

# **FACILITATING SELF-DIRECTED LEARNING IN ADULT AND VOCATIONAL EDUCATION**

Vom Fachbereich Sozialwissenschaften  
der Technischen Universität Kaiserslautern  
zur Verleihung des akademischen Grades  
Doktor der Philosophie (Dr. phil.)

genehmigte

## **Dissertation**

vorgelegt von  
**Thomas Howard Morris**

Tag der Disputation:	Kaiserslautern, 26. März 2019
Dekanin:	Prof. Dr. Shanley E. M. Allen
Vorsitzende/r:	Prof. Dr. Mandy Schiefner-Rohs Prof. Dr. Arne Güllich
Gutachter/in: 1.	Prof. Dr. Rolf Arnold
2.	Prof. Dr. Matthias Rohs

D 386

Kaiserslautern, März 2019

# Acknowledgements

The author would like to offer his sincere gratitude to his master Rolf Arnold and Matthias Rohs for facilitating and supervising this project. Both Rolf Arnold and Matthias Rohs provided guidance and critical comments throughout and, perhaps most importantly, gave me the freedom to learn whilst retaining faith in my competence to self-direct this learning project.

Moreover, Arne Güllich, Shanley Allen, Jürgen Wilzewski, and Jochen Mayerl provided unconditional support and advice throughout this process for which I am exceptionally thankful. In addition, Gina and Leo Morris provided continual support throughout this learning project. The author would like to acknowledge his thankfulness to colleagues that gave fruitful feedback on Chapters 2 and 3 of this manuscript, including Arash Tolou, Dino Cubela, Bastian Steinmüller, Leigh Fernandez, Steffen Hagemann, Michèle Parent, Henrik Andersen, and Jessica Neureuther, who provided detailed critical comments.

It is important to note that the author became fascinated with the concept of self-directed learning when Rolf Arnold introduced him to the literature on adult learning in 2016. In contrast to the author's previous experience, as a teacher of adult and vocational education, the author was not familiar with the self-directed learning concept, or aware of the critical need to foster learners' self-directed learning competence in formal educational settings. Consequently, the author's motivation to pursue this project was fueled by a deep intrinsic desire to assist educators and stakeholders of education to understand the didactical process and importance of facilitating self-directed learning in formal educational settings.

# Contents

<b>List of Figures</b>	<b>vi</b>
<b>List of Tables</b>	<b>vii</b>
<b>1 Introduction</b>	<b>1</b>
1.1 Historical foundations of the self-directed learning concept. . . . .	2
1.1.1 Foundational positions. . . . .	4
1.1.2 The learning process. . . . .	13
1.1.3 Characteristics of self-directed learners. . . . .	24
1.1.4 Contextual factors that influence the possibility for self- directed learning. . . . .	34
1.1.5 Aims and research questions of the present thesis . . . . .	38
<b>2 Vocational education of young adults in England: a systemic analysis of teaching–learning transactions that facilitate self-directed learning</b>	<b>42</b>
2.1 Introduction. . . . .	43
2.2 Self-directed learning. . . . .	44
2.2.1 The foundations of self-directed learning. . . . .	44
2.2.2 The importance of fostering self-directed learning in vocational education and training. . . . .	47
2.3 Changing educational goals of vocational education and training in England. . . . .	49
2.4 Method. . . . .	51
2.4.1 The inspection process. . . . .	52
2.4.2 Data collection and analysis. . . . .	53
2.5 Findings. . . . .	59
2.5.1 Planning learning. . . . .	59
2.5.1.1 Goal and target setting. . . . .	59
2.5.1.2 Progression pathways. . . . .	60
2.5.2 Undertaking learning. . . . .	62
2.5.2.1 Classroom control. . . . .	62
2.5.2.2 Structuring learning opportunities. . . . .	63

2.5.2.3 <i>Knowledge and skills applied to real world settings.</i> . . .	65
2.5.2.4 <i>Learner support.</i> . . . . .	66
2.5.2.5 <i>Higher order cognitive processes and knowledge dimensions.</i> . . . . .	67
2.5.3 <i>Reviewing learning.</i> . . . . .	68
2.5.3.1 <i>Feedback and monitoring.</i> . . . . .	68
2.5.4 <i>Entering/task maintenance.</i> . . . . .	70
2.5.4.1 <i>Expectations.</i> . . . . .	70
2.5.4.2 <i>Inspiring environments.</i> . . . . .	71
2.6 <i>Discussion.</i> . . . . .	74
2.6.1 <i>Limitations and suggestions for further research.</i> . . . . .	77
2.6.2 <i>Implications for practice.</i> . . . . .	78
Note. . . . .	79

