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Boosting career and employability outcomes through multiple learning abroad experiences

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Abstract

While participation in learning abroad has increased rapidly over the last decade, short-term programs played an important role in boosting participation and widening access to learning abroad. The current study takes advantage of a new pattern of participation in learning abroad to examine self-reported career outcomes and employability development benefits based on program duration and the number of programs undertaken. Using a large-scale dataset of graduates of Australian universities, the study challenges conventional wisdom that a longer experience is better and explores the impact of multiple short-term program participation as a new intervention in graduate career outcomes. Although this study is based on the Australian higher education context, the results may be informative to educators and policy-makers from countries with comparable learning abroad programs in considering how short-term programs can be used more purposefully to foster positive careers and employability outcomes.

Keywords: Higher Education Policy; Internationalisation; Graduate outcomes; Careers

Introduction

Universities play an important role in developing the knowledge and capabilities of young people in preparation for diverse careers paths (Mazzucato, 2018; Matherly & Tillman, 2019; Yorke, 2006). As many graduate jobs in today's workforce are situated within a global context or have an element of intercultural interaction, most leading universities around the world provide the opportunity for students to spend a period of time living and learning in another country. These international study experiences foster the development of global skills and knowledge (European Commission, 2014).

As a result of national and institutional strategies, participation in learning abroad¹, otherwise known as education abroad or study abroad, has increased rapidly over the last decade (Ogden, Streitwieser & Van Mol, 2020). Student demand has also driven growth. Students seek out the opportunity to study abroad for a variety of reasons including experiencing a new culture, developing language proficiency, gaining a competitive edge in the job market, having an adventure, learning new academic knowledge and developing employability skills (Berquist & Moore, 2019; Twombly, Salisbury, Tumanut & Klute, 2012).

Statistics on learning abroad participation are not universally available. In countries where data is reported, including the US, Australia and Japan, more than sixty percent of participants reported that they attended short duration programs. In the US, for example, 65% of learning abroad participants undertook a program of eight weeks or less in 2017-18 (Institute for International Education [IIE], 2019) and in Japan, 62% of participants in 2016 chose programs of less than one month in duration (Ota & Yummi, 2019). In Australia in 2019, 73% of learning

¹ This paper uses the term learning abroad to refer to a period of study undertaken in another country while the student remains enrolled in their home degree. Activities undertaken abroad can include study, research, internships, professional practicums, volunteering, community service and other learning endeavours such as case competitions. Other terms used interchangeably include education abroad, study abroad and international study experiences.

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abroad participants undertook short-term programs, defined as six weeks or less. As a proportion of all participants, this percentage has increased from 48% in 2014 (see Figure 1) (Australian Universities International Directors Forum [AUIDF], 2015-2020).

[Figure 1 About Here]

The growth in short-term program participation in some countries may be a result of widening access to learning abroad, and the affordability of short-term programs in comparison to the cost of spending a semester or year abroad (Scharoun, 2016). Expanding popularity may also reflect other accessibility issues such as discipline-specific academic program structures which make it easier to accommodate a single unit of credit abroad rather than a semester or academic year-equivalent credit. Psychological barriers may be more manageable for short-term programs, especially for students who are working to support their studies or for those with family commitments (Harvey et al., 2016). Finally, short-term programs may act as a ‘taster’ of an overseas experience (Bretag & van der Veen, 2017) which may lead to participation in other programs.

Even though several studies support the conclusion that a longer period of time abroad results in a better employment and career-related outcomes (Dwyer, 2004; Farrugia & Sanger, 2017; Johnson & Anderson, 2019), short-term programs represent a significant portion of learning abroad in some countries. The question for educators and policy-makers then becomes, how do we maximise the value of short-term learning abroad programs for student growth and development? In exploring this topic further, studies have examined specific themes, as well as aspects of the design of short-term learning abroad programs, such as the development of intercultural competence (Vande Berg, Connor-Linton, & Paige, 2009), acquisition of global

awareness (Chieffo & Griffiths, 2004) and the impact of location and language of instruction (Johnson & Anderson, 2019; Sutton & Rubin, 2010).

Although some researchers have discussed the trend towards undertaking multiple short-term programs (Chieffo & Griffiths, 2004; Coker, Heiser, Taylor & Book 2017; Green, King & Gallagher, 2019; Potts, 2021), very little evidence is available on the additional benefit of participating in more than one short-term learning abroad experience. This paper takes advantage of a new pattern of participation in learning abroad to examine self-reported career outcomes and employability development benefits based on program duration and the number of programs undertaken. Specifically, we are interested in challenging conventional wisdom that a longer experience is better and exploring the impact of multiple short-term program participation as a new intervention in graduate career outcomes. Although this study is based on the Australia higher education context, the results may be informative to educators and policy-makers from those countries with comparable learning abroad programs.

Literature review

A growing body of research addresses the connection between learning abroad and labour market outcomes. In a meta-analysis of sixty-five papers, Waibel et al. (2017) defined three areas of learning abroad career outcomes commonly studied which included transition to employment, career planning skills and professional status. Across a diversity of countries, institutions and program types, they found that former participants reported positive connections between their learning abroad experience and career outcomes. The most consistently positive results support the perception of impact on such areas as career planning skills, career direction, personal

maturation and professional development. From the perspective of respondents, learning abroad was helpful in supporting the education-to-work transition.

