PERCEPTIONS OF CAREER DEVELOPMENT LEARNING AND WORK-INTEGRATED LEARNING IN AUSTRALIAN HIGHER EDUCATION

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Abstract

This article is a report on the perceived correspondence between of career development learning and work-integrated learning programs that were delivered by career services in Australian higher education institutions. The study entailed a questionnaire survey of representatives of university career services. The questionnaire addressed the extent to which the elements of career development learning were present in work-integrated learning programs. Results of the survey indicated convergence of the career development learning domains of self-awareness and opportunity awareness, but relatively less integration of decision-making and transition learning. The article concludes with a call for further exploration into how universities and employers view career development learning in work-integrated learning programs.
The employment of graduates in the professional workforce is of paramount importance to Australian universities, government, employers, and students (Graduate Careers Australia, 2007). Yorke (2006a) defined graduate employability “as a set of achievements—skills, understandings and personal attributes—that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community, and the economy (p. 8)”.

The most recent review of the Australian higher education sector (Bradley, Noonan, Nugent, & Scales, 2008) and sundry other reports (Australian Chamber of Commerce and Industry & Business Council of Australia, 2002; Precision Consultancy, 2007) highlighted the role of higher learning for developing aptitudes, knowledge, and skills which prepare graduates for the workforce. These themes and trends are reflected in the higher education sectors of other nations with higher education systems similar to Australia’s, such as the United Kingdom (Yorke, 2006b).

Given this impetus, it is not surprising that work-integrated learning has been the focus of attention in the Australian higher education system during recent years, particularly in regard to its articulation in higher learning curricula (Australian Collaboration Education Network, 2009). Moreland’s (2005) description of work-related learning provides a useful working definition of work-integrated learning:

Work-related learning involves students learning about themselves and the world-of-work in order to empower them to enter and succeed in the world-of-work and their wider lives. Work-related learning involves:

(a) learning about oneself;

(b) learning and practising skills and personal attributes of value in the world-of-work;
(c) experiencing the world-of-work in order to provide insights and learning into the world-of-work associated with one's university studies; and

(d) experiencing and learning how to learn and manage oneself in a range of situations, including those found at work (p. 4).

Furthermore, in its report to the Australian Government, the Business, Industry and Higher Education Collaboration Council (BIHECC, Precision Consultancy, 2007) recommended that the government provide significant funding to higher education sector and industry to improve graduates’ employability skills and emphasised initiatives such as expanding access to work-integrated learning. The BIHECC report was followed by equivalently direct statements made by the sector’s peak body Universities Australia (2008), which called upon the Australian Government and employers to fund a national cadetship programme in which the provision of work-integrated learning was inherent. In this way, work-integrated learning has been presented as a major curricular vehicle for graduate employability.

In addition to emphasising the need for curricular development of graduate attributes promoted by universities (see the review by Barrie, Hughes, & Smith, 2009), Bridgstock (2009) argued that preparing graduates for the world-of-work required curricular strategies aimed at the development of career management skills: that is, how an individual might personally manage the exigencies of life, learning and work throughout his/her lifetime. The career management skills deemed valuable by the Australian Government have been articulated in the Australian Blueprint for Career Development (Ministerial Council on Education Employment Training and Youth Affairs, 2009). Given the potential contribution of career development learning to employability (Organisation for Economic Cooperation and Development, 2004; Watts, 2006) and the fact that Australian university students value career development learning in their higher education experience (Graduate Careers
Australia, 2007), there is reason to explore how career development learning can contribute to work-integrated learning. However, there has been only limited research into how career development learning and work-integrated learning have been implemented in combination in Australian higher education (Smith et al., 2009). Thus, in this paper we report on research into the perceived contribution of career development learning to work-integrated learning in the Australian context from the perspective of university career services.

**Career Development Learning**

Career development learning is apropos of lifelong learning (Patton & McMahon, 2001) and relates to:

- Learning about the content and process of career development or life/career management. The content of career development learning in essence represents learning about self and learning about the world of work. Process learning represents the development of the skills necessary to navigate a successful and satisfying life/career (McMahon, Patton, & Tatham, 2003, p. 6).

In its various curricular forms, career development learning has for more than a century been a feature of the educational landscape in international settings such as the United Kingdom (Watts, 2001), Europe (Guichard, 2001), North America (Hoyt, 2005), and Australia (Morgan & Hart, 1977). Within Australia, career development learning has been advanced by landmark publications for its implementation in the school sector in particular (e.g., Department of Education, 1999; McCowan & McKenzie, 1997; Ministerial Council for Employment Education Training and Youth Affairs, 1998), but highlighted in more recent publications addressing adult learning (Patton & McMahon, 2001), particularly higher education (Smith, et al., 2009).

