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The potential of computer-mediated internships for higher education

Abstract

Purpose: This paper discusses the opportunities and limitations of computer-mediated internships (CMIs) for higher education providers and outlines how higher education providers may maximize the benefits that arise from CMIs through strategic choices.
Approach: The paper provides a systematic assessment of the benefits, opportunities and limitations of CMIs. A particular focus of the paper concerns ways in which higher education providers may utilize CMIs to maximize student learning as well as institutional benefits in terms of the use of expertise, collaborations and the achievement of institutional targets.
Findings: Benefits of CMIs include the more inclusive access of previously disadvantaged student groups to internship opportunities, as well as fewer restrictions for higher education providers and employers. Given the right design, CMIs can provide a number of important learning opportunities to students while providing extensive opportunities for higher education providers. However, the benefits of CMIs need to be viewed in line with the challenges that arise, such as the skill and expertise required to implement CMIs, the required investment of resources, and the currently limited acceptance of CMIs by employers.
Practical implications: The findings of the paper highlight that CMIs have the potential to be highly beneficial for higher education providers and students. In addition the paper showcases how higher education providers may address the limitations of traditional internships, as well as the challenges that arise in relation to CMIs, through the systematic and well supported application of technological solutions.
Value: The paper makes an important contribution to the literature because it is the first to evaluate the potential of CMIs for the providers of higher education programs.

Keywords: skills gap, workplace transition, internships, simulation, computer-mediated communication, interaction

1. Introduction

The transition of students from university to employment is receiving growing attention (Jackson *et al.*, 2014; Rosenberg *et al.*, 2012), and has been the focus of numerous higher education strategies and collaborative ventures between employers and higher education providers (HEPs). Given that workplace experience is an important contributor to the successful transition from education to graduate employment (Guile and Griffiths, 2001; Knouse *et al.*, 1999), HEPs have a strong incentive to increase the amount and quality of workplace based learning opportunities for students (Jackson *et al.*, 2017).

The emergence of new communications technology, which allows students, employer organizations and HEPs to closely interact across time and location boundaries (Harr *et al.*, 2011), has more recently led to the creation of virtual work environments (Zander *et al.*, 2013). This development has, in turn, enabled the extension of traditional internships into new dimensions: namely simulated internships (see Bayerlein, 2015) and e-internships (also known as virtual internships, see Jeske and Axtell, 2014; van Dorp *et al.*, 2011).

The purpose of this paper is to outline and evaluate new technologically driven, and potentially resource-minimizing, internship opportunities that may enable HEPs to address some of the contemporary challenges in this area. All analyzed internship formats represent extensions to traditional internships that aim to address existing limitations through the use of computer-mediated communication and technological infrastructure.

The contribution of this paper therefore focuses on the potential benefits, application and integration of computer-mediated internships (CMIs) in the higher education setting, either as stand-alone HEP initiatives, or in collaboration with employers and professional organizations. The paper also explores the possibility of linking CMIs to strategic HEP goals, and assesses the ability of CMIs to reduce the existing skills gap between higher education and the workplace. The current paper represents an initial exploration of concepts that are relatively new to the higher education sector. As a result, the current paper's arguments are qualitatively developed statements that highlight potential benefit and limitations in order to encourage HEPs to consider CMIs for future curriculum developments.

The structure of this paper is as follows. First, the paper introduces simulated internships and e-internships. Following this, the paper outlines a number of specific benefits and opportunities that CMIs may contribute to the higher education sector. The third section outlines the challenges that arise for HEPs that embrace CMIs, and provides recommendations that aim to assist HEPs in addressing these challenges. The paper concludes with a call to action, noting the boundaries and confines in terms of the contributions that CMIs could make to HEPs and their agendas.

2. Computer-mediated internships (CMIs)

The term internship itself has a variety of meanings and interpretations (Maertz *et al.*, 2014). The current paper defines internships as temporary (non-permanent) work placements that reflect a period of transition from higher education to employment. As a result, internships are defined as student learning experiences focused on applying classroom knowledge in practical situations (Beenen and Rousseau, 2010). Within the internship arena, learning experiences may be grouped into traditional internships and CMIs, which encompass simulated internships and e-internships.

Traditional internships are real-world work placements that aim to assist students in their transition from higher education to the workplace by placing them within an employer organization for a limited amount of time. Traditional internships are predominantly defined

by the extensive location-bound face-to-face interactions that occur between interns and their employer organization.