**3 Adaptivity through self-directed learning to meet the challenges of our ever-changing world** **80**

3.1 <i>Introduction.</i> . . . . .	81
3.2 <i>Self-directed learning as a critical competence.</i> . . . . .	83
3.3 <i>Motivation for self-directed learning.</i> . . . . .	85
3.4 <i>Models of modes of learning.</i> . . . . .	88
3.4.1 <i>The reinforcing model of modes of learning.</i> . . . . .	88
3.4.2 <i>The adapting model of modes of learning.</i> . . . . .	92
3.5 <i>Practical implementation and further research directions.</i> . . . . .	97
3.6 <i>Conclusion.</i> . . . . .	98

**4 Experiential learning—a systematic review and revision of Kolb’s model** **100**

4.1 <i>Introduction.</i> . . . . .	101
4.2 <i>Kolb’s experiential learning cycle.</i> . . . . .	102
4.3 <i>Methodology.</i> . . . . .	105
4.3.1 <i>Data collection.</i> . . . . .	105
4.3.2 <i>Data analysis.</i> . . . . .	107
4.4 <i>Results.</i> . . . . .	110
4.4.1 <i>Research question 1: what constitutes a concrete experience?</i> . . . . .	110
4.4.2 <i>Research question 2: what is the nature of treatment of a concrete experience?</i> . . . . .	114
4.4.3 <i>Revision to Kolb’s model.</i> . . . . .	117

4.4.3.1 <i>Concrete experience</i> .....	119
4.4.3.2 <i>Reflective observation</i> .....	121
4.4.3.3 <i>Abstract conceptualization</i> .....	122
4.4.3.4 <i>Active experimentation</i> .....	124
4.5 Conclusions and future works.....	125
<b>5 Final conclusions and future works</b>	<b>129</b>
5.1 Final conclusions and further research directions.....	130
5.1.1 <i>Study 1</i> .....	132
5.1.2 <i>Study 2</i> .....	136
5.1.3 <i>Study 3</i> .....	138
<b>References</b>	<b>143</b>
<b>Author biography</b>	<b>177</b>

## List of Figures

Figure 1. Reinforcing model of modes of learning	89
Figure 2. Adapting model of modes of learning	92
Figure 3. Thematic map	109
Figure 4. Experiential learning cycle (a revision to D. A. Kolb's 1984 model)	118

## List of Tables

Table 1. Ofsted Framework: FE grade descriptors for outstanding (Ofsted, 2017, p. 44) and inadequate (p. 45) teaching, learning and assessment	58
Table 2. Summary: description of themes identified in the data (including cross references made to *outstanding and **inadequate grade descriptors that were considered post hoc of data analysis (refer to Table 1))	73
Table 3. Summary of journal articles included in the review	106

# **Chapter 1**

## **Introduction**

## **1.1 Historical foundations of the self-directed learning concept**

Self-directed learning is a process in which a learner controls their learning objectives and means in order to meet personal goals or the perceived demands of their personal context. The learner(s) themselves represent a central and salient feature of their differentiated context and consequently in the process a learner's learning means and objectives are highly individual.

Self-directed learning has been positioned as a *critical* competence for adults living in our modern world, where social contextual conditions are changing rapidly (cf. Morris, 2018a, Chapter 3). In this regard, it could be argued that fostering learners' self-directed learning competence should represent a foremost endeavor of formal education in many contexts. Self-directed learning competence is defined as the ability of a learner to successfully and efficiently undertake self-directed learning.

This thesis may be useful for a multitude of educational stakeholders including educators, curriculum developers, managers, and government policy-makers, but also personnel concerned with human resource development.

The construct of self-directed learning has multiple dimensions (e.g., Beckers, Dolmans, & van Merriënboer, 2016; Morris, 2018c, Chapter 2; O'Shea, 2003; Song & Hill, 2007). In a recent review of the self-directed learning concept, Sawatsky, Ratelle, Bonnes, Egginton, and Beckman (2017) identified that

scholarly conceptualizations of self-directed learning commonly emphasize one or more of three dimensions: (1) the process of learning—the management of learning tasks (2) personality characteristics of the learner, and/or (3) factors within the learner’s context that influence the possibility for learners to undertake self-directed learning. These dimensions are discussed in further detail in the forthcoming sections of this chapter.

