

**WORK-INTEGRATED LEARNING IN
THE 21ST CENTURY: GLOBAL
PERSPECTIVES ON THE FUTURE**

INTERNATIONAL PERSPECTIVES ON EDUCATION AND SOCIETY

Series Editor: Alexander W. Wiseman

Recent Volumes:

Series Editor from Volume 11: Alexander W. Wiseman

Volume 19: Teacher Reforms around the World: Implementations and Outcomes

Volume 20: Annual Review of Comparative and International Education 2013

Volume 21: The Development of Higher Education in Africa: Prospects and Challenges

Volume 22: Out of the Shadows: The Global Intensification of Supplementary Education

Volume 23: International Education Innovation and Public Sector Entrepreneurship

Volume 24: Education For a Knowledge Society in Arabian Gulf Countries

Volume 25: Annual Review of Comparative and International Education 2014

Volume 26: Comparative Sciences: Interdisciplinary Approaches

Volume 27: Promoting and Sustaining a Quality Teacher Workforce Worldwide

Volume 28: Annual Review of Comparative and International Education 2015

Volume 29: Post-Education-for-All and Sustainable Development Paradigm: Structural Changes with Diversifying Actors and Norms

Volume 30: Annual Review of Comparative and International Education 2016

Volume 31: The impact of the OECD on education worldwide

INTERNATIONAL PERSPECTIVES ON EDUCATION AND
SOCIETY VOLUME 32

**WORK-INTEGRATED
LEARNING IN THE
21ST CENTURY: GLOBAL
PERSPECTIVES ON
THE FUTURE**

EDITED BY

TRACEY BOWEN

University of Toronto Mississauga, Canada

MAUREEN T. B. DRYSDALE

St. Jerome's University, University of Waterloo, Canada



United Kingdom – North America – Japan
India – Malaysia – China

Emerald Publishing Limited
Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2017

Copyright © 2017 Emerald Publishing Limited

Reprints and permissions service

Contact: permissions@emeraldinsight.com

No part of this book may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording, or otherwise without either the prior written permission of the publisher or a license permitting restricted copying issued in the UK by The Copyright Licensing Agency and in the USA by The Copyright Clearance Center. Any opinions expressed in the chapters are those of the authors. Whilst Emerald makes every effort to ensure the quality and accuracy of its content, Emerald makes no representation implied or otherwise, as to the chapters' suitability and application and disclaims any warranties, express or implied, to their use.

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

ISBN: 978-1-78714-860-4 (Print)

ISBN: 978-1-78714-859-8 (Online)

ISBN: 978-1-78743-245-1 (Epub)

ISSN: 1479-3679 (Series)



ISOQAR certified
Management System,
awarded to Emerald
for adherence to
Environmental
standard
ISO 14001:2004.

Certificate Number 1985
ISO 14001



INVESTOR IN PEOPLE

*To our students – who continually challenge us to find better
ways of preparing them for the future.*

This page intentionally left blank

CONTENTS

LIST OF CONTRIBUTORS	<i>xi</i>
FOREWORD	<i>xiii</i>
ACKNOWLEDGEMENTS	<i>xv</i>
INTRODUCTION	<i>xvii</i>

PART I LEARNING, WORK, AND EXPERIENCE: NEW CHALLENGES AND PROJECTIONS FOR WIL

TOWARD A MODEL OF WORK EXPERIENCE IN WORK-INTEGRATED LEARNING <i>Patricia M. Rowe</i>	<i>3</i>
NAVIGATING CONTINUOUS CHANGE: A FOCUS ON SELF-DIRECTION AND SKILLS AND KNOWLEDGE TRANSFER <i>Nancy Johnston</i>	<i>19</i>
WORKPLACE LEARNING IN HIGHER EDUCATION: TWO EXAMPLES FROM A SWEDISH CONTEXT <i>Jan Gustafsson and Per-Olof Thång</i>	<i>35</i>
WIL IN LIBERAL ARTS PROGRAMS: NEW APPROACHES <i>Deanne Gannaway and Karen Sheppard</i>	<i>51</i>

**PART II
AFFORDANCES, IMPACTS, AND CHALLENGES OF
NEW TECHNOLOGIES**

- FLOURISHING IN THE FACE OF CONSTANT
DISRUPTION: CULTIVATING THE T-PROFESSIONAL
OR ADAPTIVE INNOVATOR THROUGH WIL
Phil Gardner 69
- LEARNING IN HYBRID SPACES: DESIGNING A MOBILE
TECHNOLOGY CAPACITY BUILDING FRAMEWORK
FOR WORKPLACE LEARNING
*Franziska Trede, Peter Goodyear, Susie Macfarlane,
Lina Markauskaite, Celina McEwen, and Freny Tayebjee* 83
- THE IMPACT OF DIGITAL COMMUNICATION
TECHNOLOGIES AND NEW REMOTE-WORKING
CULTURES ON THE SOCIALIZATION AND WORK-
READINESS OF INDIVIDUALS IN WIL PROGRAMS
Tracey Bowen and Antoine Pennaforte 99
- PART III
WORK-READINESS FOR A DIVERSE WORLD**
- REPOSITIONING WORK-INTEGRATED LEARNING IN
DIVERSE COMMUNITIES
Carver Pop and Roelien Brink 115
- INTERCULTURAL COMPETENCY DEVELOPMENT
CURRICULUM: A STRATEGY FOR
INTERNATIONALIZING WORK-INTEGRATED
LEARNING FOR THE 21ST CENTURY GLOBAL
VILLAGE
Norah McRae and Karima Ramji 129
- PROFESSIONAL IDENTITIES AND ETHICS: THE ROLE
OF WORK-INTEGRATED LEARNING IN DEVELOPING
AGENTIC PROFESSIONALS
*Karsten E. Zegwaard, Matthew Campbell, and
T. Judene Pretti* 145

PART IV
HEALTH, WELLBEING, AND PATHWAYS TO SUCCESS

DRIVING CHANGE: STUDENTS SHAPING AND RESHAPING WORK-INTEGRATED LEARNING SPACES <i>Narelle Patton</i>	163
PATHWAYS TO MENTAL HEALTH AND WELLBEING: UNDERSTANDING AND SUPPORTING STUDENTS DURING CRITICAL SCHOOL-TO-WORK TRANSITIONS <i>Margaret L. McBeath, Maureen T. B. Drysdale, and Nicholas Bohn</i>	177
CONCLUSION – MOVING FORWARD: WIL IN THE 21ST CENTURY <i>Maureen T. B. Drysdale and Tracey Bowen</i>	193
ABOUT THE AUTHORS	197
INDEX	205

This page intentionally left blank

LIST OF CONTRIBUTORS

<i>Nicholas Bohn</i>	McGill University, Montreal, Canada
<i>Tracey Bowen</i>	University of Toronto Mississauga, Mississauga, Canada
<i>Roelien Brink</i>	University of Johannesburg, Johannesburg, South Africa
<i>Matthew Campbell</i>	Queensland Curriculum and Assessment Authority, South Brisbane, Australia
<i>Maureen T. B. Drysdale</i>	St. Jerome's University, University of Waterloo, Canada
<i>Deanne Gannaway</i>	University of Queensland, St Lucia, Australia
<i>Phil Gardner</i>	Michigan State University, East Lansing, MI, USA
<i>Peter Goodyear</i>	University of Sydney, Sydney, Australia
<i>Jan Gustafsson</i>	University of Gothenburg, Gothenburg, Sweden
<i>Nancy Johnston</i>	Simon Fraser University, Burnaby, Canada
<i>Patricia Linn</i>	Antioch College, Antioch University, Seattle, WA
<i>Susie Macfarlane</i>	Deakin University, Burwood, Australia
<i>Lina Markauskaite</i>	University of Sydney, Sydney, Australia
<i>Margaret L. McBeath</i>	University of Waterloo, Waterloo, Canada
<i>Celina McEwen</i>	Charles Sturt University, Sydney, Australia
<i>Norah McRae</i>	University of Victoria, Victoria, Canada

<i>Narelle Patton</i>	Charles Sturt University, Sydney, Australia
<i>Antoine Pennaforte</i>	Conservatoire National des Arts et Métiers, Paris, France
<i>Carver Pop</i>	Cape Peninsula University of Technology, Cape Town, South Africa
<i>T. Judene Pretti</i>	University of Waterloo, Waterloo, Canada
<i>Karima Ramji</i>	University of Victoria, Victoria, Canada
<i>Patricia M. Rowe</i>	University of Waterloo, Waterloo, Canada
<i>Karen Sheppard</i>	University of Queensland, St Lucia, Australia
<i>Freny Tayebjee</i>	Western Sydney University, Sydney, Australia
<i>Per-Olof Thång</i>	University of Gothenburg, Gothenburg, Sweden
<i>Franziska Trede</i>	Charles Sturt University, Sydney, Australia
<i>Karsten E. Zegwaard</i>	University of Waikato, Hamilton, New Zealand

FOREWORD

What first intrigued me about cooperative education was when a student who had taken one of my introductory classes (she barely passed, and seemed befuddled by most aspects of college life) showed up at my door after returning from her first co-op. She had a list of the items she wanted to talk about; this represented a level of organization I had not previously noted. Perhaps more importantly, she carried herself differently than when I'd seen her previously: there was an air of confidence about her, with a tinge of pride about her agency. As a developmental psychologist, I know that development is multiply determined, so I filed this observation away in my mental drawer called "complex combinations of nature and nurture." Across several years of watching students return from cooperative education experiences, I became more and more interested in what seemed to be a different type of growth and learning than that promoted in the classroom or the college community. What was this learning, and how did it happen? Eventually, through grant-funded trips for faculty to visit students on co-op and their employers, and then a shift from full-time teaching to serving as a co-op advisor and researcher, I had the chance to look more closely at these questions about what and how learning happened.