There are a number of career development learning frameworks which may usefully inform the conceptualization and the delivery of work-integrated learning in higher education.
(e.g., McCowan & McKenzie, 1997; Ministerial Council on Education Employment Training and Youth Affairs, 2009; Smith, et al., 2009; Watts, 2006). The career development learning framework which clearly and simply captured student-related issues pertaining to the world-of-work, self-reflection, and transferability across learning and employment settings was the DOTS model of career development (Watts, 2006). The dimensions and elements of the DOTS model (viz. Self-Awareness, Opportunity Awareness, Decision-Making Learning, and Transition Learning) are listed in Table 1. Self-Awareness refers to an individual’s understanding of his/her career identity; Opportunity Awareness refers to an individual’s knowledge of opportunities within the world-of-work; Decision-Making Learning refers to the skills of making choices with regard to securing opportunities in the world-of-work; and Transitional Learning refers to the knowledge and skills considered necessary for entry into the workforce. In the table each element is coded in an abbreviated form under its domain (e.g., Self-awareness element 1, Identify knowledge, abilities and transferable skills developed by one’s degree, is coded as SA1).

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Insert Table 1

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The current study was an exploration of the perceived relationship between career development learning and work-integrated learning, from the perspective of Australian universities’ career services. We specifically sought to explore whether Career services which contribute to work-integrated learning programs within their institutions recognised the conceptual features of career development learning (viz., the DOTS elements) within the programs’ content and methods of delivery.
Survey

Participants
All Australian university career services were invited to participate in this study, with the invitation being directed to the organisational manager of the particular career service, or his or her delegate who had the most intimate knowledge of the unit’s work-integrated learning programs. The respondents were considered to be institutional representatives in the sense that they were asked to represent the perspective of his/her organisation, and not necessarily his/her personal views as a career development practitioner. A total of 36 (95%) of 38 possible institutional representatives provided responses to the survey. A full set of usable results for were obtained from 25 of the 36 respondents, giving a response rate of 69% for the sample.

Questionnaire
This study entailed the use of an online questionnaire entitled the Career Development and Work-Integrated Learning Survey. The questionnaire commenced with the key concepts relating to career development learning, namely the DOTS model (Watts, 2006), and a definition of work-integrated learning (Moreland, 2005). Respondents were invited to describe up to three programs The questionnaire contained items requiring respondents to describe his/her career service’s work-integrated learning programs in detail: the program’s length/duration; the number of students participating; the nature of workplace/industry partnerships; whether it was for academic credit and to what extent (e.g., compulsory, elective, assessable, extra-curricular); an outline of learning objectives; the benefits for participants; the barriers to implementation; and the level of involvement with career services. Respondents were to select one program to be the primary program of interest for the purpose of the survey.
In the second part of the questionnaire respondents were asked to indicate the level to which a particular career development skill or attribute was addressed and developed in the career service’s program. This appraisal of the program was indicated by a five-point Likert-scale: definitely, mostly, somewhat, intend to do more/to be explored, don’t know. For example, in regard to the first element of the domain Self-Awareness, the respondents were asked to use the rating scale to answer the question “Does the program enable students to identify knowledge, abilities and transferable skills developed by their degrees?” The questionnaire was hyperlinked on the online commercial survey product SurveyMonkey (www.surveymonkey.com). The survey site was open for two months.

Results

A summary of the results obtained for the three groups is presented in Table 1. The response categories were collapsed to aid interpretation of the data: definitely and mostly were collapsed to mean extensive integration; somewhat was retained as an indicator of moderate integration; and intend to do more/to be explored and don’t know were collapsed to mean limited integration. The percentage of respondents’ who indicated that the program met one of the three rating-levels for integration is shown for each DOTS element in Table 1. For example, 85% of respondents claimed that DOTS element SA1 was extensively integrated in the programs, whereas 4% claimed it was moderately integrated, and 11% suggested its integration was limited.

The data were indicative of career development learning, expressed in terms of the DOTS dimensions and elements, as being components of the work-integrated learning programs nominated by the respondents. Respondents rated all of the DOTS elements of Self-Awareness as extensively integrated in their work-integrated learning programs. Similarly, the majority of Opportunity Awareness and Transition Learning elements were well integrated. However, they rated the Decision-Making elements OA3, DL1, DL4, DL5,
DL6, TL3, as being less prominent in their work-integrated learning programs. The pattern of integration is revealed in Figure 1 with the three lines indicating the proportional levels of integration. There is a trend downward on the extensive line as it progresses across the elements from Self-Awareness to Decision Learning, and trend generally corresponds with the line indicating the proportion related to limited integration.