E-internships are fully or partially computer mediated real-world workplace experiences whose key difference to traditional internships is the geographic separation between the e-intern and the employer organization. As a result, e-internships enable a variety of flexible workplace arrangements because the intern and the employer organization may be located in different countries and time zones. Prior literature shows that although e-internships may be offered by any organization, they are particularly popular with non-profit organizations, small or medium enterprises, and start-ups (Jeske and Axtell, 2016a). The work programs/projects offered by such internships are often focused on marketing, content development and journalism, design, writing, and programing (Jeske and Axtell, 2013), and are often highly specialized and structured (Jeske and Axtell, 2014). Although e-internships are predominantly computer-mediated, their theoretical underpinning is similar to that of traditional internships because they are real-world workplace experiences and therefore involve some level of direct interpersonal interaction between the intern and the employer organization (Jeske and Axtell, 2016b).

Simulated internships differ substantially from traditional internships and e-internships because they are student learning experiences that are attached to HEP based blended and/or online learning programs. Simulated internships are student learning activities in which an immersive virtual workplace simulation replaces a traditional classroom/workplace setting (Bayerlein, 2015). The aim of such internship programs is to replicate the benefits that arise in a student's workplace based learning experience in an online or blended learning environment (Bayerlein, 2015). Simulated internships are consequently defined by the absence of any direct interaction between the intern and a real-world employer organization. Although simulated internships do not physically locate students in the world of work, they are highly valuable student learning experiences because they mimic the social and professional interactions of a real-world workplace through immersive multimedia, virtual reality gaming, and/or story telling approaches (Bayerlein, 2015). In order to support the development of student learning outcomes that are similar to those in traditional internships, simulated internships require students to assume the role of an intern responsible for a clearly defined work program. As part of this role, students are then required to engage with learning materials through real-world problem solving activities (Bayerlein, 2015).

Prior literature (Bayerlein, 2015; Jeske and Axtell, 2014;) highlights that CMIs are likely to be highly personalized experiences that meet the needs of a variety of different groups of interns, employers and HEPs. However, for the purposes of this paper, interns are assumed to be higher education students. This assumption is important because it enables a discussion of the benefits and limitations of CMIs from a HEPs perspective. However, the current paper acknowledges that internships may be sought by all types of individuals for a variety of reasons.

3. Benefits and opportunities of CMIs for HEPs

CMIs provide a number of benefits and opportunities for HEPs. Some of these are similar to those of traditional internships, while others arise due to the application of technology within CMIs. The importance of these benefits in the highly competitive higher education sector (Lueddeke, 2010) is substantial because they enable HEPs to demonstrate that their degree programs produce positive academic and employment-related outcomes for students (Hoyle and Deschaine, 2016; Maertz *et al.*, 2014). HEPs that are able to achieve high-quality outcomes in both of these domains are likely to be highly regarded by students and society, and are likely to excel in the increasingly important student outcome focused higher education quality metrics

such as the United States "Wall Street Journal/Times Higher Education College Ranking", the Australian "Graduate Destination Survey" and the European "U-Multirank" assessment system. Additional benefits of CMIs are likely to arise because successful internship programs have the potential to create strong and highly visible links between HEPs and industry partners (Gault *et al.*, 2000; Maertz *et al.*, 2014), which is likely to lead to improved reputation and student recruitment for the HEP (Divine *et al.*, 2007; Weible, 2010). CMIs in general, and e-internships in particular, build on this traditional internship benefit by extending the geographical range of available placements and industry partnerships. This extended range enables students to gain experiences in specific industries and highly specialized career pathways which are not readily available in all physical locations. The following sections provide further examples of how CMIs may support HEPs in addressing some of the contemporary challenges in higher education.

3.1. Meeting the skills gap to prepare students for the world of work

Many higher education programs remain dominated by an outdated focus on the classroom based development of theoretical knowledge (Guile and Griffiths, 2001). Degree programs with this focus are unlikely to adequately prepare students for the workplace (Bayerlein, 2015; Coll and Zegwaard, 2006; Fleming, 2008; Jackson *et al.*, 2017), and internship experiences are, regardless of their format, thought to be a suitable way to address this gap (Knouse and Fontenot, 2008).