Major research studies on the ERASMUS program in Europe have found that ERASMUS alumni are more likely to work in another country and are more likely to be internationally engaged in their work tasks. Former participants consistently connected their exchange experience with skills development and professional differentiation (Bracht et al., 2006; European Commission, 2014; Teichler & Jahr, 2001; Teichler & Maiworm, 1994; Teichler, 2017).

Learning abroad impact research has been critiqued for the use of self-assessment data and for not adequately accounting for personal characteristics of participants (Waibel, et al., 2017; Wiers-Jenssen, Tillman & Matherly, 2020). An emergent body of literature has used quasi-experimental techniques to minimize the selection bias. This research has found that career-related outcomes differ across participant groups. For example, an analysis of outcomes for Italian graduates found that participation in a learning abroad program increased the probability of being employed three years after graduation. The results were primarily driven by graduates from low socio-economic backgrounds (Di Pietro, 2015). In a German study, a positive impact of learning abroad was found for graduates from generic disciplines, or fields not strongly connected to a specific occupation (Waibel, Petzold & Ruger, 2018).

Employability Skills and Learning Abroad

Employer perspectives on recruitment practices indicate that learning abroad is not a highly ranked experience compared to internships, work experience and student leadership (Gardiner, Gross & Steglitz, 2008). However, the skills identified as important to prospective employers align with the areas of skills growth reported by former participants of learning

abroad (Gardiner et al., 2008; Potts, 2015; Wiers-Jenssen et al., 2020). As a result, employability skills development has become an area of focus for learning abroad outcomes research.

A national study of US graduates who participated in learning abroad programs found positive, self-reported results associated with fourteen of fifteen employability skills including flexibility/adaptability, interpersonal skills and communication skills (Farrugia & Sanger, 2017). Similarly, former ERASMUS participants reported that learning abroad had a high level of impact on the development of work-relevant skills including communications skills, adaptability, working with people from different backgrounds and foreign language proficiency (Bracht et al., 2006; European Commission, 2014).

Yet, studies also indicated the importance of explicitly discussing with participants the objective of improving and practicing transferable skills before, during and after the international program (Green et al., 2019; Johnson and Anderson, 2019; Potts, 2015; Wiers-Jenssen et al., 2020). While multinational organisations were more likely to view learning abroad favourably, many employers emphasized the need for graduates to be able to articulate their experience in terms of skills development in areas relevant to prospective employers (Green et al., 2019).

Program Duration, Career Impact and Employability Development

While duration is not consistently a variable of interest in learning abroad career outcomes research, several studies provide some direction on how time spent abroad impacts the experience of graduates. Former participants of short-term learning abroad programs (eight weeks or less) were less likely to agree that learning abroad contributed towards a job offer, with 43% agreement compared with 68% agreement for long-term programs (one-year) (Farrugia & Sanger, 2017). Up to fifty years following graduation, Dwyer (2004) found that participants in year-long programs were more likely to be engaged in international work, to work for a

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multinational organization and speak a foreign language in their workplace, than participants of medium and short-term programs. Although these results suggest an enduring impact of learning abroad participation for a longer time period, the results could also be interpreted as participants in long-term programs are more likely to aspire towards an international career and therefore chose to study abroad for a longer duration.

Turning to employability skills development, the findings of several studies report higher levels of impact for participants of longer programs. For example, of fifteen skills reported by Farrugia and Sanger (2017), ten skills were rated significantly higher for longer duration programs. Only four, curiosity, work ethic, leadership skills and technology skills, did not vary across durations. Results for teamwork skills were rated higher for short-term program participants. Johnson and Anderson (2019) found weaker connections between skills gains and duration than for overall career trajectory. They suggested that for short-term program participants, there may be lower recognition of the connection between their learning abroad experience and skills development and emphasised the role educators play in supporting students to recognize and articulate their competency gains.

A search of the literature found few studies that consider career-related outcomes from multiple program participation. Green et al., (2019) found that multiple program respondents were able to describe how each international experience added to their skills, knowledge and confidence. Employers in this study were also able to derive value from different types of experiences through talking to their individual employees. Given the emerging popularity of undertaking more than one learning abroad program during a degree (Chieffo & Griffiths, 2004; Coker, Heiser, Taylor & Book 2017), policy-makers and practitioners need to understand the

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3 impact of this pattern of participation in order to make informed decisions about policy setting,
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5 program design, student advising and career counselling.
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8 This paper aims to advance our understanding of the impact of learning abroad on careers
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10 and employability with a focus on program duration and multiple program participation. The
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12 study addresses the following research questions:
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- 14 1. Do the career-related outcomes of learning abroad vary between short-term to mid- and
15 long-term programs?
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- 17 2. Does participation in more than one learning abroad program provide greater career-
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19 related outcomes than participation in one program?
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- 22 3. Does participation in more than one short-term program provide greater career-related
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24 outcomes than participation in one mid- and long-term program?
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31 **Theoretical Framework**

32 Two theoretical approaches informed this study. Through Becker's (1993) human capital
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34 theory, careers and employability outcomes can be conceptualized as a return on investment in
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36 an internationalized higher education experience. As part of a higher education qualification,
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38 learning abroad is a value-added activity that may be a differentiator in the workforce following
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40 graduation (Crossman & Clarke, 2009). Returns on investment may take the form of
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42 employment and career-related benefits such as a foreign language proficiency, intercultural
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44 skills, a shorter job-search process, greater employment security and higher salary (Wiers-
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Jenssen et al., 2020; Waibel et al, 2017).