Moreover, some scholarly works on self-directed learning (e.g., Garrison, 1997) have highlighted the need to consider a fourth dimension, which concerns the cognitive aspect of self-directed learning. This includes self-regulatory processes (cf. Jones, 2017; Pintrich, 2004; Zimmerman, 1990), but also how knowledge is construed during the learning process. In this regard, Chapter 3 of the present thesis aims to further our understanding of, and highlights the importance of considering, *how learners learn* during the self-directed learning process. In addition, the aim of Chapter 4 (Morris, 2019a) is to further our understanding of the types of educational experiences that promote a *spiral* in personal growth, which also concerns how a learner’s knowledge is construed. A summary of research findings from Chapters 2, 3, and 4 is given in Chapter 5, where key further research directions are outlined.

In the present chapter, the historical foundations of self-directed learning are presented, followed by an overview of key dimensions of the self-directed learning concept, including details of the learning *process*, characteristics of self-directed learners, and contextual factors that may influence the possibility for self-directed learning.

### ***1.1.1 Foundational positions***

The concept of self-directed learning grew out of popular works published mainly in the United States of America during the nineteen-sixties and seventies. This included the scholarship of Allen Tough (e.g., Tough, 1967, 1971, 2002), a Canadian who completed his doctoral work in North America, who became fascinated with understanding the nature of adult learning, especially regarding how learning in adulthood often represents a self-directed learning process.

Through structured interviews with 66 Canadian adults, Tough (1971) identified that it was commonplace for adults to undertake “self-taught” projects of learning, outside the walls of formal education and without a teacher. He concluded that adults, at the time of the study and in the context of the study, undertook a median of eight learning projects per year, which represented 864 learning hours on average. He defined a “learning project” as a “major, highly deliberate effort to gain certain knowledge and skill (or to change in some other way)” (p. 1). Tough’s empirical work highlighted the pragmatic nature of self-directed learning; pragmatic in the sense that adults may often initiate learning in order to find solutions to real-world problems that are situated within their context of living. Indeed, Tough concluded that, “Many learning projects are initiated for highly practical reasons” (p. 1) and “A great many learning projects are related to the person’s job or occupation” (p. 35). Thus, in this study, a good portion of

measurable/explicit adult learning was self-directed, driven by the intent to solve or resolve life-centered problems.

A key limitation of this study was that Tough did not consider the quality of learning outcomes derived from the self-directed learning process. This is perhaps a very important limitation: just because adults undertake self-directed learning doesn't necessarily mean that they are competent self-directed learners and it is possible that their learning outcomes are not efficient or successful in respect of their learning objectives. Moreover, clearly, since this study the nature of adult learning may have changed significantly, especially due to digitization (e.g., Rohs & Ganz, 2015; Schmidt-Hertha & Rohs, 2018). In addition, external validity of the findings should be considered in that the nature of adult learning may be distinctly different in differential contexts.

In order to further our understanding of the quality of learning outcomes derived from the self-directed learning process, it seems imperative to understand the nature of the process of self-directed learning (cf. Chapter 3) and the types of educational experiences that lead to a spiral of learner growth, rather than learners moving in circles by habitually reinforcing their patterns of perceiving, thinking, judging, feeling, and acting (cf. Chapter 4). The present author concludes (cf. Chapter 5) that these are important directions for further research on self-directed learning, especially in regards to understanding the cognitive aspect of the self-directed learning construct and furthering our understanding of how to foster self-directed learning competence in formal educational settings.

In this regard, a key historical assumption of self-directed learning theory was that learning experiences are suitable for personal growth: personal growth that represents desirable and responsible growth, in respect to the learner(s) themselves, but also other persons within the learners' society. This is a key humanistic assumption that underlines advocating the fostering of self-directed learning competence in formal educational settings (Elias & Merriam, 1995; Groen & Kawalilak, 2014; Maslow, 1943).

Humanistic philosophical assumptions include that learners are autonomous and capable of smart decision making, have a sense of responsibility to themselves and others, are inherently good natured, possess an urge toward self-actualization, and have unique but unlimited potential for growth determined by the learner's self-concept and individual understanding of the world (Elias & Merriam, 1995).

Thus, a key foundational position of the self-directed learning construct concerns having *faith* in learners' ability to learn. Arnold (2015) pointed out that self-directed learning is "*the* single ability which gave humans the advantage in the evolutionary competition of the species" (p. 7; emphasis in original). Knowles (1975) stated, "We are talking about a basic human competence—the ability to learn on one's own" (p. 17).

In this regard, influential scholars in the field of self-directed learning have argued that often in formal educational settings the human capacity for learning, specifically self-directed learning, is underappreciated and underutilized (e.g., Rogers, 1969). However, to the knowledge of the present author no previous study has empirically tested this idea against a whole educational system and the study

presented in Chapter 2 is the first systemic study that provides sound evidence that teacher-directed learning is still commonplace in some educational institutions in our modern world, at least in the context of the case study examined. In teacher-directed learning, the teacher retains control of directing the learning means and objectives of the learning process. Historical scholarship on self-directed learning has however highlighted the importance of fostering self-directed learning competence in formal educational settings.