Although all internship formats have the potential to reduce the existing gap between higher education and workplace practice (Candy and Crebert, 1991; De Lang and Watty, 2011; Jackson *et al.*, 2017), the following section highlights that CMIs are likely to be able to address this gap more efficiently than traditional internships. The efficiency that HEPs may gain from CMIs stems from the potential to substantially increase the number of placement opportunities that CMIs are able to provide. Given the increased number of placement opportunities for students, HEPs are able to integrate work placements more extensively into their curricula because the previously existing limitations (Brough *et al.*, 2015; Jackson *et al.*, 2017; Wray and McCall, 2007) in regard to the availability of placements, as well as mismatches between the geographical locations of students and placements, are largely resolved.

A further benefit of CMIs relates to the ease with which HEPs are able to evaluate the quality of internship programs. The quality of traditional internships represents a growing area of concern (Jackson, 2015; Maertz *et al.*, 2014; Perlin, 2012), and quality assessments of traditional internships are likely to be complex because their program and support structure may not be documented in a format that aids a review by the HEP. The application of CMIs is likely to resolve this issue because the successful electronic delivery of such programs requires a much more clearly articulated structure, focus, and documentation than traditional internship programs. HEPs are able to utilize this structure for their own pre-placement program quality evaluations, as well as for the assessment of student learning outcomes against agreed upon learning goals. The structured nature of CMIs may also support the efforts of those tasked with assessing the compatibility of internships and academic programs (see work by Kim *et al.*, 2012).

3.2. Extending tutoring and support beyond the classroom

Internships are learning experiences that expand classroom based knowledge creation, tutoring and support into workplace practice (Hergert, 2009). Although traditional internships are well

suited to deliver a learning experience beyond the classroom, certain limitations apply. For example, the extent to which faculty are able to monitor an individual student's progress and learning experience within a traditional internship is limited. This limitation arises because mentoring arrangements in traditional internships are focused on the provision of guidance and advice within the employer organization (Heron, 1999), and employers are often unable and/or unwilling to provide HEPs with continuous information about an intern's progress and activities. Although, literature (see Kim *et al.*, 2012) argues that HEPs may reduce the impact of this issue by assigning dedicated faculty advisors to each intern, the information asymmetry problem that underpins this limitation remains intact. CMIs are able to assist in the reduction of the underlying information asymmetry problem because their technological underpinning aids employer organizations in the collection of an individual intern's activities and progress, as well as the provision of such information to HEPs and faculty advisors (Romero *et al.*, 2007). Such information should be readily available within CMIs because an intern's day-to-day work activities are performed in a computer mediated online environment where activity and performance tracking is easily achieved (Romero *et al.*, 2007; Shanks *et al.*, 2003). HEPs and employer organizations may even be able to share intern specific performance information through continuous real-time tracking, similar to the progress and performance tracking that is utilized in most online learning management systems (Desmarais and Baker, 2012).

The provision of continuous information about an individual intern's activities and progress would assist HEPs for two reasons. First, HEPs are likely to benefit because additional student performance metrics enable evaluations of the extent to which an existing curriculum prepares students for a given internship experience, as well as their entry into the workplace. In addition, faculty, or an intelligent automatic learning environment, who are able to access (real-time) workplace-based performance metrics are able to assist students in their learning through the provision of additional remedial learning materials and strategies that aim to maximize performance and student learning outcomes (Desmarais and Baker, 2012). This feedback loop between the interns' workplace activities and the HEP, which is likely to be a key feature of all CMIs, is particularly immediate for simulated internships because in this environment faculty assume the role of workplace supervisors as well as faculty mentors. As a result, faculty mentors have detailed knowledge of the work program, the intended learning outcomes, and the performance of each individual intern.

3.3. Enabling students to confirm their career choice

Prior literature highlights that all internship experiences should enable students to evaluate the extent to which they are suited for their chosen career (Rothman and Sisman, 2016). Although this benefit should arise in all internship formats, CMIs, and simulated internships in particular, are likely to provide HEPs with opportunities to support this evaluation that are often unavailable in traditional internships. HEPs are able to provide this support because simulated internships are expected to be strongly embedded within the curriculum and under the control of the HEP (Bayerlein, 2015). This allows HEPs and faculty to challenge students' preconceptions and expectations in a systematic and well supported environment. Additional benefits arise because interns are likely perceive their individual internship experiences to be reflective of their chosen career (Ko and Sidhu, 2012), rather than a combined reflection of their chosen career and employer organization. Simulated internships are able to overcome this limitation and improve students' ability to evaluate their career choice, rather than their choice of employer, because no individual employer is able to dominate the simulated experience. Similar benefits, albeit at a lower level, are likely to arise for e-internships because the direct impact of the employer organization on the day-to-day working experience of the intern is smaller than in traditional internships. E-internships reduce the overall impact of the employer