51 Signaling theory compliments and extends the concepts developed through human capital
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54 theory by recognizing the value of unobserved characteristics that may influence the decision to
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study abroad and also add value to an individual in the workplace (Waibel et al., 2018; Weiss, 1995). These characteristics may include self-confidence, autonomy and decisiveness (Petzold, 2017). Prospective employers may be more likely to select candidates who have studied abroad because these characteristics may lead to higher work performance.

Methods

Data

The data used in this study was collected as part of a larger project, Career Outcomes of Learning Abroad, a national study which surveyed graduates of Australian universities to understand the impact of learning abroad program participation on employment outcomes and skills development². Previous studies in Europe (Teichler & Janson, 2007), the US (Johnson & Anderson, 2019) and Australia (Potts, 2015) informed the development of the instrument, which was adapted to align with current Australian education and work statistical categories.

Data collection occurred between March and June 2019 via alumni networks of Australian universities, inviting participation in an online survey. Respondents were screened according to their participation in a learning abroad program. Valid responses from 3,376 graduates were included in the analysis. The sample includes graduates from 36 of 40 Australian universities.

Although the sample was recruited from a broad representation of universities in the country, the design of the study required participants to opt-in upon receipt of communications, meaning they had maintained a connection with their former university. A self-selection bias of

² The study was conducted under ethics approval from the university of the principle researcher. The descriptive statistics of this study have previously been published by the Blinded for review (Author, 2019; Author, 2020).

participants who had a good experience with higher education, learning abroad and their subsequent career is possible and should be considered in conjunction with the results.

Analytic Approach

Variables. The outcome of interest in the current study is threefold: first, whether or not one is working full-time at the time of survey. Second, one's evaluation of how important learning abroad was on five overall self-reported career impact areas including obtaining first job, obtaining subsequent career-related jobs, developing skills to support current and future professional role, income level in the current job, and long-term job prospects. Finally, respondents' ratings of the perceived benefit of learning abroad in terms of acquiring skills in the areas of: communication, teamwork, problem solving, interaction with individuals different to oneself, adapting and learning quickly, entrepreneurship, critical thinking, creativity/innovative thinking, judgment and decision making.

Survey methodology used in this study relies on self-reported data for all measures, and the possibility of social desirability, poor understanding of survey questions, and inaccurate retrieval of past events might undermine the validity of survey data (Porter, 2011). However, self-report measures have been widely used in assessing one's collegiate experiences and outcomes, and are generally considered as acceptable when survey items are clearly worded and theoretically/conceptually grounded, which is the case for the current study (Pace, 1985).

Employability skills employed by this study draw from the large pool of literature and policy papers in this area including the Future of Jobs report (World Economic Forum, 2016). Those measures were coded binary (1=important, very-important, 0=not at all important, not important, neutral) in order to address the skewed nature of the responses.

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The current study focuses on learning abroad program experiences, particularly the length of the program as well as participation in multiple programs. The program experiences are measured as i. participation in a short-term (seven weeks or less) versus medium-/long-term program (eight weeks to one year); ii. multiple learning abroad versus one-time participation (all durations), and iii. multiple short-term versus one medium-/long-term learning abroad program.

We also controlled for individuals’ demographics, which can impact their learning abroad participation as well as their occupational outcomes. In particular, gender (female, male, other), first generation status (both guardians had not completed any higher education), socioeconomic status (low, medium, and high based on the Australian Bureau of Statistics SEIFA IRSAD classification for high school attended), academic backgrounds such as highest level of degree (undergraduate, post-graduate, doctoral degree), major (STEM, Humanities, Arts, and Social Sciences, Business), and one’s year of graduation from the undergraduate program. See Table 1 for the definition and descriptive statistics for these variables.

[Table 1 About Here]

In the sample, 77% of graduates reported that they participated in a mid-/long-term learning abroad program, and 24% participated in multiple learning abroad programs. About 81% of the sample were working full-time at the time of the survey, and reported learning abroad to be somewhat or very important for developing skills (85%) as well as obtaining first- and subsequent jobs (61% and 56%, respectively) and long-term career prospects (66%). Yet, only about 22% found learning abroad to be important for the income level in their current roles. In terms of skills, over 80% of the learning abroad participants reported the importance of this experience in most of the skills, except entrepreneurship: only 53% responded that study abroad was somewhat or very important obtaining this skillset. In terms of demographics, about 70%

were female students, 50% of the participants were from high SES family and only 30% were first in family to attend university. While about 70% students completed undergraduate degrees, 49% and 44% of the students majored in STEM or Business, respectively, and 23% of the students studied in humanities and social sciences fields.