Part of my own inquiries about learning in co-op (now-called work-integrated learning or WIL) involved searching the published literature for answers to my questions. While one or two journals were enriched by thoughtful studies about specific learning outcomes, it was more difficult to find scholarly, big-picture observations by experienced WIL practitioners about the broad sweep of development I was observing.

This book joins a handful of others that have emerged in the last few years, to provide much-needed answers to our questions about student development. The editors, Dr. Bowen and Dr. Drysdale, are well-known to WIL practitioners for their deep and wide experience in this area. The chapter authors are top researchers and practitioners, recruited from disparate countries, institutions, and disciplines. They offer insightful summaries of what we know about WIL and what their cutting-edge practices are revealing. Inside this volume you will find exciting trends in WIL including – preparing students for economic disruptions, developing cultural intelligence, building the skills of a virtual professional, and the positive use of mobile devices by students to learn and work remotely, just to name a few. Dig into these chapters to learn more about digital agency, T-shaped professionals, photo elicitation, and mental health implications of students moving away from campus for work experiences. Not

all the chapters include research data, but they all offer intriguing hypotheses to show the way forward to research. If, like me, you are sometimes overwhelmed with the realization that “uncertainty is the only certainty” in helping students transition to productive and ethical work lives, these chapter authors have the experience and wisdom to preview that path for us. One important trend I see across several chapters is the focus on student agency. Rather than imposing the assignment of a “reflective paper” after WIL assignments that most of us use (and which, in my experience, students hate), these authors are encouraging students to take the lead in demonstrating their learning, while staff follows. Just like classroom professors must give up some control of information flow to allow students to make meaning of new knowledge in their own terms, WIL staff members are being encouraged to take the leap to allow students to frame their own learning. Hoorah!

Patricia Linn
Resident Scholar, Antioch College

ACKNOWLEDGEMENTS

First, and foremost, we would like to thank our families for their love and patience with us during this project. Additional thanks go to Sarah Callaghan, Sophia Kudriavtsev, Margaret McBeath, and Fiqir Worku from the Mental Health and School-to-Work Transitions Lab at St. Jerome's University in the University of Waterloo for assisting us with preparing the final manuscript. We thank our contributors whose work in advancing WIL and dedication to preparing students to be world-ready goes well beyond the words in their chapters. We also thank St. Jerome's University and University of Toronto Mississauga for providing financial support. Finally, we extend thanks to Emerald Publishing for recognizing the importance of this book.

This page intentionally left blank

INTRODUCTION

For decades, work-integrated learning (WIL) has been a globally recognized pedagogical approach for helping students test their skills and knowledge in a real-world work environment. WIL originally began with the implementation of co-operative education in the late 1890s through the foresight of Herman Schneider (Howard, 2004), who saw the value in integrating academically acquired knowledge and skills within the real world, problem-solving context of the workplace. Over 100 years later in a world of rapid technological advancement and globalization, the value of creating opportunities to test what is learned in the classroom within messy real-life work contexts is more urgent than ever before (Fullen & Scott, 2014). WIL has long been lauded as a way for students to test their skills, knowledge, and character in relation to developing attributes that foster success post graduation (Billett, 2009; Drysdale & McBeath, 2012, 2014; Drysdale, McBeath, Johansson, Dressler, & Zaitseva, 2016; Jackson, 2015; Linn, 2004; Smith, 2012), develop a sense of professionalism and ethical responsibility (Bowen, 2016; Coll & Zegwaard, 2012; McNamara, 2013; Trede, 2012), and prepare for an unknown future (Johansson, Kopciwicz, & Dahlgren, 2008; Kramer & Usher, 2011). However, how is WIL changing in response to the educational and economical shifts we see in the 21st century? In what ways are program developers, researchers, and faculty exploring new ways to implement WIL programs and how are they assessing the need to grapple with the unknown marketplace and work world both locally and globally? In what ways are these changes affecting what students need to learn and the skills they need to acquire?

Learning, Barnett (2012) suggests, “implies a change in understanding and a change in one’s relationship to the world” (p. 65). As most individuals know through experience, learning can be disruptive, joyous, painful, confrontational, life altering, and/or exhilarating. When learning is integrated with exploring a career or profession through hands-on experiences, the potential lies not just in the application of skills and knowledge, but also in the individual’s opportunity to test how their disposition, attitudes, and “human qualities” (Barnett, 2012, p. 65) affect how they apply skills and knowledge in cooperation with others toward a common goal. Barnett questions what it means to learn for an unknown future. His query is particularly timely for scholars, teachers, students, and employers engaged in WIL, particularly in an economically volatile, quickly changing global information world where the jobs new graduates may

be doing three years from now, don't yet exist. As much as a university or college education enables students to develop skills and gain knowledge, Barnett (2012) contends that individuals learning for an unknown future, must rely on their capacity to determine the direction forward through challenges and obstacles, and their ability to reflect on, reappraise, and learn from the past to predict new pathways for the future. WIL placements provide the settings for students to test their capacity for resilience (Mate & Ryan, 2015) and the reflective components of WIL pedagogy provide the site for rethinking their actions and reappraising their pathways (Smith, 2012). The experiential learning inherent in WIL can be considered a form of transformational pedagogy that encourages risk taking, facilitates self-assuredness, and fosters "adaptability, flexibility, and self-reliance" (Barnett, 2012, p. 75) in new graduates so they may prosper in the uncertain world of the 21st century.

Preparing students for an unknown future means helping them adapt to uncertainties, take risks, confront dilemmas, embrace complexity, recognize the limitations of their own knowledge, and maintain health and wellness. While educators cannot alleviate uncertainty for the future, we can help students develop the tools to learn how to adapt and live effectively in uncertain times (Barnett, 2012). Some of this learning and adapting will come when students are placed within a context – such as a work placement – that is unfamiliar where they must identify and adopt codes and conventions as they learn to solve problems (Bowen, 2011, 2016; Jackson, 2016; Trede, 2012). Learning for an unknown future means making decisions *in situ*, without all of the information at hand (Barnett, 2012). This responsiveness and adaptability requires resources, creativity, and experience. Fullan and Scott (2014) call for a new pedagogical approach that focuses on deep learning and real world problem solving for educating individuals to lead within an uncertain world. They propose the concept of "E Squared, Ethical Entrepreneurialism" (p. 3). Their concept of entrepreneurialism is not based on economics, a position often equated with technological innovation; rather, their definition is based on individuals who can identify and solve complex, real world problems on personal, social, local, and global levels. They consider the educated individual in the 21st century as "a doer (a doing-thinker; a thinker-doer) – they learn to do and do to learn" (p. 3). This integration of thinking, learning, and doing is driving WIL pedagogy (Smith, 2012; Smith & Worsfold, 2014). Fullan and Scott (2014) also use the term "work-ready PLUS" (p. 3) to describe the desirable new graduate who is "*sustainability literate* (socially, culturally, economically and environmentally); *change implementation savvy* (being able to engage others in constructive change and make it happen); *inventive* [...] and *clear on where you [they] stand*" (pp. 3–4). These qualities of work-ready PLUS, however, may more aptly describe an individual who is world-ready, prepared to live with uncertainty within a global context, and have the knowledge, skills, dispositions, attitudes, and empathy to effect change in that world.

Fullan and Scott (2014) contend that the PLUS in educating students is “not simply about learning 21st century skills in isolation of doing” (p. 4), but learning through collaboration and “through reflection in action and on action in order to become better at negotiating the messy, fuzzy, dilemma-ridden context of real world life and work” (p. 4). To be effective in the 21st century world, individuals must develop the interpersonal and cognitive capacity to identify problems in a world of continuous change and be capable of designing effective responses and solutions. Additionally, as Barnett also confirms, learning that is primarily predicated on academic disciplines and course content, will only take students so far – but not far enough. Now, more than ever, educators need to reappraise the use of experiential learning espoused over 30 years ago by researchers such as Kolb (1984), and prioritize high-impact practices such as WIL by capitalizing on experience “as a key source of productive learning” (Fullan & Scott, 2014, p. 8) and key to becoming more adaptable (Fazey, & Fazey, 2005).