For example, in 1969 Carl Ransom Rogers published an influential book titled *Freedom to Learn*. In his thesis, Rogers, who is considered a founder of humanistic psychology, contended that in order to prepare persons to deal with the challenges of living in societies in which conditions are rapidly changing self-directed learning is the most important competence to foster in formal education.

Rogers did not offer any concrete empirical evidence regarding how to foster learners' self-directed learning competence (cf. Chapters 2, 3, and 4), but offered his ideas for how self-directed learning may be facilitated in formal educational settings. Rogers discussed the importance of educators (1) setting the initial mood or climate of the experience; (2) enabling the collaborative setting of learning objectives with learners; (3) providing access to the widest possible range of resources for learning, including themselves (the educator) as a valuable resource; (4) welcoming all opinions and attitudes toward the content in an unbiased way; (5) working toward a share of control of directing the means and objectives of learning between teacher and learner(s), and; (6) not imposing how students choose to construct meaning. In sum, Rogers conceptualized the process of

facilitating self-directed learning in formal educational settings as a collaborative effort.

Some forthcoming theoretical works on self-directed learning have concurred with this perspective. For instance, Garrison's (1997) position was that in formal educational settings the educator inevitably plays a very important collaborative role in assisting students to appreciate the need to consider "what counts as worthwhile knowledge" (p. 23). Building on this perspective, Tan (2017) proposed that competent self-directed learning is ultimately underpinned by a "shared moral vision" (p. 250) of the "individual" and the "collective" (p. 251). That is, self-directed learning does not occur in a social or contextual vacuum and, rather, it should be considered that there might be a need for learners to balance personal goals with societal needs (cf. Chapters 2, 3, and 4).

Moreover, Malcolm Knowles, who like Allen Tough was supervised by Cyril Orvin Houle during his doctoral work, was also an influential scholar on self-directed learning theory. Inspired by Rogers's ideas (cf. Knowles, 2001), Knowles spent his career advocating the facilitation of self-directed learning in Higher Education settings (1970, 1975, 1980). Knowles's work emphasized the *process* dimension of self-directed learning, which refers to learner control of directing the learning means and objectives—the externally observable management of learning tasks (cf. Brookfield, 1986; Mocker & Spear, 1982). Knowles (1975) pointed out that perhaps the meaning of self-directed learning becomes clearer when one compares and contrasts the process to that of teacher-directed learning, in which

an educator controls the direction of the learning means and objectives (e.g., Arnold, 2015; Dewey, 1938/1963; Freire, 1970).

Indeed, Chapter 3 of the present thesis builds on this theoretical position, especially concerning that teacher-directed learning is a process underlined by behaviourist epistemology, characterized by predictable, measurable, and pre-definable learning outcomes for all learners (cf. Murtonen, Gruber, & Lehtinen, 2017). Whereas, self-directed learning rather positions with constructivist epistemology, demanding an alternative didactical framework than “traditional” forms of education (cf. Dewey, 1938/1963).

In fact, Knowles (2001) acknowledged that he became excited about understanding the principles of adult education whilst reading the work of Eduard Christian Lindeman (*The Meaning of Adult Education*, Lindeman, 1926). Knowles had worked with Lindeman during employment at the National Youth Administration in the United States of America early in his career. Indeed, it is possible to trace much of Knowles’s ideas on the principles of adult learning—which he named “andragogy”—to Lindeman’s work (1926), including that (1) adults have a deep psychological need to be self-directed (2) adult learning is individual (life-centered) and this individuality increases with age (3) experience is the richest adult learning resource, and (4) adults are motivated to learn when learning is connected to their personal needs and interests.

In emphasizing the pragmatic dimension of adult learning, Lindeman (1926), in reference to the ideas of Dewey (1910; associated with the philosophy of pragmatism, cf. Dewey, 1908), proposed a pragmatic approach, or “situation

approach” (p. 193) to adult learning, which involves learners asking four questions:

- (1) What situation have we here?
- (2) What sort of problem does it show?
- (3) What new information does it involve?
- (4) What action will set us towards a solution? (p. 193)

The pragmatic dimension of adult learning supports, and is integrally connected with, the underlying constructivist epistemological position of the self-directed learning construct. Constructivists view learning as an individual, interpretive, and active process of meaning making (Merriam, Caffarella, & Baumgartner, 2007). In this regard, von Glasersfeld (1982, 1995) and others (e.g., Arnold, 2015, 2017) reasoned that knowledge cannot be directly transferred from one person (e.g., the teacher) to another person (e.g., the learner), but rather the individual learner shapes his or her knowledge constructions. According to this perspective on knowing, one’s past personal experiences determine one’s unique knowledge structures, or lenses, in which present moment information input is processed, which determines how our knowledge is construed and represents how people make individual or co-constructed sense of experience.