Analysis. As the outcomes are binary variables, we estimated a series of logistic regression to explain the differences in the probability of one indicating the benefit of learning abroad depending on the program experiences:

$$\ln\left(\frac{p}{1-p}\right)_i = \beta_0 + \beta_1 \text{Program Experiences}_i + \beta_2 \text{Demographics}_i + \beta_3 \text{Graduation year}_i + \varepsilon_i$$

where the β_1 captures what we were interested in for this study: how *Program Experiences* associate with the reported career outcomes. First, we compared the perceived career outcomes based on the length of the program (short-term vs. medium- or long-term) (RQ1). The analytic sample included graduates who were working in Australia, were not enrolled in education as a full-time student at the time of the survey, and were undergraduate students when they studied abroad (N=2,223). For RQ2, β_1 captured the differences in the perceived career outcomes between respondents who had multiple learning abroad (N=508) versus one-time participation (N=1,611). Finally, we tested if individuals who participated in *multiple short-term* learning abroad programs (N=109) might have a better perceived career outcome, compared to those who participated in *one medium-/long-term* learning abroad program (N=1,233) (RQ3).

Limitations

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The result of the study should be interpreted carefully, given several limitations of the study. While the statistical analysis used was able to control for a number of background and education variables, learning abroad should not conclusively be attributed for the career outcomes reported by participants. Universities provide different study environments and resources, which can include connections to employers and alumni.

Potential endogeneity associated with learning abroad has been a common source of bias for studying the effect of learning abroad on various outcomes. Specifically, individuals' motivation and personality characteristics (European Commission, 2014; Zimmerman & Neyer, 2013) may play a critical role in the decision to undertake a learning abroad program (Twombly et al. 2012; Waibel et al. 2017) as well as one's career outcomes. For instance, students with strong interest in working in jobs/industries that require skills for global engagement might invest in learning abroad experience from their personal orientation as well as for their career goals. While some studies have attempted to address the selection bias by employing analytic strategies (e.g., instrumental variable approach, regression discontinuity) that exogenously assigns students into the study abroad *participation* status (Di Pietro, 2015; Oosterbeek & Webbink, 2011), the current study was not able to employ these approaches, as there is no solid theoretical ground and literature that explains the sorting around different *types and durations* of study abroad programs; also, the data used in this research did not provide sufficient information that can successfully work as an exogenous variable. Therefore, the results should be interpreted as the differences in the career outcomes among the individuals who participated in different types of learning abroad programs.

Results

Perceived Impact of Learning Abroad on Career Outcomes by Duration

Table 2 summarizes career outcomes predicted based on the learning abroad characteristics. Firstly, for three overall areas of career impact, a significant difference was found between the participants of short-term and medium-/long-term programs. Students who participated in mid-and long-term programs were 1.4 times more likely to be employed full-time, compared to those who participated in short-term programs (Panel (A), Column (1)). Mid-/long-term learning abroad participants tended to consider the learning abroad experience to be impactful for obtaining his/her first job (Odd Ratio=1.47). Additionally, the positive perception of building skills to support current and future professional role (Odd Ratio=1.66), long-term career prospects (Odd Ratio=1.85), as well as income level (Odd Ratio=1.40) (Panel (A), Columns (2)-(6)) were significantly stronger for the mid-/long-term group.

Mid-/long-term learning abroad programs also contributed to the higher likelihood of perceiving the importance of learning abroad on six of nine employability skills (Panel (A), Columns (7)-(15)). For the capacity to adapt and learn quickly, respondents who participated in medium and long-term programs were more than four times as likely to report a high impact of learning abroad on that skill, compared to respondents who participated in short-term programs. The odds of correlating learning abroad with communication skills and the ability to interact with different individuals were respectively 2.65 and 2.31 higher for the mid-/long-term group.

Compared to short-term learning abroad, medium and long-term programs were also positively correlated with one's perceived development in problem solving (Odd Ratios=1.63), creativity (Odd Ratios=1.36) and judgement and decision making (Odd Ratios=2.17). On the contrary, and consistent with Farrugia and Sanger (2017), for teamwork skills, the direction of the result was

opposite (Odd Ratios=0.62), with short-term program participants more likely to report a high impact of learning abroad on this skill.

Perceived Impact of Learning Abroad on Career Outcomes by Single or Multiple Participation

Panel (B) of Table 2 reports the differences in career outcomes between individuals who participated in multiple learning abroad and only one program. While no meaningful differences were found between the two groups in terms of full-time employment, participants of multiple programs were more likely to perceive that learning abroad was beneficial for their career and employability outcomes across all other items measured. Multiple program participation was associated with twice higher probability of reporting perceived benefits than single program participation for obtaining one’s first job in his/her field of study (Odd Ratios=2.22), obtaining subsequent career-related jobs (Odd Ratios=1.96), developing skills to support current and future professional role (Odd Ratios=2.25), long-term career prospects (Odd Ratios=1.89) and income level in current job (Odd Ratios=1.81).