While the concept of using WIL to provide students with the opportunity to build resilience and face real world challenges is certainly not new, the urgency of learning for an unknown future is increasing due to rapid technological advancements and innovations that are driving the global economy (Long & Meglich, 2013). Maintaining the *status quo* is no longer acceptable in terms of programs, assessment, and student support.

As demonstrated by the many authors cited within this introduction, research within the field of WIL over the last decade has focused on identifying ways to help students become work ready from a number of perspectives. However the nature of work in the digital information world is undergoing rapid change. *Work-integrated learning in the 21st century: Global Perspectives on the Future* examines challenges and new questions about the state of work for today’s university and college graduates as they transition into an unknown future. These challenges and questions are placed in the context of WIL and are organized into four sections: the nature of education in relation to the nature of work; the role of technology as both affecting change and implementing change; work-readiness and diversity; and the importance of student autonomy, mental health, and wellbeing. Each section is described in more detail below.

Part I, *Learning, Work, and Experience: New Challenges and Projections for WIL*, addresses the relationship between work, learning, and knowledge acquisition. This section begins with Rowe’s research examining the nature and role of work experience as it pertains to WIL. Firstly, she defines work itself and describes how traditional definitions have changed due to the expanded parameters of how, when, with whom, and under what conditions work is performed. Rowe presents a model of work experience within the context of WIL that captures the type of WIL program and the characteristics of the job performed. She argues that all the variables within the model impact both the immediate outcomes such as knowledge, skills, and motivation, and secondary

outcomes such as career development and performance. Finally Rowe provides recommendations for future research, based on the model, focusing on what is required in order to address the evolving needs of our students, and how best to prepare them for working in the 21st century.

Johnston – in “Navigating Continuous Change: A Focus on Self-Direction and Skills and Knowledge Transfer” – focuses on the challenges that new graduates face as they transition to work after graduation. One challenge is that what students are learning in the classroom may not match what is currently needed in the workforce. A second challenge is recognizing the ongoing learning that is required to respond to the continuously changing needs of the labor market. Johnston describes what students and higher education can do to overcome these challenges. A suggestion is for students to learn how to recognize that the skills and knowledge they acquire within an academic context are transferable to workplace contexts. Further, she contends they must become self-directed in this endeavor and articulate their capacity for flexibility and adaptability to future employers. Johnston argues that institutions of higher education can incorporate instructional approaches that teach students how to be self-directed and how to transfer their knowledge from one context to another.

In “Workplace Learning in Higher Education: Two Examples from a Swedish Context”, Gustafsson and Thång provide evidence from two case studies that show how students do indeed lack the understanding of how to transfer theory into practice. The case studies further demonstrate how higher education can be organized in such a way as to encourage new forms of knowledge production and how WIL plays a role in this. The first case study uses a problem-based learning approach in nursing to highlight the challenges students face when making explicit connections between the theoretical base of their subject matter and the practical application within a work context. The use of WIL in this case illustrates how higher education can help students transfer skills and knowledge in a way that is meaningful and authentic, and provides an excellent example of the kind of facilitation that Johnston says higher education should engage in to prepare work-ready students. The second case study focuses on the theory to practice disconnect from a different perspective, highlighting the tensions between program delivery and marketplace needs within vocational education. The major challenges noted were that students expressed a need for more meaningful work placements where they could have the opportunity to develop marketable skills, whereas employers stressed their desire to receive students who were skill ready, highly motivated, and self-directed.

In the final chapter of this section, Gannaway and Sheppard tackle the tensions between the traditional organizing principles and intentions of liberal arts programs and the contemporary global marketplace focus on graduate employability outcomes. Many liberal arts programs around the world realize the value of incorporating WIL for their students in order to gain real world experience. They also recognize the value of the critical, creative, and adaptive

thinking skills that liberal arts students bring to the workplace from their broad education. In the same way theory to practice disconnects have emerged in the discussion by Johnston, and Gustafsson and Thång, the connection between liberal arts student attributes and the attributes of 21st century graduates goes undetected by many employers, or undervalued at the very least. The models presented in this chapter suggest a move away from the transactional approach to WIL – where students draw knowledge and skills from disciplinary or professional based programs – to a transformational model – that capitalizes on the human qualities inherent in liberal arts, where students are positioned as knowledge workers that are adaptive, resilient, and prepared for an unknown future.

Part II, *Affordances, Impacts, and Challenges of New Technologies*, addresses the impact of technology on WIL programs from student, institution, and program developer positions. This section begins with Gardner, who examines the future of jobs, which he contends, will be constantly augmented, reconfigured, and relocated through economic decisions and technologies. He suggests that individuals will navigate a space between the order of the routine and the chaos of disruption in order to sustain and direct their career options. This space, described by Gardner, provides contextual learning stimuli that extend the student’s disciplinary specific knowledge by blending with knowledge shared from other disciplines, sources, and experiences, and nurtures broadening boundary spanning abilities. Gardner also examines the student’s ability to successfully span multiple boundaries and disciplines through the use of a specific model he labels as the *T-shaped professional*.

In “Learning in Hybrid Spaces: Designing a Mobile Technology Capacity Building Framework for Workplace Learning,” Trede, Goodyear, Macfarlane, Markauskaite, McEwen, and Tayebjee argue that workplace learning is a hybrid space where work, learning, and technology intersect, allowing for traditional roles and identities to be fluid. More specifically, they contend that students shift between their role as a student to that of a practitioner within their WIL placement, transferring their learning across settings. However, because these roles between the different settings may be disconnected, they don’t always have the support to help them make the transitions. Trede et al., describe how students can employ personal mobile devices (PMDs) to connect across settings and access the support they need, however, using PMDs in professional settings is not without its challenges – such as the professional and safe use of technology within the workplace context. The authors present a framework that highlights the resources that can be used to support students’ use of PMDs in the workplace in order to be effective, autonomous workers.

Bowen and Pennaforte – in “The Impact of Digital Communication Technologies and New Remote-Working Cultures on the Socialization and Work Readiness of Individuals in WIL Programs” – present two examples, one French and one Canadian, to explore the importance of digital literacy in

relation to finding work placements, communicating with workplace co-workers and supervisors, and understanding appropriate uses of social media within professional contexts. Pennaforte uses a French study to examine the digital communication skills students require for work-readiness in the 21st century. He focuses specifically on students' abilities to effectively use ICTs to research career opportunities and to communicate professionally. Bowen specifically examines the impact of technology on the changes to work culture in regards to the rise of remote working for many organizations. Increasingly in the Canadian context, WIL employers expect students to work remotely for some, or all, of the work placement, which presents further challenges to students' communication skills and how they make decisions.

Part III, *Work-Readiness for a Diverse World*, explores the all-important role of diversity in thinking about, and developing WIL programs for the 21st century global village, and the need for not just work-ready, but also profession-ready graduates. This section begins with Pop and Brink who look closely at the challenges for developing WIL programs within emerging economies. The focus of their chapter is twofold. First, they address challenges at the academic level and the need to decolonize the curriculum so that classroom learning incorporates more locally based case studies, examples, and histories to ensure that the theory-to-practice transfer of skills and knowledge is more culturally appropriate, meaningful, and adaptable for students. The second focus builds on the use of such a curriculum to help students define their career goals and objectives, and develop career planning skills that include WIL. They conclude that attitudinal changes about how to incorporate WIL and the delivery of both academic and practical programs, will begin to help emerging economies with new graduate and youth unemployment challenges that are distinct from developed economies.

McRae and Ramji, in "Intercultural Competency Development Curriculum: A Strategy for Internationalizing Work-Integrated Learning for the 21st Century Global Village," focus on students who complete their WIL placements abroad and their capacity to develop cultural intelligence (CQ), as they prepare to work within a global marketplace. CQ is the ability to function within diverse contexts and interact respectfully with others in those contexts. The authors describe a specific international WIL program in Canada and provide evidence of the effectiveness of the Intercultural Competency Development Curriculum (ICDC) – which is an integral part of the program's preparation for sending students into an international work placement. Reflective writing, part of the ICDC reporting phase, is used to gain insight into the challenges students face when communicating across cultures and languages in order to gain respect and to demonstrate the skills that they can contribute to the international organization. The chapter concludes with a call to develop intercultural competency across the curriculum, for all students who will face diversity within the 21st century global village.

In “Professional Identities and Ethics: The Role of Work-Integrated Learning in Developing Agentic Professionals,” Zegwaard, Campbell, and Pretti argue that while it is important to be work-ready, it is far more important to be profession-ready. Being profession-ready (or “professional”) is characterized by one’s professional sense of self and professional identity. They argue that this involves students developing critical moral agency – meaning that they have the ability to critically reflect on experiences in the workplace and their position; they have an awareness of moral and ethical ideals; and they have agency to effect positive change during their placement. The authors further contend that while WIL provides the context for developing profession-ready graduates, the WIL placement must be of high quality in order to provide authentic experiences where students can be active participants in the workplace guided by appropriate role models.