organization on the internship experience because interns are not physically co-located with the employer organization. As a result, interns are more likely to focus their evaluation of the internship, and their own suitability for their chosen career, on the internship program rather than the employer organization. However, when viewed through the lens of social cognitive career theory (Lent *et al.*, 1994, 2000), this particular benefit is also associated with a key disadvantage of CMIs. Specifically, social cognitive career theory predicts that a reduction (e-internships) or exclusion (simulated internships) of social interaction opportunities between interns and colleagues, mentors and supervisors at the employer organization is likely to impact the work practices, expectations and level of self-efficacy of interns. Interns in CMIs are also less likely to develop affective learning outcomes (Kraiger *et al.*, 1993), because the accidental learning opportunities that are provided by unplanned ad-hoc social interactions with staff at the employer organization (Candy and Crebert, 1991) are reduced substantially. Whilst purposefully designed CMI experiences may be able to reduce this negative impact, the reduction or removal of social engagement opportunities for interns represents a key drawback for CMIs.

CMIs in general, and simulated internships in particular, also represent an opportunity for HEPs to expose students to simulated real-world work challenges early in their academic career. This early exposure is more likely to occur in CMIs than in traditional internships because CMIs are more easily focused on individual concepts or learning outcomes, which are manageable for first or second year students whose overall understanding of their chosen career path is likely to be limited. The early exposure of students to the world of work has several benefits for HEPs: Firstly, students are able to assess their career choice in the early stages of their degree, which is likely to lead to reduced attrition rates at the later stages of a degree program. A second benefit arises because the early exposure to a practical workplace setting is likely to aid students in the comprehension of subsequent curriculum content. This benefit arises because once students are exposed to a workplace environment they may be able to improve their overall skill and knowledge development by relating new learning tasks to their practical experience. Although similar benefits are likely to arise in traditional internships, CMIs enable students to relate their practical experience to curriculum content at an earlier point during their degree program. As a result, CMIs are likely to improve the skill and knowledge development of students throughout a larger proportion of their degree program than traditional internships.

3.4. Supporting HEPs' diversity and equality targets

Prior literature highlights that the addition of internships to existing curricula are beneficial for students in almost all disciplines (Candy and Crebert, 1991; Maertz *et al.*, 2014). However, the integration of traditional internship within a degree program may inadvertently limit the participation of disadvantaged student groups and undermine a HEP's efforts towards diversity and equality. Traditional internships may have this effect because they require interns to travel to an employer organization, the workplace may not suit those with disabilities (particularly in smaller organizations), time management constraints may exist for students with care giving responsibilities, and travel and/or relocation expenses of an internship may not be (fully) compensated by a stipend or salary (Bates, 2005; Moore *et al.*, 2015). While these issues are likely to limit the traditional internship participation opportunities of some students groups substantially, CMIs are able to reduce their impact through the use of technology. For example, the application of technological solutions is able to reduce the presence, travel and relocation pressures faced by interns substantially (Jeske and Axtell, 2014). As a result, the range and amount of internship opportunities for students with caregiving responsibilities, as well as students with limited financial means, is increased substantially. In addition, the application of

online learning and support platforms enables HEPs and employers to integrate mechanisms (including tools for voice command, visual enhancements, and so on) into CMIs that support students with disabilities. Given these opportunities, CMIs are expected to increase diversity in two ways: Firstly, through an increase in the diversity of internship offerings for students; and secondly, through an increase in the diversity of interns within a given employer organization.

4. Challenges of CMIs for HEPs

The current paper has described how CMIs may enable HEPs to provide high quality internship experiences to a large number of students, while concurrently enabling HEPs to access previously unavailable benefits and opportunities. However, not all degree programs are likely to be equally conducive to the integration of simulated internships or e-internships. Of particular concern are degree programs that enable students to enter numerous career pathways. Given that all internship formats are likely to be most impactful on student learning if they possess a clear focus (Rothman, 2007), prior literature (Bayerlein, 2015) recommends that HEPs should address this concern by structuring CMIs as umbrella programs in which individual interns develop the skills and knowledge that is most relevant to their personal career goals. Whilst such umbrella programs are well suited to the development of transferable soft/professional skills (Bayerlein, 2015), their ability to enable the application of the specific technical content most relevant to an individual student's personal career goals is likely to be limited.