A significant result was also obtained for seven of nine employability skills, with participants of multiple programs 1.60 to 2.53 times as likely to report a high impact on their capacity to adapt and learn quickly (Odd Ratio=2.53), their critical thinking skills (Odd Ratio=2.07) and their communication skills (Odd Ratio=2.05). Multiple program participation was also beneficial for the development of problem solving (Odd Ratio=1.92), judgement and decision-making (Odd Ratio=1.56), entrepreneurship (Odd Ratio=1.56) and creativity (Odd Ratio=1.68). No significant difference was reported for teamwork skills or ability to interact with different individuals (Panel (B), Columns (7)-(15)).

Perceived Impact of Learning Abroad on Career Outcomes Comparing One Long-Term Experience to Multiple Short-Term Experiences

Finally, we compared individuals who participated in multiple short-term programs and one long-term programs (Table 2, Panel (C)). Respondents who participated in more than one short-term program were more likely to report the significance of learning abroad on career-related outcomes in three areas: obtaining first job (Odd Ratio=1.63), obtaining subsequent career-related jobs (Odd Ratios=1.58) and skills to support one's current and future professional role (Odd Ratio=2.35). Full-time employment was not significant, indicating no difference in employment status between these respondent groups.

Meanwhile, only one employability skill was positive and significant for multiple program participants. Yet, the size of the differences in the responses between the multiple short-term and single long-term programs was notable. Specifically, the odds of reporting the positive impact of learning abroad on critical thinking skills was 3.24 times higher for the multiple short-term group, compared to the one long-term learning abroad group.

[Table 2 About Here]

Discussion

This study has taken advantage of new patterns of learning abroad program participation by graduates of Australian universities to take a fresh look at the connection between learning abroad and career and employability outcomes. In this section, we will discuss the major findings and the implications for students, institutions and policy makers.

Learning Abroad Program Duration

In the overall career impact aspects, mid/long-term program respondents were significantly more positive about the connection between their international experience and career outcomes including obtaining their first job in their field of study, income level in their current role and long-term career prospects. Previous research (Farrugia & Sanger, 2017; Johnson & Anderson, 2019) has reported similar findings and concluded that in most areas of career outcomes, programs of a longer duration, generally considered to be semester and year programs, resulted in greater impact, from the perspective of former participants.

In the area of perceived skills development, for six of nine employability skills significant impact was reported. In four skills, communication, ability to interact with different others, capacity to adapt and learn quickly and judgement and decision-making, respondents were more than twice as likely to support a high or very high perceived impact of mid/long-term learning abroad programs. Teamwork was also significant, but in the reverse direction, indicating that participants in short-term programs were more positive about the development of their teamworking skills than medium and long-term program participants. This result is consistent with the finding of Farrugia and Sanger (2017), further supporting the perceived value of short-term programs in fostering skills for working in a team.

Another finding of the current study is that respondents who spent a longer duration overseas for study were more likely to be employed full-time. While program duration appears to be related to better reported career outcomes, we should also consider the possibility that for some participants, the decision to participate, type of program selected and subsequent outcomes may be connected to personality, motivation or other unobservable variables (Zimmerman &

Neyer, 2013). Consistent with signaling theory, these variables may support a graduate to succeed in the workplace (Waibel et al., 2018; Weiss, 1995).

Multiple Program Participation

The major contribution of this study to higher education research is the finding that participation in more than one learning abroad program during an undergraduate degree led to very strong perceived impact on most career aspects and the development of employability skills. Compared with participants of a single program, multiple learning abroad program participants were more likely to work full-time and perceive that learning abroad had a positive impact on obtaining their first job in their field of study, developing skills to support their current and future professional role, income level and long-term career prospects.

Additionally, they indicated that learning abroad benefited the development of seven of nine employability skills including communication skills, the capacity to adapt and learn quickly and critical thinking skills. It is important to note that the study uses self-reported data and self-assessment of skills development, which means that findings may present a more positive view of the measures reported than would have been obtained through random selection and objective assessment techniques.

Green et al., (2019) also reported support for the career and employability benefits of multiple program participation by both graduates and employers. Future lines of enquiry around this topic could consider activities undertaken while abroad and the types of students engaging in multiple program participation. Studying abroad more than once has also been associated with following a career with a global dimension (Mohajeri Norris & Gillespie, 2009) and working for an international organization (Potts, 2015). The question of cause and effect should be

considered carefully, however, as a student considering a global career may be predisposed to undertaking multiple international study experiences at the outset.

Multiple Short-Term Programs verses a Single Mid/Long-Term Program

Several studies have reported patterns of repeat participation in learning abroad, emphasizing the value of short-term programs in expanding access to participation by overcoming academic, financial and personal barriers (Bretag & van der Veen, 2017; Harvey et al., 2016). Examining the outcomes for participants of short-term programs, particularly those who undertook more than one short-term program, was an important part of this analysis.

The results of this study indicate that although very strong career-related outcomes were reported by participants in multiple learning abroad programs of any duration, undertaking more than one short-term program can amplify the career and employability outcomes in a comparable way to the outcomes from spending an extended period of time abroad through a single experience. This is demonstrated by three findings. Firstly, there was no significant difference between the groups on the likelihood of being full-time employed at the time of the study. Undertaking more than one short-term program appears to strengthen the employment outcomes of graduates, compared with undertaking a single program.