The chapters in Part IV, *Health, Wellbeing, and Pathways to Success*, focus on the WIL student and their wellbeing as they face the challenges of balancing student life with WIL. In “Driving Change: Students Shaping and Reshaping Work-integrated Learning Spaces,” Patton examines ways that students can shape spaces to facilitate their learning within WIL. She highlights the importance of students driving their WIL experiences as active participants in shaping the context of those experiences. Included in this endeavor for gaining autonomy is learning how to negotiate within hierarchical relationships and understanding how their dispositions, including their wellbeing, can affect learning within different contexts, and shape the spaces in which the learning takes place. Patton uses the technique of photoelicitation and student created photos of WIL learning spaces, to spark discussions around practices and obstacles not recognized by the students as something they can overcome. Students use the photos to reconstruct the narrative about their experience as one that leads to empowerment. Patton concludes with recommendations for using photos of work and learning spaces to open up discussions between students and their supervisors. This can help them develop agency, autonomy, and wellbeing.

Finally, we have McBeath, Drysdale, and Bohn who address the growing rates of mental illness amongst students in higher education and explore the factors that might impact mental health and wellbeing for students who participate in WIL programs. More specifically, they discuss evidence that suggests participation in WIL can disrupt students’ development of a sense of belonging to school and their perceived level of social support. They also examine emerging research regarding the impact of WIL participation on the mental health and wellbeing of at-risk and minority student populations. The authors review current evidence for mental health interventions, such as peer support, that can foster a sense of belonging and social connectedness, enhance mental health and overall wellbeing, and help students successfully prepare for the transition from the learning academy to the workplace.

The book concludes with *Moving Forward: The Future of WIL in the 21st Century* that explores the collective messages for the future that are intended to help facilitate further change. The conclusion examines potential areas for short-term change, as well as issues and challenges for WIL that have yet to receive the attention needed to help ensure student success.

Tracey Bowen
Maureen T. B. Drysdale
Editors

REFERENCES

- Barnett, R. (2012). Learning for an unknown future. *Higher Education Research and Development*, 31(1), 65–77.
- Billett, S. (2009). Realising the educational worth of integrating work experiences in higher education. *Society for Research into Higher Education*, 34(7), 827–843.
- Bowen, T. (2011). Examining undergraduate student learning journals for indicators of developing autonomy and professional capacity in an internship course. *Higher Education Research and Development*, 30(4), 463–475.
- Bowen, T. (2016). Becoming a professional: Examining how WIL students learn to construct and perform their professional identities. *Studies in Higher Education*, doi:10.1080/03075079.2016.1231803
- Coll, R. K., & Zegwaard K. E. (2012). Enculturation into engineering professional practice: Using legitimate peripheral participation to develop communication skills in engineering students. In A. Patil, H. Eijkman, & E. Bhattacharyya (Eds.). *New media communication skills for engineers and IT professionals: Trans-National and Trans-Cultural demands* (pp. 22–33). Information Science Reference.
- Drysdale, M. T. B., & McBeath, M. (2012). Self-concept and tacit knowledge: Differences between cooperative and non-cooperative education students. *Asia-Pacific Journal of Cooperative Education*, 13(3), 169–180.
- Drysdale, M. T. B., & McBeath, M. (2014). Exploring hope, self-efficacy, procrastination, and study skills between cooperative and non-cooperative education students. *Asia-Pacific Journal of Cooperative Education*, 15(1), 69–79.
- Drysdale, M. T. B., McBeath, M., Johansson, K., Dressler, S., & Zaitseva, E. (2016). Psychological attributes and work-integrated learning: An international study. *Higher Education, Skills, and Work-Based Learning*, 6(1), 20–34.
- Fazey, I. R. A., Fazey, J. A., & Fazey, D. M. A. (2005). Learning more effectively from experience. *Ecology and Society*, 10(2), 4.
- Fullan, M., & Scott, G. (2014). *Education plus: New pedagogies for deeper learning whitepaper*. Seattle, WA: Collaborative Impact SPC, Retrieved from: <http://www.michaelfullan.ca/wp-content/uploads/2014/09/Education-Plus-A-Whitepaper-July-2014-1.pdf>
- Howard, A. (2004). Cooperative education and internships at the threshold of the Twenty-First century. In P. Linn, A. Howard, & E. Miller (Eds.), *Handbook for research in cooperative education and internships* (pp. 3–10). New Jersey, NJ: Lawrence Erlbaum Associates Publishers.
- Jackson, D. (2015). Employability skill development in work-integrated learning: Barriers and best practice. *Studies in Higher Education*, 40(2), 350–367.
- Jackson, D. (2016). Developing pre-professional identity in undergraduates through work-integrated learning. *Higher Education*, doi:10.1007/s10734-016-00802

- Johansson, K., Kopeiwicz, L., & Dahlgren, L. O. (2008). Learning for an unknown context: A comparative case study on some Swedish and Polish Political Science students' experiences of the transition from university to working life. *Compare*, 38(2), 219–231.
- Kolb, D. A. (1984). *Experiential Learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall.
- Kramer, M., & Usher, A. (2011). *Work-integrated learning and career-ready students: Examining the evidence*. Toronto: Higher Education Strategy Associates.
- Linn, P. (2004). Theories about learning and development in cooperative education and internships. In P. Linn, A. Howard, & E. Miller (Eds.), *Handbook for research in cooperative education and internships*. New Jersey, NJ: Lawrence Erlbaum Associates Publishers.
- Long, K., & Meglich, P. A. (2013). Preparing students to collaborate in the virtual world. *Higher education, skills and work-based learning*, 3(1), 6–16. doi:10.1108/20423891311294948
- Mate, S., & Ryan, M. (2015). Learning through work: How can a narrative approach to evaluation build students' capacity for resilience? *Asia-Pacific Journal of Cooperative Education*, 16(3), 153–161.
- McNamara, J. (2013). The challenge of assessing professional competence in work integrated learning. *Assessment and Evaluation in Higher Education*, 38(2), 183–197.
- Smith, C. (2012). Evaluating the quality of work-integrated learning curricula: A comprehensive framework. *Higher Education Research and Development*, 31(2), 247–262.
- Smith, C. D., & Worsfold, K. (2014). WIL curriculum design and student learning: A structural model of their effects on student satisfaction. *Studies in Higher Education*, 39(6), 1070–1084.
- Trede, F. (2012). Role of work-integrated learning in developing professionalism and personal identity. *Asia-Pacific Journal of Cooperative Education*, 13(3), 159–167.

This page intentionally left blank

PART I
LEARNING, WORK, AND
EXPERIENCE: NEW CHALLENGES
AND PROJECTIONS FOR WIL

This page intentionally left blank

TOWARD A MODEL OF WORK EXPERIENCE IN WORK-INTEGRATED LEARNING

Patricia M. Rowe

ABSTRACT

Work experience is increasingly seen as an important complement to traditional higher education. There are a variety of forms of these educational programs, such as internships, sandwich programs, field work, and cooperative education, that are referred to generically as Work-Integrated Learning (WIL). As yet, however, there is relatively little research on the concept of work experience and considerable inconsistency in its definition and measurement. This chapter describes some of the research and writing from the industrial and organizational psychology field and its relevance to WIL. Based on the previous work, a model of work experience, specifically developed to aid our understanding of the role of work experience in WIL, is proposed. Three dimensions are suggested: level of specificity (task, job, organization, and career), measurement mode (number, time, relation to program, density, timing, and type), and version of WIL (cooperative education, sandwich, etc.). The model also includes individual factors and contextual factors as influences on work experience. Both immediate and secondary outcomes are described. Finally, the applicability of the model to several

**Work-Integrated Learning in the 21st Century: Global Perspectives on the Future
International Perspectives on Education and Society, Volume 32, 3–17**

Copyright © 2017 by Emerald Publishing Limited

All rights of reproduction in any form reserved

ISSN: 1479-3679/doi:10.1108/S1479-36792017000032013

examples of WIL research are discussed and suggestions for future research are offered.

Keywords: Work experience; WIL; factors affecting work experience; outcomes of work experience

INTRODUCTION

The inclusion of a period of practical work related to the academic curriculum in postsecondary (tertiary – i.e., university, college) education has a long history, dating back to more than 100 years in both Britain and the United States. There are many forms of this type of educational program, including cooperative education, internships, and research assistantships (Groenewald, Drysdale, Chiupka, & Johnston, 2011), as well as many names associated with these programs (see Gardner & Bartkus, 2014 for a list). Increasingly, however, the term *work-integrated learning* (WIL) has come to be accepted as “an umbrella term used for a range of approaches and strategies that integrate theory with the practice of work within a purposefully designed curriculum” (Patrick et al., 2008, p. iv).