In addition to the suitability of CMIs for individual degree programs, there are several challenges that may be associated with all CMIs. The following sections provide an overview of the key challenges that HEPs are likely to face when adopting CMIs, and outline recommendations that aim to assist HEPs in addressing these challenges effectively.

4.1. Expertise and student skills

The availability of expertise (both within and outside the institution) represents a key issue that HEPs should consider when adopting CMIs. The expertise required to develop and monitor CMIs may not be present at every HEP because faculty may have limited practical work experience (Jackson and Chapman, 2012), and their overall understanding of workplace based learning may be limited (Jackson *et al.*, 2017). This challenge is likely to be particularly pronounced for simulated internships because faculty may find the identification of critical learning outcomes that students should develop, as well as the processes through which such outcomes maybe supported in such an environment difficult to achieve (Bayerlein, 2015; Jackson and Chapman, 2012). In order to mitigate the impact of this challenge, HEPs should work closely with employer organizations to develop and maintain any CMI program.

In addition to ensuring that faculty is adequately prepared and supported, HEPs should ensure that potential interns possess the skills required to succeed in a CMI environment (Sattler and Peters, 2012). Critical CMI success skills that students should possess are likely to be similar to those required for online study (see Xiao, 2012) and telework (see Workman *et al.*, 2003; Xu and Tracey, 2014) arrangements, because both situations create challenges that are comparable to those that arise in CMIs. E-interns who do not already possess these skills at the start of their placements may not be able to close all skills gaps that impede their work performance on their own (Ilgen *et al.*, 2005; Spell, 2001). HEPs should consequently encourage students to develop critical CMI success skills through the application of active learning tasks, as well as the utilization of blended learning programs, in curriculum

components that preceded a student's CMI placement (Jackson *et al.*, 2017). In addition, HEPs and employers are also able to evaluate the extent to which prospective interns possess the skills required within a CMI by applying an appropriate recruitment process. During the recruitment of e-interns, traditional assessment criteria should be augmented with an evaluation of a candidates' technical competence, their ability to work in a self-directed fashion, and their ability to work in insolation without continuous supervision and support. The effective assessment of such skills is well supported through cultural self-awareness (Canady *et al*., 2011) and multicultural competency tests (Manese *et al.*, 2001).

Once interns have commenced a CMI, the pro-active provision of support, training and mentoring becomes critical to the overall success of their internship (Ruggerio and Boehm, 2017). Whist similar requirements exist in traditional internships (see Miller and Jablin, 1991), CMIs require such support to be provided through computer-mediated means. Prior literature highlights that potential avenues for the provision of support within CMIs include educational e-learning system (Chen, 2012), or e-mentoring activities (Thompson *et al.*, 2010). Within these support systems, HEPs may assist students in maximizing their CMI learning outcomes through the provision of pro-active peer and faculty advisor support opportunities (Jeske and Axtell, 2016b). If CMI interns possess the skills required to work remotely from their employer organization, are pro-actively supported by their HEP, and the internship program is conducive to a telework arrangement, the student learning outcome trade-offs between traditional internships and CMIs are likely to be small. However, it is important to note that CMI are unlikely to replicate all of the affective learning outcomes (Kraiger *et al.*, 1993), that arise within traditional internships through informal or socially focused ad-hoc interactions with staff at the employer organization (Candy and Crebert, 1991).

4.2. Investment

Another key challenge for the adoption of CMIs concerns the investment of substantial resources by HEPs. In particular, the amount of investment required to develop and implement simulated internships may, at first glance, appear prohibitive. Indeed, the increasing removal of educators from the working environment into which graduates will enter (Fleming, 2008; Jackson and Chapman, 2012) means that HEPs may not have the capacity to develop authentic workplace simulations without assistance (Bayerlein, 2015). In addition, HEPs may not already possess the technical infrastructure required to implement virtual internship programs for large numbers of students. Although both challenges may be overcome, the extensive resources required to develop virtual internship experiences may only be recovered successfully if the internship experience is utilized by a sufficient number of students, and faculty are able to develop the skills required to continuously update the simulation to maintain a strong link to the world of work. However, the investment required to operationalize CMIs may be more than balanced out by the gains that are available when collaborative opportunities are fully recognized and utilized (see Weible, 2010).