Secondly, participants of multiple short-term programs were more than twice as likely to agree that learning abroad supported the development of skills to support their professional role. They were also more positive about the impact of their international experiences on obtaining their first job and obtaining subsequent career-related jobs than participants of one medium or long-term program.

Finally, in the analysis of individual employability skills, there was no significant perceived difference between the groups for eight of nine skills. However, the perceived impact

of multiple learning abroad programs on critical thinking skills was more than three times higher than the comparison group. Studies using the National Survey of Student Engagement (NSSE) in the US have found that study abroad is positively correlated with deep learning, especially integrative and reflective learning (NSSE, 2007). The report states “it appears that the amount of time one is abroad is not as important as whether a student has such an experience” (NSSE, 2007, p.17) and goes on to suggest that short-term learning abroad or study away opportunities should be expanded to underrepresented student groups.

Experiential learning theory (Kolb, 1984) may assist in explaining how multiple learning abroad experiences promote student learning development. An international study experience provides an opportunity for students to synthesize, integrate and apply knowledge, supporting them to apply classroom learning in a new environment (Gonyea, 2008). More than one experience expands the opportunities to experiment and apply new knowledge in different contexts. The findings of the current study add support to the NSSE (2007) conclusion that short-term learning abroad programs may promote deep learning, especially for participants of multiple programs.

Further research on this topic might employ measures that provide objective assessment data in order to increase confidence in the findings and counter some of the possible biases in this study. Other career and employability-related outcomes that could be considered include occupational standing, job satisfaction and the appropriate match between education qualification and employment. Moreover, variables to capture potential mechanisms that exogenously predict participation in different types of learning abroad programs should be tested. While few studies have employed quasi-experimental methods with variables that explain individuals' selection into the learning abroad (e.g., % alumni participated in study abroad as a

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proxy for exposure to study abroad [Di Pietro, 2015], selection for learning abroad scholarships [Oosterbeek & Webbink, 2011]), these analytic approaches are often limited in their capacity to further differentiate the nature of the programs beyond participation (see Kim, Kim, DesJardins & McCall, 2015); finding exogenous variables that can be theoretically and empirically supported is a difficult task, often resulting in studies that over or underestimate the effect of learning abroad on subsequent outcomes (Angrist & Pischke, 2008).

Conclusion

This paper has presented the first large-scale findings on the perceived connection between learning abroad and careers and employability-related benefits for graduates of Australian universities with a focus on the intersection of program duration and multiple program participation. The findings suggest that promoting participation in more than one learning abroad program may be a highly effective way for institutions to amplify graduate employability outcomes. This is particularly relevant in education systems which reward institutions for graduate job placement rates, such as Australia and the UK.

By combining duration and multiple program participation, this study challenges traditional policy and practice in learning abroad that favours medium and long-term programs. Respondents in this study who participated in multiple short-term learning abroad programs reported a high and comparable level of career and employability impact, especially in the areas of job attainment, professional skills development and critical thinking skills. This finding is important because short-term programs can be more accessible to a broader range of students (Harvey et al., 2016; Scharoun, 2016), and they have become a popular way for students to experience the world. A student who is unable, for financial, personal or academic reasons to spend an extended period of time abroad can consider participating in two or more short-term

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3 programs, rather than one medium or long-term program, to increase their future work and career
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5 prospects.
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8 Higher education institutions and other policy makers should examine how policy and
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10 practice supports students in undertaking more than one learning abroad program, with
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12 consideration for how short-term programs can be used more purposefully to foster positive
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14 career and employability outcomes. The high prevalence of multiple learning abroad
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16 participation identified in this study indicates that more research is needed to fully understand the
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18 contribution of multiple international experiences to higher education outcomes. Although this
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20 study has been undertaken within the context of one national higher education system, the
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22 findings may encourage similar research projects in other countries. This study provides a
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24 foundation to build upon in the future.
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Figure 1. Learning Abroad in Australia by duration 2014-2019

Table 1. Definition and Descriptive Statistics for Key Variables

Variable	Definition	Frequency (%)
Full-time employment	1 if working full-time, 0 otherwise	1,794 (80.70)
Impact of learning abroad		
Obtaining your first job in your field of study	1 if one reported learning abroad being somewhat important or very-important on each statement, 0 otherwise (not at all important, somewhat not important, neutral).	1,347 (60.59)
Obtaining subsequent career-related jobs		1,246 (56.05)
Developing skills to support your professional role		1,879 (84.53)
Income level in current role		481 (21.64)
Long-term career prospects		1,461 (65.72)
Skills		
Communication	1 if one reported learning abroad being somewhat important or very-important on each area, 0 otherwise (not at all important, somewhat not important, neutral).	2,117 (95.23)
Teamwork		1,849 (83.18)
Problem solving		1,967 (88.48)
Ability to interact with diverse individuals		2,133 (95.95)
Capacity to adapt & learn quickly		2,107 (94.78)
Entrepreneurship		1,177 (52.95)
Critical thinking		1,908 (85.83)
Creativity/Innovative thinking		1,850 (83.22)
Judgement & decision making		1,965 (88.39)
Learning Abroad: Mid/Long-term	Mid/long-term if the duration is longer than 2-3mo; Short-term if the duration is 7 weeks or less	1,632 (77.02)
Learning Abroad: Multiple Times	1 if yes, 0 otherwise	508 (23.97)
Major areas of study*	Science, Technology, Engineering and Mathematics (STEM)	1,071 (48.68)
	Business	962 (43.73)
	Humanities and Social Sciences	514 (23.36)
Highest level of study completed	Undergraduate	1,548 (69.64)
	Graduate coursework	616 (27.71)
	PhD	59 (2.65)
Gender	Female	1,536 (69.41)
	Male	639 (28.87)
	Other	38 (1.72)
SES**		
Low	25 th percentile	164 (8.74)
Medium	75 th percentile	735 (39.16)
High	100 th percentile	978 (52.10)
First-generation status	Neither parents have a post-secondary qualification	651 (30.42)
Total number of the sample		2,223
Notes. *More than one discipline could be selected. **Derived from Australian Bureau of Statistics SEIFA IRSAD classification for high school attended. International students not included.		