The one characteristic common to all WIL programs, be they cooperative education programs, internships, sandwich placements, practica, or field work, is the acquisition of *work experience*. Work experience is deemed to be so significant by recruiters that it is frequently listed as a prerequisite to be considered for a job, and in times of high unemployment, when many applicants are competing for every vacancy, it may be used as the initial step in the screening process (Catano, Wiesner, Hackett, & Methot, 2010). As a result, there has been a substantial increase in the number of students taking internships, both paid and to a greater extent, unpaid in the last 25 years (Gardner, 2011). Knowing the importance of gaining experience, business and industry representatives (Business Council of Canada, 2016) and government advisers (Government of Ontario, 2016) are now calling for mandatory WIL programs at both secondary (high school) and postsecondary levels. Given this, it is reasonable to ask what the meaning of the term work experience is and what characteristics are necessary for work experience to have an effect. To date, there has been very little research on work experience per se, or on the necessary or desirable conditions for work experience to have an effect. This chapter will review the literature on work experience, examine the characteristics of work experience that may have an effect on the young person participating in a WIL program, and propose a model of work experience explicitly for WIL programs. However, before defining and examining the characteristics of work experience, it is necessary to define work itself.

While the *Oxford Dictionary* (n.d.) defines work as activity “involving mental or physical effort done in order to achieve a result,” industrial psychologists traditionally define work as activity that produces goods or services valued by others, for which one is paid, is carried out according to a time schedule, and is supervised by others. Increasingly, however, unpaid or volunteer work is included, and in this technological era, has become 24×7 and not restricted to a time schedule. Furthermore, entrepreneurial and consulting work is normally carried out alone or with a group of collaborators and without a supervisor, also demonstrating that the traditional definition is obsolete. Given this change in thinking about work, any activity that produces goods or services (of value to the community at large), whether the work is paid or not, on a strict time schedule, or supervised by others, will be treated as work in this chapter. (For a discussion of the many meanings of work, see [Hulin, 2014](#), pp. 10–15.)

“Work is the primary activity of lives” ([Hulin, 2014](#), p. 15). In addition to usually providing us with an income, it provides structure to our lives, social relationships, and a purpose to life. We identify with our work and are known by what we do (i.e., even in retirement I say that I am a psychologist). Work provides us with feelings of self-worth and self-esteem ([Hulin, 2002](#)). One has only to examine the negative effects of unemployment ([Wanberg, 2012](#)) or problems in retirement ([Conroy, Franklin, & O’Leary-Kelly, 2012](#)) to appreciate how important work is to the individual. Not surprisingly, therefore, many university and college students are concerned about their employment prospects upon graduation ([Drysdale & McBeath, 2014](#)), and as mentioned above, the importance of having some work experience in order to be employable.

WORK EXPERIENCE DEFINED

Work experience is one of the most important concepts in human resource research and practice, yet there remains inconsistency in its definition and meaning (see, e.g., [Hofmann, Jacobs, & Gerras, 1992](#); [Rowe, 1988](#)). Since those early articles there have been other attempts to delineate work experience, but the most important paper on this issue is by [Quinones, Ford, and Teachout \(1995\)](#), who state that work experience refers to “events that are experienced by an individual that relate to the performance of some job” (p. 889).

A first step in looking for aspects of jobs that might be of relevance to WIL is to consider the various expectations of our stakeholders – primarily students, employers, and postsecondary institutions. For the students, the strongest motivation for entering a WIL program is to gain experience that will enhance their chances of finding employment upon graduation. That need is clearly being met, as has been shown from the earliest study of cooperative education ([Wilson & Lyons, 1961](#)) to the more recent and extensive research with Ontario students participating in a variety of WIL programs at the postsecondary level

(Sattler & Peters, 2013). In an earlier study, Sattler and Peters (2012) also report that most employers (the second stakeholder group) state that their primary interest in participating in cooperative or work-integrated education is in attracting and recruiting future employees. In fact, over half of the WIL employers who participated in the 2012 Sattler and Peters study hired a WIL graduate for a permanent position. Finally, the third stakeholder to consider is the institution: faculty members see the highest benefits of WIL as labor market advantages for students, but also see benefits to the institution in terms of strengthening links to the business community (DeClou, Sattler, & Peters, 2013). It is important to note that all three stakeholders hold expectations about, and see the benefits of, WIL programs that are centered on improving the employability of students and enhancing their career development. This focus on work makes clear the necessity of research paying more attention to the work experience in WIL programs and the jobs students hold.

As mentioned earlier, a paper by Quinones et al. (1995) made a significant contribution to our understanding of the meaning and measurement of work experience; they conceptualized work experience as having two dimensions: level of specificity and measurement mode. Three levels of specificity were suggested: task, job, and organization; and three levels of measurement mode: amount or number, time, and type. Crossing these two dimensions to form a matrix results in nine cells — such as time on the job, type of organization, or number of times a task is performed. Each of these cells represents a measure of work experience at one of the three levels of specificity.

Because job performance is of special interest in human resource research, Quinones et al. (1995) examined its relationship to the various aspects of work experience in the cells of the matrix (e.g., number of organizations, etc.). Both a literature review and a meta-analysis were conducted. The literature review revealed that the most frequent measure of experience was time, followed by amount or number, and finally type of experience. The majority of studies measured work experience at the job level, followed by the organizational level, and the task level. Meta-analysis of the data from the studies in the literature review revealed a corrected correlation of 0.27 between work experience and job performance, indicating that there is a positive relationship between the two variables. This relationship, however, was moderated or affected by measurement mode, level of specificity, and type of criteria for the assessment of job performance. Further analysis showed that the correlation between experience and performance reached 0.43 if amount or number was the measure used, and 0.41 if task was measured. In other words, for experience to have a sizable effect on performance, one should measure the amount of experience, not time as is customary on resumes, and measure the experience on tasks, not in a job as is usually done. Moreover, correlations were higher when job performance was assessed with “hard” (e.g., number of items produced or sales) than with “soft” criteria (e.g., supervisor ratings). These results led to the conclusion that “various measures of work experience capture different aspects of job-relevant

experience” (p. 904). A later chapter by [Quinones \(2004\)](#) examined some of the literature since the original article, but maintains the two-dimension, nine-cell model.

Using the groundwork provided by [Quinones et al. \(1995\)](#), [Tesluk and Jacobs \(1998\)](#) further developed the construct of work experience. They proposed two additional levels of specificity – work groups and occupation; and two interactive measures to measurement mode. The interactive measures were density, or the intensity of the experience, and timing, or when the experience occurred relative to the level of learning or achievement of the individual. Their model also incorporates contextual factors, such as the work environment or the larger social environment, and individual factors, such as ability and motivation. Both contextual and individual factors not only affect work experience directly, but they also affect what is learned from the work experience. Finally, [Tesluk and Jacobs](#) proposed both immediate outcomes (knowledge and skills, work motivation, and work-related attitudes) and secondary outcomes (job performance and career development).

Since these two important articles by [Quinones et al. \(1995\)](#) and [Tesluk and Jacobs \(1998\)](#), several studies, primarily dealing with leadership or management development, have examined aspects of the relationship between experience and performance. For example, [Dragoni, Oh, Vankatwyck, and Tesluk \(2011\)](#) found that accumulated work experience and an individual factor – cognitive ability – were the strongest predictors of executives strategic thinking, and extraversion was related to the amount of work experience acquired. Another interesting study is that by [Carette, Anseel, and Lievens \(2013\)](#) in which challenging assignments were found to have a beneficial effect in the early career but not in the mid-career of managers, a confirmation of the importance of the timing measurement mode.

A MODEL OF WORK EXPERIENCE FOR WORK-INTEGRATED LEARNING

The [Tesluk and Jacobs \(1998\)](#) model provides a good starting point for developing a model of work experience explicitly designed for WIL. First, work experience in the context of WIL is multidimensional; that is, it has numerous aspects, is affected by a number of factors, and has several outcomes. The WIL model described here (see [Fig. 1](#), adapted from [Quinones et al., 1995](#) and [Tesluk and Jacobs, 1998](#)) includes some of the work experience characteristics found in their articles, but adds a new dimension and a few factors especially relevant to WIL, and excludes a number that are more relevant to permanent positions.

