in the company. As indicated in Table 2,** **15 of the 20 informants reported that their engagement was rich which,** is consistent with the overall finding about internships being productive for their learning.

Intern expectations

Intern expectations refer to the anticipated outcomes that interns had of the internship. These expectations were categorised as either "fulfilled" or "partially fulfilled" based on whether the internship experience was **reported as being aligned with the intern's original expectations of** those experiences. Fulfilled expectations were indicated by the intern

having a rewarding experience that matches their initial expectations the internship. A partially fulfilled expectation suggests that interns reported a mix of satisfaction and disappointment, especially when they encountered unmet goals. The responses here are mixed and balanced with half of the interns reporting under both classifications of expectations, as presented in Table 2. So, whereas measures of the productive and engaged qualities of these experiences were high, interns reported in equal measure their expectations had been fulfilled or partially fulfilled.

Workplace scaffolding

The degree by which support has been provided in the work setting is captured here under the rubric of scaffolding. It refers to the structure and guidance provided to the interns to assist their development of skills and abilities required to participate in and complete work tasks successfully. "Expansive – open and positive" scaffolding refers to an environment that encourages exploration and autonomy, providing the intern with a positive and supportive culture that values continuous learning. "Restrictive – closed and specific" refers to a more structured and controlled environment. This type of scaffolding usually entails limited flexibility and requires adherence to strict protocols. However, it is important to be aware that being restrictive is not necessarily a negative quality as it may also capture the characteristics of the work being undertaken and the need for that work to be carefully controlled, managed, or regulated. As with interns' expectations, the reported findings here are also quite balanced with only 11 of the 20 interns referring to expansive opportunities during their internships, as presented in Table 2.

Workplace provision of experiences

Another measure that captures the affordances of the work setting is the degree by which the informants characterised the qualities of their workplace experiences (i.e., activities and interactions) and the level of direction and engagement provided to the intern. "Directed and engaging" provision refers to a structured and purposeful approach, where interns are given clear tasks and guidance. "Unstructured and peripheral" provision implies a lack of clear structure or focus. Interns may not receive clear guidance or meaningful tasks. As indicated by the

presentation of the analysis in Table 2, on balance, slightly fewer interns reported structured experiences than those reporting unstructured experiences. However, again, these responses need to be understood in the context of the kind of work being undertaken by the interns and the degree to which a structured or unstructured approach is appropriate in those work settings and for different kinds of work tasks.

PSEI lecturer scaffolding

PSEI lecturers' scaffolding represents another affordance in the form of support and guidance provided by these lecturers during the internship process. That is, the lecturers provide support before the students become interns in the workplace and have contact with the workplace supervisors. They provided guidance and support for the interns periodically and as requested by them associated with their progress within the internships. Noteworthy is that PSEI lecturers' scaffolding was categorised as being "expansive: open and positive" when it encouraged active intern engagement and exploration. Data classified as being indicative of "restrictive: closed and specific" refers to PSEI lecturers adopting a more structured (i.e., didactics) approach, where there is specific advice and guidelines for the intern to follow. As indicated in Table 2, 14 of the interns reported lecturers taking an expansive approach. Of course, there are circumstances in which less expansive guidance would have been required in terms of intern conduct in the workplace and encouraging them to adhere to workplace practices, including but not restricted to aspects of safety and following protocols.

Interns' responsiveness to challenges

Interns' responsiveness to challenges refers to the degree to which they can address workplace challenges, such as new tasks, problem solving, or requests to engage in new areas of work. In some ways, addressing these challenges represents the exercise of their agency, and with it engaging in non-routine problem-solving activities which are of the kind that both rely upon adaptability but also develop it (Billett, 2022). Data indicated many of the interns engaged with such challenges in enthusiastic and effortful ways and, sometimes, proactively sought solutions to these problems or challenges. These instances were classified as a "fulsome response" in the dual coding system. They are

characterised by resilience and willingness to achieve positive outcomes. Conversely, data that was classified as the intern taking a more limited or cautious approach to the tasks were classified as "measured engagement". This could mean they exhibited a more moderate level of initiative as compared to fulsome responders. As indicated in Table 2, when self-reporting such challenges the interns indicated high levels of 'fulsome responses' on their part (i.e., 12 out of 20). The data indicate a pattern of engagement that is consistent with self-reports about their adaptability efforts. That is, the contributions to their learning were not restricted to what had been afforded them through the workplace experiences but were enacted and augmented through their own agency and effortful engagement in new tasks and challenges.