In this respect, and in referring to the context of formal educational settings, Jonassen (1999) identified that the fundamental difference of constructivist learning environments is that the educational process is driven by “the question or issue, the case, the problem, or the project that learners attempt to solve or resolve”

(p. 218) and “nearly every conception of constructivist learning recommends engaging learners in solving authentic problems” (p. 221), which inevitably demands learners to undertake judgemental and critical thinking (Dewey, 1916/2013; Garrison, 1997). Thus, constructivist learning environments emphasize the importance of engaging learners in solving authentic real-world based problems. Chapters 3 and 4 of the present thesis builds upon this foundational position.

Nonetheless, what is fascinating about early conceptualizations of facilitating self-directed learning in formal educational settings, such as that of Knowles and Rogers, is that they encompassed humanistic assumptions and acknowledged the importance of appreciating constructivist epistemology, but, in a seemingly piecemeal fashion, did not emphasize the pragmatic aspect of self-directed learning—intimately linked to a key purpose of self-directed learning—to solve or resolve problems in the context of a learner’s life.

Although, there is inevitably some transfer, which represents an important research direction for further studies, it is however possible that undertaking self-directed *academic* learning may not support the process of fully fostering the skills and abilities needed for an adult to be competent to solve or resolve the real-world problems in their social or work life. In this regard, Chapter 2 of the present thesis examines the nature of teaching–learning transactions that may facilitate self-directed learning in formal vocational educational settings. The author concludes that the nature of teaching–learning transactions may be differential in accordance

with differential pragmatic purposes, the individual learner's needs and their specific vocational pathway.

Moreover, perhaps because of the complexity of the didactics involved in facilitating self-directed learning in formal educational settings (cf. Chapters 2, 3, and 4), the self-directed learning concept continues to convey considerable misunderstanding and confusion. It is important to note that this has been historically the case. For instance, Brockett and Hiemstra (1991) pointed out that some educators may even envisage that self-directed learning involves "a person cloistered in the corner of a library reading a book or at home using a package of individualized learning materials" (pp. 11-12). The theoretical work presented in Chapter 3 of the present thesis suggests that, actually, such examples may indeed form part of a self-directed learning process, but what is essential to consider in addition is the nature of how learners learn, which concerns the cognitive aspect of self-directed learning.

Chapter 3 also addresses, in part, recent scholarly concerns that the self-directed learning construct has become somewhat obfuscated, both within and between academics and practitioners (cf. Beckers et al., 2016; Brockett & Hiemstra, 1991; Candy, 1991; Garrison, 1992, 1997). Even, self-directed learning has been recently dubbed as an "umbrella term" for various self-controlled goal-directed learning processes (Beckers et al., 2016; O'Shea, 2003; Sawatsky et al., 2017; Song & Hill, 2007).

In the following sections of this report, key dimensions of the self-directed learning construct are discussed, including (1) the learning process (2)

characteristics of self-directed learners, and (3) contextual factors that may influence the possibility for self-directed learning. Afterward, the aims and research questions of the present thesis are outlined.

### ***1.1.2 The learning process***

Self-directed learning was commonly conceptualized in terms of learner control of directing the learning *process*—the externally observable management of learning tasks (cf. Brookfield, 1986; Mocker & Spear, 1982; Garrison, 1997). The method, resources, structure and conditions of which are potentially influenced by the unique circumstances of the learning opportunity, determined by the contextual conditions of the learning experience at that particular point in time (Mocker & Spear, 1982; Spear & Mocker, 1984). Caffarella (1993) argued that, irrespective of the organizing circumstances of the learning environment, the self-directed learning process involves the learner assuming and maintaining “primary responsibility” for directing their learning process. The present author’s perspective on the definition of self-directed learning in this regard is detailed in Chapter 3 of the present thesis.

Tough’s (1967, 1971) seminal work, discussed in the previous section of this chapter, was fundamental in popularizing the concept of self-directed learning. Tough’s study depicted a learning process of stark contrast to traditional teaching models, whereby a teacher assumes control of directing the planning, undertaking,

and reviewing aspects of the learning process (cf. Arnold, 2015; Dewey, 1938/1963; Freire, 1970). A notable question that surfaced from Tough's research was whether self-directed learning could be facilitated in formal educational settings.