Levels of specificity in this model are task, job, and organization (taken from [Quinones et al., 1995](#)) and career (called occupation by [Tesluk & Jacobs, 1998](#)) is added. Measurement mode has amount (renamed number), time, and

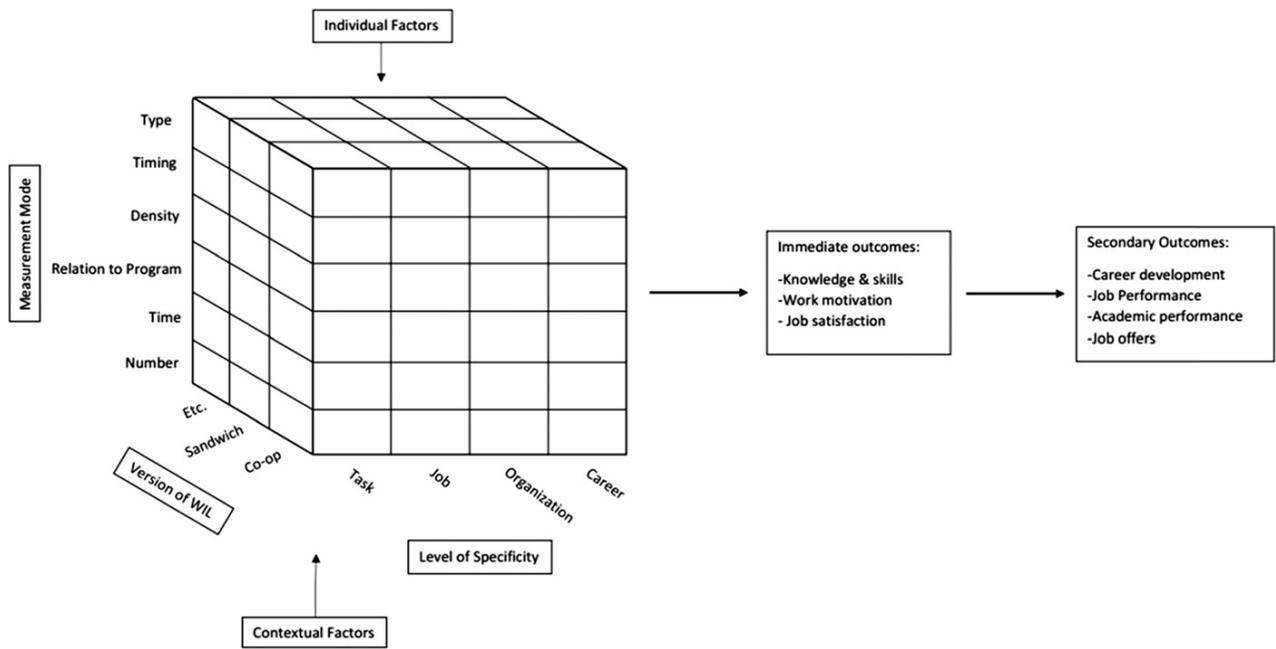


Fig. 1. Model of Work Experience for Work-Integrated Learning.

type, as proposed by Quinones et al., and density and timing added by Tesluk and Jacobs, and adds relation to academic program. This produces a 4×6 matrix, with 24 cells, though not all cells may be important in WIL. A third dimension – the form of WIL (co-op, internship, etc.) – is added, making as many multiples of 24 cells as there are forms of WIL. Obviously, in any one study only a selection of WIL programs, or only one, would be examined. Many individual factors may affect work experience, such as a student's ability, personality factors, openness to experience, or motivation to achieve. Similarly, there are many contextual factors that may influence work experience in WIL, such as the supervisor, other staff members, the involvement of the coordinator or academic institution, and the work environment. Note that both individual and contextual factors are predicted to affect cells differentially; for example, the work supervisor might be expected to have a greater influence on the number and challenge of tasks than on any measures of organization or career. Similarly, motivation to achieve might influence time spent on the job, but not number of tasks.

Lastly are the outcomes of experience proposed by Tesluk and Jacobs (1998): immediate or primary ones and less immediate or secondary ones. The immediate outcomes include three of the group (knowledge, skills, abilities, and other attributes – often referred to in the industrial and organizational literature (e.g., Catano et al., 2010) as KSAOs. Note that ability, an individual factor, is not affected by work experience. The importance of these outcomes for the future employment and effective performance of students cannot be over-emphasized, as KSAOs are the basis for decisions on selection, training, and promotion in organizations (Catano et al., 2010). Less immediate, or secondary outcomes such as job performance and career development follow from the primary outcomes of work experience. Added in the WIL model is job satisfaction to the immediate outcomes and academic performance and job offers to the secondary outcomes.

Research Relevant to the Model

Let us now consider the components of this model and its applicability to previous research in WIL. The first dimension in the model is level of specificity; as we have seen from the Quinones et al. study (1995), experience at the task level is a better predictor of future performance than at the job level, and thus more likely to predict outcomes. Researchers typically do not evaluate WIL at the task level, though in searching for appropriate co-op or work placements, coordinators are likely to pay close attention to the tasks the student would be expected to perform. Our research might well benefit from more consideration of these tasks in addition to looking at jobs. The next level, job, was also related to performance in the Quinones et al. study, as has been noted in a number of WIL studies since (see review by Braunstein, Takei, Wang, &

Loken, 2011). Organization, too, has been found to be related to performance in the Quinones et al. meta-analysis, and given the high proportion of graduates who are offered jobs following graduation, is also likely found in WIL (Sattler & Peters, 2012). Rowe's 2000 report that graduates who accepted employment with a previous co-op employer had higher salaries and were more satisfied with their jobs two years after graduation than those who did not take a permanent job with a previous co-op employer, also indicates the relevance of organization. Finally, career included here as the goal for many WIL students is to gain experience relevant to their future careers (Kramer & Usher, 2011).

Measurement mode refers to the way the various levels of specificity are measured. Consider, for example, time or the period of experience. Quinones et al. reported that time was the most frequent measure of experience in previous studies, and in the meta-analysis confirmed a significant relation between length of time and performance. Many different time periods are included in the jobs considered part of WIL: alternating semesters in some co-op programs, year-long sandwich and internship periods, and indeterminate lengths of time in practica, part-time work, and field work. Not only are the time periods variable, but also the total length of time spent in these WIL positions can vary to a great extent. For example, in one form of WIL (i.e., cooperative education) at the University of Waterloo, the number of required work terms varies from six in one program to four or five in others. Unfortunately, the relative effects of these differing lengths of time are lacking in the research. Given the importance these different programs have for all stakeholders, it is surprising that we know so little about their impact on student outcomes. Exceptions to this statement are the studies by Sattler and Peters (2012, 2013) and Kramer and Usher (2011). The multiyear, multiphase study by Sattler and Peters assessed the views of students, employers, and institutional members in Ontario on their views of different forms of WIL, and found positive impressions of WIL programs held by all three groups. Kramer and Usher compared the evaluations by 2,148 Canadian university students about several different forms of WIL (including summer work); while all types of work experience were seen by students as providing benefits, co-op was rated as most effective.

The measurement mode that has the highest relation with performance in the Quinones et al. (1995) study is amount, called number in our model, or the frequency a specificity level is experienced. In other words, the number of times a task is practiced or the number of jobs that have been held, the higher the performance level. As with time, number is quite variable across different types of WIL. Co-op students, for example may hold as many jobs with unique tasks in as many organizations as they have work terms, or hold one job in one organization perhaps with increasing responsibilities. Internships are typically in one setting, though medical internships may require participation in a number of medical specialties. Similarly, students may have many opportunities to practice various tasks, or few, and the opportunity to experience several occupations or only one. While the model might predict greater acquisition of

knowledge and skill from more different experiences, given the short period of most placements, there is some question as to whether this prediction would be confirmed in WIL research.

An interactive measurement mode proposed by [Tesluk and Jacobs \(1998\)](#) is density, or the intensity of the experience. Although research in this area is lacking both in industrial psychology and in WIL, personal experience with WIL students speaks to its relevance. Two of my students were subjected to sexual harassment in their workplaces, which seriously affected their subsequent interest in staying in the field and ability to hold permanent jobs. Other students of mine have had very positive experiences that led to graduate studies and a deep commitment to the discipline. These experiences may be at any level of specificity. The second interactive mode suggested by [Tesluk and Jacobs](#) is timing, which is especially important for young workers. Work that introduces new tasks when the individual is ready to undertake them is more likely to lead to positive outcomes than when challenges are introduced too soon or too late. For example, the young worker expected to manage other workers of the same age or older may have a negative outcome. Both timing and density are worth further study in our research.

Relatively few studies have used type, a qualitative measurement mode, but it may be useful in circumstances where experience is used to predict success in obtaining future jobs as is done in WIL. One aspect of type is the similarity between two work experiences. Thus, one would predict that the more similar that one task or job is to another, the more likely experience on the first would affect performance on the second. Another example is the anecdotal report that some employers have strong biases regarding skills and attitudes that may be learned in different types of organizations, such as government, not-for-profit, or entrepreneurial organizations. Thus, they may show preference or aversion to employing students with work experience in particular types of organizations. More research needs to be done to determine whether these biases actually affect future hiring.

Another aspect of type in the WIL model is relation to the student's academic program. Many student work experiences are closely linked to the academic program while others have only a weak connection, which should then be reflected in differential academic performance. It is possible that the major study by [Van Gyn, Cutt, Loken, and Ricks \(1997\)](#) might have had more significant results had the relation of the work term to the academic program been considered. A closer relation to the academic program has also been shown ([Drewery, Pretti, & Barclay, 2016](#)) to be related to better job performance through a measure of subjective well-being, a component of which is job satisfaction. The fact that students in science and engineering, where work terms are more closely related to the academic discipline are more likely to obtain permanent job offers than their non-WIL counterparts speaks to the relevance of both this factor and the similarity factor ([Peters, Sattler, & Kelland, 2014](#)).