Intern adaptability

Interns' adaptability was categorised as "demonstrated adaptiveness" which refers to interns who exhibited a high degree of flexibility, and openness to change. That is, when interns indicated that they had adapted to the challenges of the workplace and embraced unfamiliar tasks. Conversely, when the data indicated that the interns have struggled to adjust to the changing work environment they were coded as taking "limited adaptive approaches". As indicated in Table 2, the interns reported high levels of adaptability (i.e., 14 out of 20). This finding about adaptability is interpreted as being very positive in terms of the interns' engagement in developing the capacities for and exercising adaptability. It would be inappropriate to expect that all the interns would be able to demonstrate adaptability through their internships, given that they were engaged in activities that are often constrained, understandably, by workplace practices and protocols. Here, the concept of bounded agency (Shanahan & Hood, 2000), comes to the fore. That is, the interest in and ability of individuals to exercise their agency given the context of the boundaries prescribed for them. Workplaces have clear boundaries that indicate tolerances for agency and adaptability given specific kinds of work practices and needs. Hence, the overall pattern here indicates that within bounded circumstances and where possible the interns engaged in adaptive practices.

In these ways, the pattern of the response to these variables indicates that, overall, internships provided productive and engaging experiences

in work settings even though not all their expectations were fulfilled, and that the support they received from both the work settings and their host educational institution were, broadly, helpful, and supportive of the educational experience. Albeit self-reported, the interns suggested that their agency and engagement likely underpinned much of the success of these internships. That is, an individual cannot rely solely upon the affordances of the polytechnic and the workplace, but that interns themselves also need to exercise their personal agency.

Correlations of affordances and engagement

The results of correlation analysis are presented in Table 3. In the left-hand column are the variables and across the tables to their right are the correlations related to those variables. The Pearson correlation coefficient was computed to assess the strength of the association between two variables and the direction of the relationship. The value of the correlation coefficient varies between -1 (strong negative relationship) and +1 (strong positive relationship), thereby indicating the degree by which the two concepts are aligned positively or negatively. The value at or close to zero implies a weak or no relationship. The coefficient bolded indicates a positive correlation between the two variables.

Table 3: Results of correlation analysis

		Engagement	PSEI Lecturer Scaffolding	Workplace scaffolding	Workplace provision of experiences	Intern adaptability
Engagement	Pearson Correlation	1	.278	**.638**	**.522**	.126
	Sig. (2-tailed)		.250	.002	.018	.597
	N	20	19	20	20	20
Intern expectations	Pearson Correlation	.346	.151	**.503**	**.503**	.436
	Sig. (2-tailed)	.135	.537	.024	.024	.054
	N	20	19	20	20	20
Workplace scaffolding	Pearson Correlation	**.638**	-.025	1	**.818**	**.504**
	Sig. (2-tailed)	.002	.918		.000	.023
	N	20	19	20	20	20
Interns' responsiveness to challenges	Pearson Correlation	.236	**.459**	**.492**	**.533**	**.802**
	Sig. (2-tailed)	.317	.048	.027	.015	.000
	N	20	19	20	20	20
Workplace provision of experiences	Pearson Correlation	**.522**	.088	**.818**	1	**.592**
	Sig. (2-tailed)	.018	.720	.000		.006
	N	20	19	20	20	20

Notes: Correlation coefficient values less than +0.5 or greater than -0.5 are not considered significant (by most statisticians).

The following seven conclusions can be drawn from Table 3. Firstly, when workplace scaffolding fosters an open and expansive environment, the interns experience rich engagement in their work activities and interactions from which they learned. Secondly, when workplaces provide experiences that the interns found interesting and worthwhile, they reported having had, the interns experienced rich engagement. Thirdly, when workplace scaffolding encourages an open and expansive approach to work activities and interactions, the interns reported that their expectations were fulfilled to a greater degree. The same occurred when workplaces provided support and direct guidance led to interns reporting that their expectations had been fulfilled, as the fourth consideration, which was aligned with interns reporting that they demonstrated productivity and positive to new workplace challenges. Fifth, there was some correlation between workplace as having an open and expansive environment and the reporting of interns demonstrating adaptiveness in and through their work. Sixth, and perhaps not surprisingly, when the interns reported engaging fulsomely in their responses to workplace challenges, they also demonstrated adaptiveness. Equally, and finally, in their workplaces provided directed and engaging experiences, the interns demonstrated adaptiveness. It is this adaptiveness that is a central concern for the educational outcomes of internships.