Knowles (1975) promoted self-directed learning as a *process* that includes learner *initiative* to plan, conduct, and review their own learning. He (1970, 1975, 1980) proposed a continuum of *control*; the two ends of which being teacher-directed and self-directed learning. Knowles (1975) advocated the facilitation of self-directed learning in formal education, but warned it can be “a very risky venture” (p. 44), concluding that “Students entering into these [North American university] programs without having learned the skills of self-directed inquiry will experience anxiety, frustration, and often failure, and so will their teachers” (p. 15). These personal reflections, alongside early empirical studies, provided clues regarding how the success or failure of a self-directed learning effort influences the learner's motivation toward further pursuits of self-directed learning.

For example, Kasworm (1983) empirically tested Knowles's ideas by employing learning contracts with groups of North American university students. Kasworm reported upon the effect of a course demanding self-directed learning from learners upon learners' subsequent motivation for self-directed learning. She concluded some positive findings, but also that about a quarter of students had particular difficulty with the self-directed learning process. These students also reported that they would avoid future formal educational opportunities that demand self-directed learning. For example, “One of these students candidly

remarked during the final class session evaluation that she had discovered she was not an independent learner nor did she expect that graduate coursework should assume that she should be her own teacher” (p. 50). Such early empirical evidence suggested that it is possible that a positive or negative self-directed learning experience affects a learner’s motivation for further self-directed learning pursuits and that fostering learners’ skills for self-directed learning may be necessary for promoting effective learning outcomes from the process.

Other scholars, such as M. Gibbons (2002), have also advocated the use of learning contracts to facilitate self-directed learning. Gibbons explained that learning contracts could be used to plan and record learning activities and could work alongside other assessment methods, such as self-assessment worksheets. Gibbons also suggested that there are alternative approaches, such as the implementation of student-centered conferencing, or completion of a portfolio (cf. Beckers et al., 2016, for review), which could accompany a program of self-directed learning.

Moreover, further studies have empirically tested such ideas in formal educational settings. For example, Kicken, Brand-Gruwel, van Merriënboer, and Slot (2009) examined the effectiveness of vocational education of young adult learners in the Netherlands that demands self-directed learning. In reference to Dutch secondary vocational education, the authors explained that many institutions have introduced “on-demand” education because it is nowadays acknowledged that students should be given more control of and responsibility for their own learning. This experimental study involved students (42 female, 1 male;

mean age = 18 years, SD = 1.2) in their first year of a three-year hairdressing program. The study was designed to investigate whether supervision meetings, in which students received specific advice on how to use a development portfolio to monitor their progress and plan their future learning, helped them to develop their self-directed learning skills and improve their learning in the domain. Students in the advice group ( $n = 21$ ) formulated better learning needs, selected more suitable learning tasks, completed more practical assignments, and acquired more certificates than students in the feedback-only group ( $n = 22$ ). The authors however concluded that many students did not make sufficient progression in these self-directed learning programs, especially, perhaps, because they were use to a teacher-directed learning process throughout their formal schooling up until this educational stage and suggested that learners would benefit from expert support for nurturing their self-directed learning skills.

Furthermore, Jossberger, Brand-Gruwel, van de Wiel, and Boshuizen (2017) discussed the potential for workplace simulations to facilitate self-directed learning in formal educational settings. They explained that in vocational education and training of adults in the Netherlands, there has been a shift away from theoretical domain-specific knowledge taught in classrooms, specifically because it presented a problem of knowledge and skill transfer. The authors explained that workplace simulations, which comprise of domain-specific, whole, authentic, and complex learning tasks, have a very good potential to solve the issue of knowledge and skill transfer, as well as enabling the facilitation of self-directed learning in formal educational settings. However, they also acknowledged that the

didactical understanding of facilitating workplace simulations has, to date, not been properly worked out. Chapters 3 and 4 of the present thesis addresses, in part, this concern and may assist educators to understand how to design education that leads to deep conceptual understanding, which is required to secure workplace competence (cf. Chapter 2).

Moreover, in a recent mixed-method study on the effectiveness of employing e-portfolios in Dutch vocational education and training (32 males, 15 females; mean age = 17.3 years, SD = 1.5), Beckers, Dolmans, Knapen, and van Merriënboer (2018) highlighted that assistance, especially feedback given by educators, seems essential to support the facilitation of self-directed learning, but, perhaps, requires much time and energy on the part of the educator. This idea is supported by previous studies (e.g., Kicken et al., 2009) that concluded that young adult learners often require teacher support because many young adult learners have not yet fully fostered the skills necessary for the self-directed inquiry process.