As WIL encompasses different time periods, different academic programs, and probably different kinds of tasks, a third dimension is required in the WIL model. To fully describe the effects of WIL, researchers need to compare the measures assessed for the different kinds of WIL at each combination of level of specificity and measurement mode. For example, comparisons should be made between co-op and internships on time on the task or number of organizations, and so on. It is important to note that much WIL research deals only with one form of the program and thus there is only one level of the dimension in most studies. Two projects that do attempt to make these comparisons are those of [Sattler and Peters \(2012, 2013\)](#) and [Kramer and Usher \(2011\)](#).

The WIL model acknowledges the importance of individual factors in influencing the impact of work experience. While ability, motivation to learn, and social skills are obvious factors, there are other factors more relevant to WIL: academic program, immigrant status, age, gender, and socioeconomic level have all been related to participation rates in WIL ([Sattler & Peters, 2013](#)). Differences on individual factors between those who select WIL programs and those who do not, or differences among those who choose different forms of WIL may have a significant effect on results in this area ([Drysdale et al., 2007](#)).

Contextual factors are especially likely to affect work experience; factors that may be particularly significant in WIL are the supervisor, the work environment, salary, and mentoring. For example, only in WIL do we find unpaid work. A National Association of Colleges and Employers report ([Crain, 2016](#)) identifies a number of differences between American students participating in paid versus unpaid internships; those in unpaid internships took longer to find permanent positions, received lower salaries, and experienced lower job satisfaction. Worth noting, however, [Gardner \(2011\)](#) reported that unpaid work terms may be confounded with program, as unpaid jobs are more likely to be found in education, social sciences, health sciences, arts & humanities, and communications programs. Institutional factors, such as the involvement of the coordinator, preparation for the work period, and opportunities for reflection, are important contextual factors unique to WIL. At least one study has found some institutional factors to have relatively little influence on the acquisition of workplace skills ([Kramer & Usher, 2011](#)).

Lastly, the WIL model adopts the two kinds of outcomes, immediate and secondary, as proposed by [Tesluk and Jacobs \(1998\)](#). This distinction is particularly important insofar as the link between work experience and performance outcomes is less direct than is the link between work experience and such outcomes as knowledge and skills. Sometimes students, especially the more entrepreneurial ones, may acquire knowledge and skills so great (famously, the founders of Blackberry and Microsoft) that they leave their academic programs to set up their own companies or take fulltime employment. Other students may perform well but be so dissatisfied with the job during their work term that they leave their academic program or change careers. For a particularly

rich description of the effects, both positive and negative, on the lives of students, see the very important study by Linn, Ferguson, and Egart (2004) and Linn (2015) of Antioch alumni 50 years after their graduation.

The immediate outcomes (KSAOs) are the characteristics desired in new hires by those demanding WIL for all graduates. It is also important to point out that these characteristics may be negative as well as positive; that is, students may learn bad attitudes or habits on a job or the wrong or unsafe ways of performing a job. For example, Berwald and Rowe (1985) found that students were surprised to learn that their co-workers were less hard working but more friendly than they expected. In addition to the outcomes proposed by Tesluk and Jacobs (1998) the WIL model includes job satisfaction as an important outcome for our students. Job satisfaction on the work term should be a significant predictor of career development, a secondary outcome. WIL researchers would do well to examine the acquisition of immediate outcomes, that is, knowledge and skills, as well as job satisfaction, rather than measures of job performance when trying to determine the more important aspects of work experience.

Secondary outcomes are the longer-term results of work experience, including job performance and career development that are drawn from the Tesluk and Jacobs (1998) article, while job offers and academic performance are added because of their relevance to student work. Most studies in both human resources research and in WIL research have related measures of work experience to the secondary outcomes, especially future employment, but according to the model, these relationships are through the immediate outcomes. Therefore, we would expect the effect of measures of work experience to have a greater effect on acquisition of knowledge and skills than on job or academic performance.

Future Research on the Model

The model proposed here may serve to stimulate research in a number of areas. I have previously argued (Rowe, 2014, 2015) that WIL researchers should pay more attention to the jobs our students hold during their work terms; as a result, I have frequently been asked what measures should be used. The typical response from an industrial psychologist like me is to suggest that a job analysis be carried out. However, such a procedure results in a job description unique for each individual job and student and thus is useless for research. This model, however, permits measures (time on task, number of organizations, etc.) that are independent of the particular job held or tasks performed. Specific measures that should be more useful to the WIL researcher are the number of times a task is performed, the similarity of the experience during the work term to the future job, and the relation of the academic program to tasks, job, and career, and thus would be especially appropriate areas to examine.

The choice of which level of specificity and which measurement mode to select (i.e., which cell or cells to examine) should be done with an eye to the outcome of interest. If one is interested in whether work terms affect academic performance, then clearly the relation of the job to the curriculum should be assessed. However, one should be assessing immediate outcomes such as knowledge and skills, as well as academic performance. Or if one is interested on the impact of work experience on communication skills, then the amount of practice in communication tasks the student received on the job should be considered. Certainly, in both these cases intellectual ability, an individual factor, might play a part.

Two other areas that should be examined are the relative effects of different kinds of WIL, made explicit by the inclusion of a third dimension in the model, and the issue of time in WIL. We know almost nothing about how much time is required for any effect to occur. Worth noting is the work of [Nicholson and West \(1988\)](#) on the transition cycle, who suggested that four months, the typical semester-long co-op work term, was too short for work experience to have much effect (N. Nicholson, personal communication, November 1989).

It is important to realize that most of the research done on work experience in psychology and human resources evaluates work experience in the current job with performance in the *same* job, not in a future position. Almost none of the studies in the [Quinones et al. \(1995\)](#) meta-analysis examined how a measure of work experience (usually time on the job) predicted performance in a new and different job. Yet employers and government officials presume that work experience has positive effects on future work and that is why they want college and university graduates to pursue WIL programs ([Business Council of Canada, 2016](#); [Government of Ontario, 2016](#)). While the effect of experience in a future job has been largely ignored in human resources research, it is critically important in WIL, as future employment is the reason both students and employers engage in the program. Given the finding that the benefits of co-op work experience largely accrued to those who accepted employment with a previous employer ([Rowe, 2000](#)), future research needs to assess the extent to which the benefits of work experience generalize to other jobs and organizations. More WIL research also needs to examine the relative effectiveness of different types of WIL programs to influence future job performance.

CONCLUSION

In closing, it is appropriate to ask what the value of the WIL model is. Hopefully, the model may function to integrate many diverse studies and will have some relevance for WIL research. One of the most important features of the model is that work experience is multidimensional, with many aspects, even for the limited work periods found in WIL programs. Another important

characteristic of the WIL model is the inclusion of individual and contextual factors. Just a sample of possible factors has been suggested here; I anticipate that other researchers will add many more to this list. The proposed model provides a means of incorporating them in our work in this area. The value of the matrix, even though complex, provides a more organized way of thinking about these different aspects, and using them in research. Some of the cells are already known to be important for WIL; other cells, currently untested, may stimulate research and prove to be significant.

Work experience is the essential feature of WIL. It is critical that we better understand what it contributes to the current and future knowledge, skills, and attitudes of the young people who participate in these programs. Further, we need to know the conditions under which positive effects are enhanced and the factors that may limit these effects. In keeping with a recent appeal by Weingarten, Deller, and Hicks (2016) for research on work experiences to determine whether they actually produce the desired results, it is hoped that this proposed model would help to stimulate such future research and advance our knowledge of the effects of work experience in WIL programs.