Discussion: Internship support and opportunities for learning adaptability

The findings from the quantitative analysis of the qualitative data provide valuable insights into the relationships between the different factors involved in these students' internship experience in promoting adaptable learning outcomes. Through examining how the factors interplay with one another, a more informed understanding of the types of experiences provided and support needed for interns to transition to working life can be developed, both in terms of direct affordances (i.e., workplace and education institutional scaffolding), but also the opportunities and scope to exercise and develop further their agency and adaptability, albeit within the boundaries of workplace requirements. The quantitative findings revealed that interns' adaptability was shaped by interplays between workplace structures in terms of the activities and interactions they were afforded, including the boundaries placed upon

their agency by workplace protocols and practices, on the one hand. Yet, on the other, was their agency in seeking learning opportunities and engagement and then their engagement in adaptive actions when seeking to respond to workplace challenges including new tasks, problems to be solved and new areas of work in which to engage. These findings emphasise the importance of workplace experiences and supportive relationships in promoting intern engagement, expectation fulfilment, and adaptiveness.

These quantitative findings indicate statistically significant relationships between workplace scaffolding, workplace provision of experiences, intern engagement, intern expectation fulfilment, intern responsiveness to challenges, and intern adaptiveness. However, caution needs to be exercised because the number of informants is very small, and the correlations are, accordingly, limited to what can be proposed from such a small sample size. Nevertheless, based on the quantitative analysis of these data, four key findings emerge from this analysis.

Firstly, there is a positive correlation between an open and expansive workplace scaffolding that fosters and encourages intern engagement. When the workplace provides interns with an environment of higher support, they reported having higher levels of engagement in their daily tasks. Secondly, there is a significant relationship between workplace provision of experiences and interns' reported fulfilment of expectations. This means that when workplaces provide directed and engaging experiences, these interns reported believing their expectations were met, leading to a more fulfiling internship experience. Thirdly, the data analysis indicates that when workplace scaffolding was open and expansive, interns were reported to have exhibited higher levels of adaptiveness. This suggests that a supportive workplace environment fosters interns' adaptability to adapt to new challenges. Fourthly, the analysis indicates a positive correlation between workplace scaffolding and the provision of experiences. These two factors are interrelated, indicating that an engaging and well-structured workplace tends to provide more opportunities for interns to grow. Overall, the quantitative analysis of the qualitative interview data provides patterns of responses that underscore the importance of an engaging and supportive workplace environment in promoting expectation fulfilment, adaptiveness, and intern engagement.

Giddens' theory emphasises the dynamic relationship between structure and agency, suggesting that individuals have the capacity to shape and be shaped by their environments (1984). In relation to the findings above, these interns' workplace experiences provided through their educational institutions represent structures that interns encounter and are suggested to them, through the norms, forms, and practices of those institutions (i.e., affordances). Conversely, the agency of the interns refers to the degree by which they can and their ability to make choices, exercise autonomy and navigate within the structure (i.e., engagement). It is recognised that personal capability is central to taking action and initiating change through purposeful and meaningful choices (Bishop, 2017).

The structure of the workplace frames the interns' experiences, and in many ways provides boundaries for their agency (Shanahan & Hood, 2000). This includes the availability and difficulty of tasks, access to resources, and the support given to them by their supervisors. This workplace structure influences the opportunities available for interns to adapt to the new environment and exercise agency, advanced here as workplace affordances. These affordances include workplace scaffolding and provision of experiences by supervisors and co-workers, and also by lecturers in the PSEIs. These elements represent the frameworks and support systems established by the company for the interns. On the other hand, agency represents the intern's ability to make choices and respond within the context of workplace structure (i.e., how they come to engage). This constitutes their proactive behaviour and engagement in their work tasks. Learning opportunities do not necessarily lead to rich or productive learning; individuals must actively engage with these opportunities to facilitate learning, Individual behaviour has the potential to influence the overall learning environment within the workplace (Helfer, 2023). As interns, they can advocate for more learning opportunities or conversely, their reluctance to learn can impact the nature of the work (Helfer, 2023).