HEPs that are developing expert knowledge in the creation of simulated internships or e-internship programs may also be able to commercialize this knowledge, and assist key industry partners with the development or management of their own CMI programs. Although such activities do not represent the core business of most HEPs, the provision of assistance regarding the development and management of workplace based learning programs to key industry partners is likely to improve the relationship with these organizations substantially (Divine *et al.*, 2007; Gault *et al.*, 2000; Weible, 2010). The absence of a strong location-boundedness, as well as the availability of virtually unlimited placement numbers in simulated internships, may also enable internationally active HEPs to create distinctive online program offerings for an international audience. As a result, CMIs may be particularly relevant for Business Schools

that (aim to) offer international management education programs and seek to develop differentiation strategies as well as extensive partnerships with industry (Bevelander, 2011).

HEPs that choose to develop simulated internships may also minimize the required resources through the application of the design process described by Bayerlein (2015). Within this process, the backward design philosophy of Wiggins and McTighe (1998) is used to create student focused simulated internships through a combination of industry engagement and the application of proven educational principals. The utilization of this design process creates a student focused learning environment, because the identification of critically important graduate skills represents the starting point for all design activities (Michaelsen and Sweet, 2008). One option to maximize the learning outcomes of simulated internships (and concurrently minimizing development costs) is for HEPs to cooperate more extensively with employers, industry bodies and other HEPs (Grogan and Roberson, 2002). Such collaborations may, among other outcomes, result in situations where the content of simulated internships is provided by real-world business partners, and shared by a group of HEPs (also, see: Ruggerio and Boehm, 2017). In addition to providing content and advice on critically important graduate skills, industry partners may also be involved in delivering and assessing simulated internships to maximize the authenticity of the experience for interns, to ensure that learning materials and environments remain relevant for a given industry, and to reduce ongoing delivery costs for HEPs.

4.3. Acceptance of CMIs by employers

A final key challenge of CMIs relates to their limited acceptance by graduate employers. This challenge is largely due to employers' general unfamiliarity with the suite of available internship opportunities in general (Jackson *et al.*, 2017), and CMIs in particular.

Prior literature (Bayerlein, 2015) acknowledges that employer are likely to be concerned about the authenticity and learning value of CMIs, and provides theory based arguments that establish the high value of authentic CMIs for student learning. However, it is important to note that empirical evidence of the learning value of CMIs is thus far absent from the literature. Given the absence of such evidence, HEPs should address this challenge through extensive engagement with industry partners and employers (Wilson, 2012). Such interactions have two major benefits: Firstly, such interactions enable employers to influence the skills and knowledge that students develop within a CMI (see de la Harpe and David, 2012), which is critical for the creation of an authentic virtual workplace, and represents a cornerstone in the development of simulated internship experiences. Secondly, they allow employers to benefit from a HEPs experience in developing and implementing effective learning programs, which is likely to strengthen the relationship between employers and HEPs (Jackson *et al.*, 2017), improve an employer's acceptance of the developed CMI program, and enable employers to maximize the success and societal standing of their own internship programs.

In addition to the outlined HEP actions that aim to improve the acceptance of CMIs by employers, the increasing popularity of virtual work arrangements and the prominence of self-employment and freelancing (see Gandini, 2016) are also likely to improve the general acceptance of e-internships and simulated internships within the business community. However, the extent to which such general perception shifts are likely to occur is partly depended on the technical expertise, environmental pressures and organizational pressures faced by employer organizations (Baker, 2012). In addition, regional differences may arise because key factors, such as the geographical size of a country, as well as the degree of technological growth within that country, are likely to play an important role in the extent to which CMIs are embraced by HEPs and employers alike (see Jeske and Axtell, 2016a).

5. Concluding remarks

This paper discussed the opportunities and limitations of CMIs for HEPs and outlined how HEPs may be able to maximize the benefits that arise from CMIs through strategic choices. Although not all benefits and limitations that are discussed in this paper may be applicable to all HEPs, CMIs are likely to provide most HEPs with opportunities to expand existing workplace based learning programs, whilst concurrently addressing several limitations of traditional internships. However, CMIs are also associated with a number of challenges and limitations for HEPs, employer organizations and students. Despite these limitations, the current paper argues that the benefits of CMIs are likely to outweigh their limitations. This conclusion is reached because CMIs enable HEPs to address contemporary issues in higher education, including the workplace readiness and employability of graduates, the availability and quality of internship opportunities for a growing number of students, and the provision of internship opportunities for an increasingly diverse student population. As a result, the current paper argues that CMIs represent a valuable contribution to the higher education sector, and provide HEPs with previously unavailable opportunities to create workplace based education programs for students. Given the benefits that may be created through the widespread development and application of CMIs, we hope that more HEPs will consider to utilize CMIs in future curriculum development programs.

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