REFERENCES

- Berwald, M. C. A., & Rowe, P. M. (1985). Organizational socialization: Or, I sure didn't expect my job to turn out like this! *Transition Learning, 1*, 77–87.
- Braunstein, L. A., Takei, Wang, F., & Loken, M. K. (2011). Benefits of cooperative and work-integrated education for employers. In R. K. Coll & K. E. Zegwaard (Eds.), *International handbook for cooperative and work-integrated education: International perspectives of theory, research and practice* (pp. 277–286). Lowell, MA: World Association for Cooperative Education, Inc.
- Business Council of Canada. (2016, June 2). Every university and college student should have access to work-integrated learning, business and post-secondary leaders say. Retrieved from <http://thebusinesscouncil.ca/news-item/bher>
- Carette, B., Anseel, F., & Lievens, F. (2013). Does career timing of challenging job assignments influence the relationship with in-role job performance? *Journal of Vocational Behavior, 83*, 61–67. doi:10.1016/j.jvb.2013.03.001
- Catano, V. M., Wiesner, W. H., Hackett, R. D., & Methot, L. L. (2010). *Recruitment, and selection in Canada* (4th ed.). Toronto: Nelson.
- Conroy, S., Franklin, D., & O'Leary-Kelly, A. M. (2012). Turmoil or opportunity? Retirement and identity-related coping. In J. K. Ford, J. R. Hollenbeck, & A. M. Ryan (Eds.), *The nature of work: Advances in psychological theory, methods, and practice* (pp. 165–182). Washington, DC: American Psychological Association.
- Crain, A. (2016). *Understanding the impact of unpaid internships on college student career development and employment outcomes*. National Association of Colleges and Employers. Retrieved from <http://www.nacweb.org/uploadedfiles/files/2016/guide/the-impact-of-unpaid-internships>
- DeClou, L., Sattler, P., & Peters, J. (2013). *The University of Waterloo and work-integrated learning: Three perspectives*. Toronto: Higher Education Quality Council of Ontario. Retrieved from <http://www.heqco.ca/en-ca/Research/ResPub/Pages/The-University-of-Waterloo-and-Work-Integrated-Learning-Three-Perspectives-.aspx>

- Dragoni, L., Oh, I.-S., Vankatwyck, P., & Tesluk, P. (2011). Developing executive leaders: The relative contribution of cognitive ability, personality, and the accumulation of work experience in predicting strategic thinking competency. *Personnel Psychology, 64*, 829–864. doi:10.1111/j.1744-6570.2011.01229.x
- Drewery, D., Pretti, T. J., & Barclay, S. (2016). Examining the effects of perceived relevance and work related subjective well-being on individual performance for co-op students. *Asia-Pacific Journal of Cooperative Education, 17*(2), 119–134.
- Drysdale, M., Goyder, J., Nosko, A., Easton, M., Frank, K., & Rowe, P. (2007). The role of co-op in the transition from high school to post-secondary education. *Journal of Cooperative Education, 41*(1), 48–55.
- Drysdale, M. T. B., & McBeath, M. (2014). *Connected minds – healthy minds: The mental health and wellbeing of post-secondary students transitioning into the labour market*. Government of Ontario, Ministry of Training, Colleges, and Universities. Ontario: Author.
- Gardner, P. (2011). *The debate over unpaid college internships*. Intern Bridge. Retrieved from <http://www.ceri.msu.edu/wp-content/uploads/2010/01/Intern-Bridge-Unpaid-Gardner,P.&College-Internship-Report-FINAL.pdf>
- Gardner, P., & Bartkus, K. R. (2014). What's in a name? A reference guide to work-education experiences. *Asia-Pacific Journal of Cooperative Education, 15*(1), 37–54.
- Governemnt of Ontario. (2016, June 23). *Building the workforce of tomorrow: A shared responsibility*. Retrieved from https://www.ontario.ca/page/building-workforce-tomorrow-shared-responsibility?_ga=1.234350622.1420231862.1470059178
- Groenewald, T., Drysdale, M., Chiupka, C., & Johnston, N. (2011). Towards a definition and models of practice for cooperative and work-integrated education. In R. K. Coll & K. E. Zegwaard (Eds.), *International handbook for cooperative and work-integrated education: International perspectives of theory, research and practice* (pp. 17–24). Lowell, MA: World Association for Cooperative Education, Inc.
- Hofmann, D. A., Jacobs, R., & Gerras, S. J. (1992). Mapping individual performance over time. *Journal of Applied Psychology, 77*, 185–195.
- Hulin, C. L. (2002). Lessons from I/O psychology. In F. D. Drasgow & J. M. Brett (Eds.). *Psychology of work: Theoretically based empirical research* (pp. 3–22) Mahwah, NJ: Erlbaum.
- Hulin, C. L. (2014). Work and being: The meaning of work in contemporary society. In J. K. Ford, J. R. Hollenbeck, & A. M. Ryan (Eds.), *The nature of work: Advances in psychological theory, methods, and practice* (pp. 9–33). Washington, DC: American Psychological Association.
- Kramer, M., & Usher, A. (2011). *Work-Integrated learning and career-ready students: Examining the evidence*. Toronto: Higher Education Strategy Associates. Retrieved from <http://higher-ed-strategy.com/wp-content/uploads/2012/02/InsightBrief5-FINAL-11.pdf>
- Linn, P. L. (2015). A lifespan perspective on cooperative education learning: A grounded theory. *Asia-Pacific Journal of Cooperative Education, 16*(4), 301–326. 302.
- Linn, P. L., Ferguson, J., & Egart, K. (2004). Career exploration via cooperative education and life-span occupational choice. *Journal of Vocational Behavior, 65*, 430–447.
- Nicholson, N., & West, M. (1988). *Managerial job change: Men and women in transition*. Cambridge: Cambridge University Press.
- Oxford Dictionary. Retrieved from <https://en.oxforddictionaries.com/definition/work>
- Patrick, C.-J., Peach, D., Pocknee, C., Webb, F., Fletcher, M., & Pretto, G. (2008). *The WIL (Work Integrated Learning) report: A national scoping study. [Final Report]* Retrieved from https://scholar.google.ca/scholar?hl=en&q=Patrick%2C+C.-J.%2C+Peach%2C+D.%2C+Pocknee%2C+C.%2C+Webb%2C+F.%2C+Fletcher%2C+M.%2C+%26+Pretto%2C+G.+%282008%29+The+WIL+%28Work+Integrated+Learning%29+report%3A+A+national+scoping+study.+Australian+Learning+and+Teaching+Council+%28ALTC%29+Final+Report%2C+Brisbane%2C+Australia%3A+Queensland+University&btnG=&as_sdt=1%2C5&as_sdtpr=
- Peters, J., Sattler, P., & Kelland, J. (2014). *Work-integrated learning in Ontario's postsecondary sector: The pathways of recent college and university graduates*. Toronto: Higher Education

- Quality Council of Ontario. Retrieved from <http://www.heqco.ca/en-ca/Research/ResPub/Pages/Work-Integrated-Learning-in-Ontario-s-Postsecondary-Sector-The-Pathways-of-Recent-College-and-University-Graduates-.aspx>
- Quinones, M. A. (2004). Work experience: A review and research agenda. In C. L. Cooper & I. T. Robertson (Eds.) *International review of industrial and organizational psychology* (17th ed, pp. 119–138). Chichester: Wiley. doi:10.1002/0470013311.ch4
- Quinones, M. A., Ford, J. K., & Teachout, M. S. (1995). The relationship between work experience and job performance: A conceptual and analytic review. *Personnel Psychology*, *48*, 887–910.
- Rowe, P. M. (1988). The nature of work experience. *Canadian Psychology*, *29*, 109–115.
- Rowe, P. M. (2000). Work experience: Rethinking its value for the individual and the organization. Invited address, Canadian Psychological Association Conference, Ottawa, ON, June 2000.
- Rowe, P. M. (2014). What's missing from work integrated learning research? Keynote address to world association for cooperative and work-integrated education international research symposium, June 2014, Trollhattan, Sweden.
- Rowe, P. M. (2015). Researchers' reflections on what is missing from work-integrated learning research [special issue]. *Asia-Pacific Journal of Cooperative Education*, *16*(2), 101–107.
- Sattler, P., & Peters, J. (2012). *Work-Integrated learning in Ontario's postsecondary sector: The perspective of Ontario employers*. Toronto: Higher Education Quality Council of Ontario. Retrieved from <http://www.heqco.ca/en-ca/Research/ResPub/Pages/Work-Integrated-Learning-and-Postsecondary-Graduates-The-Perspective-of-Ontario-Employers.aspx>
- Sattler, P., & Peters, J. (2013). *Work-integrated learning in Ontario's postsecondary sector: The experience of Ontario graduates*. Toronto: Higher Education Quality Council of Ontario. Retrieved from <http://www.heqco.ca/en-ca/Research/ResPub/Pages/Work-Integrated-Learning-in-Ontario-Postsecondary-Sector-The-Experience-of-Ontario-Graduates.aspx>
- Tesluk, P. E., & Jacobs, R. R. (1998). Toward an integrated model of work experience. *Personnel Psychology*, *51*, 321–355.
- Van Gyn, G., Cutt, J., Loken, M., & Ricks, F. (1997). Investigating the educational benefits of cooperative education: A longitudinal study. *Journal of Cooperative Education*, *32*(2), 70–85.
- Wanberg, C. R. (2012). The individual experience of unemployment. *Annual Review of Psychology*, *63*, 369–396.
- Weingarten, H. P., Deller, F., & Hicks, M. (2016). HEQCO – Hunting for Good WIL: Put quality before quantity. It's not academic blog, July 19. Toronto: Higher Education Quality Council of Ontario. Retrieved from <http://blog-en.heqco.ca/2016/07/heqco-hunting-for-good-wil-put-quality-before-quantity/>
- Wilson, J. W., & Lyons, E. H. (1961). *Work-study college programs: Appraisal and report of the study of cooperative education*. New York, NY: Harper & Brothers.

This page intentionally left blank