As the Giddens' theory of structure and agency (1984) highlights their interdependence, the workplace structure sets the boundaries, while the agency shapes the interns' responses and actions within the boundaries. The findings above demonstrate how interns' adaptiveness is related to the interplay between workplace scaffolding, workplace provision of experiences, and learning opportunities. The workplace structure shapes

the opportunities afforded to these interns, while agency allows interns to actively engage and adapt to different circumstances. Individuals may switch roles, leading to shifts in their levels of adaptability, creativity, and critical responsiveness to evolving structures (Emirbayer & Mische, 1998). The findings indicate that a supportive workplace structure can potentially assist interns to exercise agency, engage actively with their tasks, fulfil their expectations, and demonstrate adaptiveness. Likely, as interns demonstrate their ability to be adaptive, more opportunities will be afforded to them in their work settings. All of this is consistent with Giddens' (1979) view that agency and structure are mutually constitutive, as interns' actions and responses are influenced by and influence the workplace environment. Interns actively exercise their autonomy and agency by engaging in meaningful collaborations to define challenges, validate objectives, and propose innovative solutions (Hayes & Cejnar, 2020). This process not only fosters independence but also empowers interns to play an active role in problem solving and goal setting within the workplace.

Implications for educational practices

These findings indicate implications for those involved in the planning, enactment, and evaluation of internships about how they can assist tertiary education students in making successful transitions into working life. The insights advanced from this study may be used to guide future actions aimed at improving the internship experience and outcomes. For post-secondary educational institutions, these findings inform curriculum enhancements, ensuring that students will be equipped with the necessary tools to navigate workplace challenges and adapt effectively. The analysis highlights the importance of providing interns with opportunities for rich engagement and scaffolding, within the boundaries of practice. By equipping interns with career planning and development, interns are more likely to increase their career adaptability over time and facilitate school to work transition (Koen & Vianen, 2012). For enterprises, employers can benefit from the findings by understanding the key factors that contribute to a positive and productive internship experience for their interns. Having a mentor at the workplace is important for interns' school-to-work transition because mentors offer guidance, skill development, networking opportunities, feedback, motivation, confidence, career advice, and

conflict resolution, all of which are critical for interns to succeed in their new professional roles (Dymock, 1999). By taking steps to improve their orientation into the workplace, providing clear expectations, and establishing a supportive environment that encourages intern adaptability, the learning, adaptability, and productivity of interns may increase (Le Maistre, 2006).

These processes and outcomes could well lead to improved satisfaction among interns and more informed decision-making about their occupational and work life pathways. Internship lecturers might also use these implications to refine their support strategies. By recognising the potential of their role in supporting interns' engagement and adaptive learning through their internship these tertiary students can also provide support in the form of feedback and guidance. In conjunction with workplace supervisors, lecturers can also seek to create learning opportunities to stimulate intern adaptiveness.

Conclusion

In conclusion, the findings of this investigation emphasise the need for collaboration and measures from all stakeholders involved in supporting student internships. Importantly, all of these arrangements need to consider the dual contributions of social settings (i.e., education and workplace) in affording activities and interactions that can support intern learning and developing adaptability within the boundaries of effective and safe work practice. Collectively, these may enhance the internship experience, allowing students to be better prepared for the working world.

References

Akkermans, J., and Tims, M. (2017). Crafting your career: How career competencies relate to career success via job crafting. *Applied Psychology 66*(1), 168–195. https://doi.org/10.1111/apps.12082

Akkermans, J., Paradniké, K., Van der Heijden, B. I. J. M., & De Vos, A. (2018). The best of both worlds: The role of career adaptability and career competencies in students' well-being and performance. *Frontiers in Psychology, 9*(1678), 1-13. https://doi.org/10.3389/fpsyg.2018.01678

Asian Development Bank. (2017). Work-based learning; Developing the quality, relevance and quantity of skills training. Retrieved from https://development.asia/explainer/work-based-learning-skills-development

Baartman, L. K., & De Bruijn, E. (2011). Integrating knowledge, skills and attitudes: Conceptualising learning processes towards vocational competence. *Educational Research Review, 6*(2), 125-134. https://doi.org/10.1016/j.edurev.2011.03.001

Barrick, M. R., Stewart, G. L., Neubert, M. J., & Mount, M. K. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology, 83*(3), 377–391. https://doi.org/10.1037/0021-9010.83.3.377