One imperative advantage of learners learning in a formal educational setting is, perhaps, learner access to an expert—the educator—who may represent an important learning resource, but could also function to progressively enable and assist to foster learner competence to assume control of directing their learning process. Indeed, in 1972 Moore pointed out that “Most educational theories stipulate the desirability of learners’ acquiring sufficient skill in preparation, execution, and evaluation to conduct their own learning” (p. 80).

In this regard, Arnold (cf. Arnold, 2015, 2017, 2019, in press) introduced the concept of *enabling didactics* (translated from German: *Ermöglichungsdidaktik*)

into the German education system in the 1990's. The concept places the teacher as a facilitator of learning, who can enable, allow, help, or assist the learner to develop the ability to learn for themselves—encouraging learners to be self-directed through setting up learning situations and experiences that enable the progressive development of autonomous learning competencies, whilst concurrently, gradually, taking away teacher support. Thus, *enabling* students to develop autonomy in planning, undertaking, and evaluating their own learning.

In a review of Arnold's (2015) work, Morris (2018b) explained that Arnold's concept adopts a constructivist epistemology and is complementary to other popular adult learning theories. Arnold argues that learning is *always* self-directed at its core and that learning is indeed a natural human ability: thus, human beings should have the capacity to learn independently. But rather, through certain teaching practices, such as consistently instructing learners to memorise and reproduce isolated facts, a teacher could discourage learners or block a learners' motivation to learn further.

Indeed, in reviewing Arnold's systemic-constructivist perspective on self-directed learning, Morris (2019b) discusses that Arnold's position emphasizes the holistic nature of a learner's experience of learning (from childhood until death). The systemic-constructivist perspective builds upon a more general view of constructivist epistemology, highlighting that an adult's understanding of the world is systemically grounded in one's experiences from birth. This perspective is supported by other scholars on self-directed learning, such as Kranzow and

Hyland (2016) who discussed the need for a holistic educational system in order to facilitate, over time, the fostering of learners' self-directed learning competence.

Arnold's systemic-constructivist perspective (cf. Arnold, 2019, in press) complements, in particular, Robert Kegan's constructive-developmental theory (Kegan, 2009). Kegan argued that rather than being concerned with what information we know, appreciating our way of knowing is essential: it is important to understand that the way we construct experience can become more complex as we age.

In this regard, Arnold's work (e.g., Arnold, 2019, in press) highlights that in order to understand an adult learner's tendency and propensity toward self-directed learning, the person's childhood and adolescent experiences of learning must be considered. The idea of a systemic approach to understanding an educational process of competence development goes against empirical studies on self-directed learning, exemplified through this thesis, that report on relatively novel, short-lived, attempts for individual institutions or individual teachers to propose or trial a course of formal education that stipulates or suggests that students undertake self-directed learning. The systemic perspective on self-directed learning should be considered when interpreting the present thesis.

In accordance with the systemic-constructivist perspective on self-directed learning, there is a need for educational systems that operate progressively in regards to learners' competence development. In this respect, Chapter 2 of the present thesis documents a case study of the vocational educational system in England and reports a wide-within institutional difference concerning the extent to

which self-directed learning processes are facilitated during the educational process.

The systemic-constructivist perspective toward self-directed learning is also complementary to staged models of self-directed learning. Most notably, Grow's (1991) model suggests that the educator must stage educational activities that are suitable, but progressive, in accordance with the self-directed learning competence of individual learners. He proposed that contextual factors such as learner's familiarity with subject content would determine a learner's unique learning stage. Grow's staged model of self-directed learning has four stages, in which there is a differential balance of control of directing the learning process between teacher and learner.

In stage 1, the student is a dependent learner and the teacher assumes an authority role. Examples of such learning activities include coaching with drill exercises and informational lectures. In stage 2, the learner is interested and the teacher assumes the role of motivator and guide, such as in guided discussions. In stage 3, the learner becomes involved in the learning process and the teacher assumes the role of a facilitator of learning, such as in teacher-guided group project work. Finally, in stage 4, the educator takes the role of a consultant or delegator, such as in internships, dissertations, or individual/group study work.

Moreover, M. Gibbons (2002) advocated that formal education is an opportunity for "developing the perspective, attitudes, and initiative that make self-directed learning possible" (p. 17). He proposed a five-step process to help educators facilitate self-directed learning in formal education: (1) identifying

learning outcomes (2) creating a supportive environment (3) teaching skills and processes for self-directed learning (4) negotiating learning proposals with learners, and (5) setting in place a procedure for self-assessment. Gibbons hypothesized that enabling all students toward a passionate pursuit of their own learning can only be enabled by educators “who are committed to this vision and equipped to empower their students to become fully and proudly themselves” (p. 13). However, further empirical research is required to test this possibility.