Table 2. Career outcomes by duration and multiple participation

Panel (A): short-term vs. mid-/long-term learning abroad															
	Employment	Impact					Skills								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Full-time	First job	Career	Skills	Income	Long-term	Communication	Teamwork	Problem solving	Interactions	Adaptability	Entrepreneurship	Critical thinking	Creativity	Judgement
Mid-/long-term Learning Abroad	1.440** (0.241)	1.467*** (0.204)	1.182 (0.162)	1.656*** (0.319)	1.402* (0.251)	1.849*** (0.269)	2.652*** (0.894)	0.616** (0.134)	1.633** (0.350)	2.305** (0.860)	4.163*** (1.301)	1.248 (0.171)	1.099 (0.221)	1.359* (0.250)	2.166*** (0.459)
N	1717	1711	1715	1717	1715	1719	1467	1712	1710	1389	1562	1719	1691	1715	1663
Panel (B): one vs. multiple learning abroad															
	Employment	Impact					Skills								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Full-time	First job	Career	Skills	Income	Long-term	Communication	Teamwork	Problem solving	Interactions	Adaptability	Entrepreneurship	Critical thinking	Creativity	Judgement
Multiple learning abroad	1.201 (0.194)	2.219*** (0.290)	1.961*** (0.244)	2.249*** (0.447)	1.814*** (0.251)	1.885*** (0.252)	2.054* (0.786)	1.322 (0.227)	1.919*** (0.416)	1.445 (0.591)	2.525** (0.990)	1.564*** (0.190)	2.074*** (0.414)	1.682*** (0.298)	1.560** (0.329)
N	1717	1711	1715	1717	1715	1719	1467	1712	1710	1389	1562	1719	1691	1715	1663
Panel (C): multiple short-term vs. one long-term															
	Employment	Impact					Skills								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Full-time	First job	Career	Skills	Income	Long-term	Communication	Teamwork	Problem solving	Interactions	Adaptability	Entrepreneurship	Critical thinking	Creativity	Judgement
Multiple short-term	0.841 (0.261)	1.634* (0.448)	1.582* (0.417)	2.347* (1.198)	1.357 (0.410)	0.987 (0.274)	0.484 (0.283)	1.060 (0.389)	2.106 (1.173)	0.922 (0.746)	0.405 (0.281)	1.406 (0.370)	3.241** (1.780)	1.536 (0.607)	1.571 (0.874)
N	1084	1090	1090	1093	1041	1086	929	1082	1082	787	898	1093	1074	1089	1026

Notes . All models include control variables including study abroad regions and individual backgrounds. Graduation year fixed effect included.
Odds Ratios are reported. Standard errors in parentheses. * p<0.05, ** p<0.01, *** p<0.001

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Appendix

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Table A1. Full model estimates: Career outcomes by duration