Discussion

This research explored the relationship between career development learning and work-integrated learning, from the perspective of Australian universities’ career services which deliver work-integrated learning programs to university students. With a two-thirds response rate of the sample of Australian university career services providing an institutional response to the survey, the current results represent a substantive piece of evidence toward understanding institutional approaches to career development learning and work-integrated learning. Moreover, the results of the survey provide evidence of a perceived correspondence between the theoretical elements of career development learning and work-integrated learning.

The survey results indicate that the elements of Self-Awareness and Opportunity Awareness and Transition Learning were rated as most often present in work-integrated learning programmes. Although respondents recognised the majority of DOTS elements of Opportunity Awareness and Transition Learning in programs, the elements pertaining to researching the requisite skills of occupations and the employment market (i.e., OA3) and the processes of job search strategies and the effective use of job vacancy information (i.e., TL3) were not as highly endorsed as a feature of work-integrated learning programs. We were
initially surprised by this result. All Australian university career services offer job search and application training as part of their mainstream services (Department of Education Employment & Workplace Relations, 2008). In light of this service provision, we surmised that career services would not necessarily distinguish such activities in their work-integrated learning programs. This does not necessarily imply that such preparatory content should not appear in work-integrated learning programs, or indeed any other appropriate coursework, because embedding this content in coursework may provide broader accessibility to students.

The perception of limited integration of career development learning in relation to decision-making is worthy of further consideration, particularly in relation to elements DL1, DL4, DL5, and 6 (the elements DL2 and DL3 were more strongly integrated). Inspection of those elements reveals semantic correspondence with notions of self-awareness, so it is possible that respondents subsumed those elements within their work-integrated learning programs which address self-awareness. However, given the importance of understanding the influence of context and chance in the world-of-work, it would better if such dimensions were expressly articulated in terms of how students are, or are not, being given opportunities to consolidate their preparations through work-integrated learning. Accordingly, although DL1, 4, 5, and 6 are perceived as relatively absent, we hasten to add the axiom that absence of evidence does not necessarily mean evidence of absence. With the level of data available through this survey, we suggest that further fine-grained analyses of the programmes are required to make a definitive conclusion regarding the presence or absence of decision-making as a dimension of career development learning in work-integrated learning activities provided by university career services.

**Study Limitations**

There are three limitations of this study which are worth noting. The survey required an institutional perspective rather than an individual practitioner perspective. Hence, the two-
thirds response rate for the survey represents a sample of 38 institutions, not a sample of all career development practitioners in Australian higher education sector. Accordingly, it cannot be concluded that the survey results represent the broader population of practitioners.

Secondly, the data set analysed for the survey focused upon one example of career education nominated by the respondents which they believed best represented the melding of career development learning with work-integrated learning. There were more examples of practice which could have been put forward for analysis (participants were invited to present up to three cases) but the analysis focused upon one program. Finally, it may be suggested that the definition of work-integrated learning used for the study may have constrained participants’ considerations, in the sense that other definitions may have highlighted different dimensions of their work-integrated learning programs. This charge is valid in many respects, particularly given the diversity of approaches in Australian higher education (Australian Collaboration Education Network, 2009).

**Future Research**

The evidence presented for the correspondence between work-integrated learning and the theoretical elements of career development learning may not surprise career development practitioners whose profession has been involved in the delivery of work-integrated learning under the aegis of career education. Indeed, Australian career development practitioners would recognize the correspondence as an obvious manifestation of their professional competency *Labour Market Preparation*, as stipulated in their Professional Standards (Career Industry Council of Australia, 2007). The same may not be said for other stakeholders whose own professional and disciplinary backgrounds are equally important, yet perhaps significantly different from that of career development practitioners working in universities. Furthermore, work-integrated learning—broadly conceived—has not been the sole preserve of a specific disciplinary or professional agent or department within higher education.
systems. Instead, it has been delivered by a wide range of practitioners within Australian universities: career development practitioners, academics, practicum supervisors, and more; and it necessarily required the input of employers and supervisors in various workplaces. Again, how those other professionals who deliver work-integrated learning understand its relationship to career development learning is yet to be fully explicated. Accordingly, having established evidence of this link from an institutional perspective of university career services, there is scope to explore how other university departments and employers understand career development learning in their teaching and workplace supervision of work-integrated learning. Such exploration could also scope how university career services can support and enhance their work in this approach to students’ career development.

**Implications for Practice**

Career development learning has much to offer into the curricula of higher education, but career development practitioners must demonstrate to policy leaders and institutional managers the extent to which career development learning is currently operating within curricula of their own institutions. This paper does not represent a national audit per se; its research method has inherent limitations, as previously noted. Nevertheless, it presents implications with regard to the necessity to conduct of an in-depth survey of career development learning and work-integrated learning practices, not just for Australia, but for other nations’ higher education systems. With results of this study in mind, career development practitioners and academic staff within the higher education institutions may reflect upon the extent to which they recognise dimensions of career development learning in their educational programs. Whilst we endorse our nation’s Australian Blueprint for Career Development (Ministerial Council on Education Employment Training and Youth Affairs, 2009), we concurrently commend the DOTS model for its clarity and transferability into educational programs. Indeed, it was used as the basis of this study; however, it may prove
useful for other career services wanting to review their programs through a theoretical lens that captures the essence of career development learning.