Bhandari, R., Basnet, K., & Bhatta, K. (2022). Internship experience: A transition from academic world to health care workplace. *Journal of the Nepal Medical Association, 60*(247), 331–334. https://doi.org/10.31729/jnma.7383

Billett, S. (2001a). Co-participation at work: Affordance and engagement. *New Directions for Adult and Continuing Education, 92*, 76-72. https://doi.org/10.1002/ace.41

Billett, S. (2001b). Learning through work: Workplace affordances and individual engagement. *Journal of Workplace Learning, 13*(5), 209-214. https://doi.org/10.1108/EUM0000000005548

Billett, S. (2009). Workplace competence: Integrating social and personal perspectives. In: Velde, C. (eds) *International perspectives on competence in the workplace*. Springer, Dordrecht. https://doi.org/10.1007/978-1-4020-8754-7_3

Billett, S. (2022). Promoting graduate employability: Key goals, and curriculum and pedagogic practices for higher education. In B. Ng (Ed.), *Graduate employability and workplace-based learning development: Insights from sociocultural perspectives* (pp. 11-29). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-19-5622-5

Bishop, D. (2017). Affordance, agency and apprenticeship learning: A comparative study of small and large engineering firms. *Research in Post-*

Compulsory Education, 22(1), 68–86. https://doi.org/10.1080/13596748.2016.1272074

Carnevale, A. P., & Smith, N. (2013). Workplace basics: The skills employees need and employers want, *Human Resource Development International, 16*(5), 491-501. https://doi.org/10.1080/13678868.2013.821267

Dansberry, B. E. (2012). Examining outcomes data from an undergraduate internship program. Paper presented at the 119th ASEE Annual Conference and Exposition; Conference proceedings, San Antonio, TX; United States; 10 June 2012 through 13 June 2012

Dymock, D. (1999), "Blind date: a case study of mentoring as workplace learning", *Journal of Workplace Learning, 11*(8), 312-317. https://doi.org/10.1108/13665629910300496

Emirbayer, M., & Mische, A. (1998). What Is Agency? *American Journal of Sociology, 103*(4), 962–1023. https://doi.org/10.1086/231294

Giddens, A. (1979). *Central problems in social theory*, University of California Press, Berkeley.

Giddens, A. (1984). *The constitution of society*, University of California Press, Berkeley.

Giddens, A. (1990). *The consequences of modernity*, Cambridge, Polity Press.

Giddens, B., & Stasz, C. (1999). *Context matters: Teaching and learning skills for work*, Centerpoint.

Hayes, M., & Cejnar, L. (2020). Evaluating alternative work-integrated learning opportunities: Student perceptions of interdisciplinary industry-based projects. *Journal of University Teaching & Learning Practice, 17*(4). https://doi.org/10.53761/1.17.4.7

Hefler, G., Fedáková, D., Steinheimer, E., Studená, I., Wulz, J. (2023). Early career workers' agency in the workplace: Learning and beyond in cross-country comparative perspective. In: Holford, J., Boyadjieva, P., Clancy, S., Hefler, G., Studená, I. (eds) *Lifelong learning, young adults and the challenges of disadvantage in Europe. Palgrave studies in adult education and lifelong learning*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-14109-6_15

Hirschi, A., & Valero, D. (2015). Career adaptability profiles and their relationship to adaptivity and adapting. *Journal of Vocational Behavior, 88*, 220-229. https://psycnet.apa.org/doi/10.1016/j.jvb.2015.03.010

Howe, D. (2008). Relationship-based thinking and practice in social work. *Journal of Social Work Practice First Annual Lecture, 12*(1), 45-46. https://doi.org/10.1080/02650539808415131

Jackson, D., Fleming, J., & Rowe, A. (2019). Enabling the transfer of skills and knowledge across classroom and work contexts. *Vocations and Learning,*

12(3), 459-478. https://doi.org/10.1007/s12186-019-09224-1

Koen, J., Klehe, U., & Vianen, A. (2012). Training career adaptability to facilitate a successful school-to-work transition. *Journal of Vocational Behavior, 81*(3): 395-408. https://doi.org/10.1016/j.jvb.2012.10.003

Le Maistre, C., Boudreau, S. and Paré, A. (2006), "Mentor or evaluator? Assisting and assessing newcomers to the professions", *Journal of Workplace Learning, 18*(6), 344-354. https://doi.org/10.1108/13665620610682071