	Employment	Impact					Skills								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Full-time	First job	Career	Skills	Income	Long-term	Communication	Teamwork	Problem solving	Interactions	Adaptability	Entrepreneurship	Critical thinking	Creativity	Judgement
Mid-/long-term Learning Abroad	1.440** (0.241)	1.467*** (0.204)	1.182 (0.162)	1.656*** (0.319)	1.402* (0.251)	1.849*** (0.269)	2.652*** (0.894)	0.616** (0.134)	1.633** (0.350)	2.305** (0.860)	4.163*** (1.301)	1.248 (0.171)	1.099 (0.221)	1.359* (0.250)	2.166*** (0.459)
Learning Abroad Region (Reference: North America)															
Europe	0.812 (0.143)	0.862 (0.109)	0.872 (0.109)	0.601*** (0.112)	1.002 (0.153)	0.878 (0.114)	0.715 (0.264)	1.008 (0.172)	0.816 (0.172)	0.460* (0.203)	0.710 (0.252)	1.009 (0.126)	1.204 (0.212)	0.826 (0.143)	0.725 (0.153)
Asia/Pacific	0.711 (0.151)	1.100 (0.181)	0.957 (0.153)	0.913 (0.223)	1.073 (0.209)	1.279 (0.220)	0.741 (0.328)	0.975 (0.218)	0.780 (0.202)	1.531 (0.916)	1.132 (0.483)	0.911 (0.145)	0.995 (0.222)	0.873 (0.193)	0.942 (0.252)
Middle East & Africa	1.062 (0.636)	2.375 (1.259)	1.602 (0.765)	0.835 (0.552)	0.740 (0.480)	4.291** (2.772)	1.000 (.)	1.473 (1.147)	0.843 (0.565)	1.000 (.)	1.807 (2.012)	0.619 (0.281)	1.100 (0.719)	1.195 (0.780)	0.852 (0.574)
Latin America	0.923 (0.376)	0.913 (0.282)	0.912 (0.279)	0.524 (0.211)	1.488 (0.547)	1.225 (0.402)	0.371 (0.227)	0.408** (0.152)	0.379** (0.150)	1.615 (1.821)	1.291 (1.059)	0.781 (0.242)	0.777 (0.309)	0.649 (0.250)	1.484 (0.840)
Major (Reference: Other)															
STEM	1.984*** (0.420)	1.110 (0.164)	1.315* (0.193)	0.953 (0.193)	1.008 (0.178)	1.434** (0.228)	0.910 (0.335)	1.606** (0.334)	1.485 (0.360)	2.425 (1.827)	0.909 (0.323)	1.465*** (0.211)	1.253 (0.264)	1.371 (0.277)	1.196 (0.280)
Humanities & Social Sciences	1.888*** (0.465)	1.319 (0.225)	1.576*** (0.265)	1.155 (0.278)	0.798 (0.162)	1.475** (0.269)	0.623 (0.259)	1.584* (0.391)	0.920 (0.249)	8.479** (7.481)	0.681 (0.278)	1.159 (0.191)	0.929 (0.220)	0.972 (0.221)	0.979 (0.265)
Business	1.237 (0.271)	0.873 (0.133)	1.119 (0.169)	0.840 (0.176)	1.011 (0.185)	1.272 (0.208)	0.817 (0.316)	0.950 (0.206)	1.086 (0.276)	3.128 (2.355)	0.648 (0.244)	0.813 (0.121)	1.110 (0.244)	1.142 (0.241)	0.831 (0.205)
Highest level of study (Reference: Undergraduate)															
Graduate coursework	0.903 (0.165)	0.937 (0.121)	0.995 (0.127)	1.016 (0.174)	1.116 (0.173)	0.901 (0.118)	0.794 (0.249)	1.305 (0.228)	1.131 (0.227)	1.094 (0.480)	0.991 (0.322)	1.047 (0.133)	1.204 (0.219)	0.967 (0.163)	1.299 (0.263)
PhD	0.428** (0.174)	0.663 (0.222)	0.511** (0.175)	1.343 (0.638)	0.313* (0.195)	1.818* (0.651)	1.000 (.)	0.460** (0.169)	0.802 (0.396)	0.322 (0.275)	1.382 (1.542)	0.444** (0.158)	0.675 (0.283)	0.636 (0.258)	1.123 (0.587)
Gender (Reference: Female)															
Male	1.837*** (0.310)	1.167 (0.137)	0.987 (0.112)	0.942 (0.152)	1.675*** (0.223)	1.171 (0.142)	0.849 (0.249)	0.814 (0.125)	0.542*** (0.092)	0.575 (0.201)	0.572** (0.157)	1.352*** (0.154)	0.851 (0.135)	0.863 (0.131)	0.745* (0.133)
Other	0.652 (0.422)	0.258** (0.156)	0.535 (0.298)	0.483 (0.327)	0.375 (0.393)	0.635 (0.356)	1.000 (.)	0.327* (0.199)	1.052 (1.117)	1.000 (.)	0.297 (0.325)	0.765 (0.424)	0.488 (0.330)	0.366 (0.226)	1.000 (.)
SES (Reference: Low)															
Medium	0.637 (0.185)	1.090 (0.218)	0.977 (0.193)	1.419 (0.390)	0.630** (0.146)	0.697 (0.153)	0.670 (0.384)	1.200 (0.342)	0.826 (0.281)	0.676 (0.431)	0.328 (0.247)	0.835 (0.166)	1.113 (0.318)	0.855 (0.252)	0.788 (0.286)
High	0.512** (0.145)	1.025 (0.200)	0.866 (0.168)	1.032 (0.271)	0.705 (0.158)	0.578** (0.124)	0.632 (0.355)	0.877 (0.241)	0.745 (0.249)	1.020 (0.661)	0.220** (0.164)	0.760 (0.148)	0.966 (0.268)	0.684 (0.196)	0.638 (0.226)
First-generation	0.935 (0.137)	0.880 (0.101)	1.002 (0.113)	1.091 (0.180)	0.801 (0.115)	0.969 (0.116)	0.836 (0.250)	0.946 (0.151)	0.872 (0.155)	0.626 (0.206)	0.453*** (0.122)	1.111 (0.126)	1.366* (0.233)	1.269 (0.202)	0.946 (0.173)
N	1717	1711	1715	1717	1715	1719	1467	1712	1710	1389	1562	1719	1691	1715	1663

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Notes . All models include control variables including study abroad regions and individual backgrounds. Graduation year fixed effect included.
Odds Ratios are reported. Standard errors in parentheses. * p<0.05, ** p<0.01, *** p<0.001

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