Conclusion

In conclusion, the results of this survey indicate that Australian university career services recognise correspondence between their programs of career development learning and work-integrated learning. This perception of correspondence is interpreted as a positive sign of the pragmatic implementation of theory in the practice of career development learning in higher education. Further, we interpret this relationship as a dimension of career development learning contributing to the overall objective of graduate employability through its curricular influence upon work-integrated learning.

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References


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**THEORY AND PRACTICE**

Question: What are the four dimensions of the DOTS framework?

Answer: Self-Awareness, Opportunity Awareness, Decision-making Learning, and Transition Learning.

Question: What is the purported value of career development learning to work-integrated learning?

Answer: It is asserted that career development learning can enhance students’ experience of work-integrated learning by providing a conceptual framework through which their learning experiences can be designed and reflected upon. Thus, it is suggested that the four DOTS domains provide a useful framework for such learning experiences.

Question: What is one direction for future research?

Answer: There is a need to provide evidence that career development learning can significantly impact upon student outcomes, such as academic results and employability.
<table>
<thead>
<tr>
<th>DOTS dimensions and elements</th>
<th>Level of Integration (%)</th>
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<tbody>
<tr>
<td></td>
<td>Integrated</td>
</tr>
<tr>
<td><strong>Self-Awareness</strong></td>
<td></td>
</tr>
<tr>
<td>Identify knowledge, abilities and transferable skills developed by one’s degree (SA1)</td>
<td>85</td>
</tr>
<tr>
<td>Identify personal skills and how these can be deployed (SA2)</td>
<td>88</td>
</tr>
<tr>
<td>Identify one’s interests, values and personality in the context of vocational and life planning (SA3)</td>
<td>69</td>
</tr>
<tr>
<td>Identify strengths and weaknesses, and areas requiring further development (SA4)</td>
<td>69</td>
</tr>
<tr>
<td>Develop a self-reflective stance to academic work and other activities (SA5)</td>
<td>81</td>
</tr>
<tr>
<td>Synthesise one’s key strengths, goals and motivations into a rounded personal profile (SA6)</td>
<td>58</td>
</tr>
<tr>
<td><strong>Opportunity Awareness</strong></td>
<td></td>
</tr>
<tr>
<td>Demonstrate knowledge of general trends in graduate employment and opportunities for graduates in one’s discipline (OA1)</td>
<td>72</td>
</tr>
<tr>
<td>Demonstrate understanding of the requirements of graduate recruiters (OA2)</td>
<td>76</td>
</tr>
<tr>
<td>Demonstrate research-based knowledge of typical degree-related career options and options in which one is interested (OA3)</td>
<td>60</td>
</tr>
<tr>
<td><strong>Decision-Making Learning</strong></td>
<td></td>
</tr>
<tr>
<td>Identify the key elements of career decision-making, in the context of life planning (DL1)</td>
<td>48</td>
</tr>
</tbody>
</table>
Relate self-awareness to knowledge of different opportunities (DL2) &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;68 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;20 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;12

Evaluate how personal priorities may impact upon future career options (DL3) &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;60 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;24 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;16

Devise a short/medium-term career development action plan (DL4) &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;52 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;20 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;28

Identify tactics for addressing the role of chance in career development (DL5) &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;28 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;24 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;48

Review changing plans and ideas on an ongoing basis (DL6) &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;32 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;24 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;44

Transition Learning

Demonstrate understanding of effective opportunity-search strategies (TL1) &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;56 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;28 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;16

Apply understanding of recruitment/selection methods to applications (TL2) &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;56 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;28 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;16

Demonstrate ability to use relevant vacancy information, including ways of accessing unadvertised vacancies (TL3) &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;32 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;28 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;32

Identify challenges and obstacles to success in obtaining suitable opportunities and strategies for addressing them (TL4) &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;52 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;20 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;28

Demonstrate capacity to vary self-presentation to meet requirements of specific opportunities (TL5) &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;60 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;24 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;16

Demonstrate ability to present oneself effectively in selection interviews and other selection processes (TL6) &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;68 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;16 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;16

Figure 1. Integration of DOTS elements into program as a proportion of participants who rated level of integration as extensive, partial, or limited. SA = self-awareness; OA = opportunity awareness; DL = decision-making learning; TL = transition learning.