Li L. (2022). Reskilling and upskilling the future-ready workforce for industry 4.0 and beyond. *Information Systems Frontiers: A Journal of Research and Innovation*, 1–16. Advance online publication. https://doi.org/10.1007/s10796-022-10308-y

OECD. (2010). *Learning for jobs*. OECD Publishing

OECD. (2019). *Skills matter*. Retrieved from https://www.oecd.org/skills/piaac/publications/Skills_Matter_Additonal_Results_from_the_Survey_of_Adult_Skills_ENG.pdf

Organisation for Economic Co-operation and Development. (2010). *Learning for jobs*. Retrieved from https://www.oecd.org/education/skills-beyond-school/Learning%20for%20Jobs%20book.pdf

Osman, Y., Shaari, I., Hung, D. (2022). Exploring out-of-classroom structural affordances for learning: A case study of a co-curricular activity. In: Hung, D., Wu, L., Kwek, D. (eds) *Diversifying schools. Education in the Asia-Pacific region: Issues, Concerns and Prospects* (pp. 127-146). Singapore: Springer. https://doi.org/10.1007/978-981-16-6034-4_7

Petrila, A., Fireman, O., Fitzpatrick, L.S., Hodas, R.W., & Taussig, H.N. (2015). Student satisfaction with an innovative internship, *Journal of Social Work Education, 51*(1), 121-135, doi: 10.1080/10437797.2015.977175

Savickas, M. L. (2005). The theory and practice of career construction. In S. D. Brown and R. W. Lent (Ed.), *Career development and counseling* (pp.42-70). John Wiley & Sons, Inc.

Science Direct. (2021). Pearson Correlation. Retrieved from https://www.sciencedirect.com/topics/computer-science/pearson-correlation.

Shanahan, M. J., & Hood, K. E. (2000). Adolescents in changing social structures: Bounded agency in life course perspective. In L. J. Crockett & R. K. Silbereisen (Eds.), *Negotiating adolescence in times of social change* (pp. 123-136). Cambridge: Cambridge University Press.

Tymon, A. (2013). The student perspective on employability. *Studies in Higher Education, 38*(6), 841-856. https://doi.org/10.1080/03075079.2011.604408

Universities Australia. (2008). A national internship scheme: Enhancing the skills and work-readiness of Australian university graduates. Retrieved from

http://hdl.voced.edu.au/10707/134895

About the authors

Natasha Tan is a research associate at the Center for Research and Development in Learning in Nanyang Technological University. She earned her bachelor's degree in Anthropology and Sociology, demonstrating a keen interest in understanding human societies and cultural dynamics. Building on her passion for research and social sciences, Natasha furthered her academic journey at the University of Western Australia, where she attained a Master of Social Research Methods (MA). She is actively involved in the domain of workforce learning, with a specific focus on delving into the work-integrated learning experiences of young adults and advancing the professional development of educators engaged in work-integrated education.

Dr Chue Shien is a research scientist at the Center for Research and Development in Learning in Nanyang Technological University. She was awarded the NTU Research Scholarship to pursue her PhD in science education at National Institute of Education (NIE), Nanyang Technological University Singapore. She earned her Master of Arts (MA) in English Studies from National University of Singapore (NUS) and holds a Postgraduate Diploma in Education (PGDE) from NIE. A teacher at heart, she has taught Chemistry at K12 level, journeyed with working adult learners in domains of applied linguistics and facilitated medical learning through team-based learning pedagogy.

Cheryl Ong Siow Bin is a research assistant at the Center for Research and Development in Learning in Nanyang Technological University. She received her bachelor's degree in Sociology and a minor in Science, Technology and Society (STS) from Nanyang Technological University. Her current field is on workforce learning, with special focus on young adults' work-integrated learning experiences and the professional development of educators engaged in work-integrated education. She is interested in the social learning and lifelong learning.

Dr Stephen Billett is Professor of Adult and Vocational Education at Griffith University, Brisbane, Australia, a National Teaching Fellow, Australian Research Council Future Fellow, Fulbright scholar and honorary doctorates from Jyvaskala and Geneva. He has worked in

industry, as a vocational educator, teacher educator, professional developer and policy roles in the Australian vocational education system and as a teacher and researcher at Griffith University.

Contact

Email: *natasha.tanr@ntu.edu.sg*

Email: *shien.chue@ntu.edu.sg*

Email: *cheryl.ong@ntu.edu.sg*

Email: *s.billett@griffith.edu.au*