Other scholars have highlighted that formal education may represent an important opportunity to foster learners’ self-directed learning competence, which includes the skills necessary for the self-directed *inquiry* process (e.g., Arnold, 2015; Grow, 1991; Kicken et al., 2009; Knowles, 1975; Rogers, 1969). This perhaps involves learners becoming confident, competent and comfortable with planning, undertaking and reviewing their learning process—which includes learners taking *responsibility* for constructing meaning from their educational experience, but also, perhaps, setting up suitable educational experiences that are conducive to learning (cf. Chapters 4 and 5).

In this regard, John Dewey (1938/1963) argued for the need for an educational system in which a teacher’s role should involve the setting-up of *quality* learning experiences for students that leads to *continual* learner growth (cf. Chapter 4). Dewey discussed that a teacher would need to survey and take into account the individual needs of students and design learning opportunities and environments that *facilitate* students to connect new knowledge to their own individual representation of the world. Moreover, Dewey proposed that the teacher plays a

key role in moderating a student's desire to go on learning. In context of experience and education, Dewey wrote:

The most important attitude that can be formed is that of desire to go on learning. If impetus in this direction is weakened instead of being intensified, something much more than mere lack of preparation takes place. The pupil is actually robbed of native capacities which otherwise would enable him to cope with the circumstances that he meets in the course of his life. We often see persons who have had little schooling and in whose case the absence of a set of schooling proves to be a positive asset. They have at least retained their native common sense and power of judgement, and its exercise in the actual conditions of living has given the precious gift of ability to learn from the experiences they have. (p. 48)

Chapters 3 and 4 of the present thesis aims to address this important issue, identified by Dewey, but in respect of the self-directed learning process, concerning the need to consider what forms of educational experience may influence a learner's desire to go on learning. Indeed, motivation, a further dimension of the self-directed learning construct, is discussed further in Chapter 3, where a model of self-directed learning is proposed (cf. Figure 2). The purpose of this model of self-directed learning is to assist educators and other stakeholders of education to view the process of self-directed learning through a differential lens and to contribute toward the understanding of how to design education that can facilitate learners' motivation for self-directed learning and foster learners' self-directed learning competence.

The conclusions drawn in this thesis (cf. Chapter 5) identify that there are potentially differential forms of formal education that could or are indeed fitting with the model of self-directed learning proposed in Chapter 3 (Figure 2). This includes, but is not limited to experiential learning, which represents an educational process in which learners are placed physically, often in collaboration with others, in rich contextual learning environments that represent in the moment, uncontrived, experience (e.g., Fűz, 2018; Karoff, Tucker, Alvarez, & Kovacs, 2017; Munge, Thomas, & Heck, 2018). In Chapter 4, the experiential learning concept is systematically reviewed; the learning process is ultimately underpinned by learner *responsibility* and control over directing the planning, undertaking, and reviewing aspects of learning. It is discussed that the models proposed in Chapters 3 and 4 (cf. Figures 2 and 4, respectively) require further empirical testing and represent exciting further research directions for studies on self-directed learning.

In sum, the *process* dimension of self-directed learning concerns learner control of directing the learning means and objectives of one's learning process—the externally observable management of learning tasks. Self-directed learning is a process of stark contrast to teacher-directed learning, whereby the teacher retains control of directing the learning means and objectives. In the next section, characteristics of self-directed learners are discussed regarding how they may influence a learner's propensity and tendency toward self-directed learning.

### *1.1.3 Characteristics of self-directed learners*

Characteristics of self-directed learners concern relatively stable factors that influence one's propensity, preference, skill, and intrinsic motivation, toward self-directed learning. In this regard, personality characteristics that influence a learner's preference for taking control of and responsibility for the learning process are important considerations (cf. Alharbi, 2018; Barry & Egan, 2018).

Drawing on the work of Brockett (1983), Lounsbury, Levy, Park, Gibson, and Smith (2009) described self-directed learning as a personality construct, where the learner has “a disposition to engage in learning activities where the individual takes personal responsibility for developing and carrying out learning endeavors in an autonomous manner without being prompted or guided by other people (such as a teacher, parent, or peer)” (p. 411).

Historically, some prominent scholars of adult education positioned age as a key characteristic of a self-directed learner: self-directed learning was considered a cardinal construct that differentiated adult from child learners (e.g., Knowles, 1970; Lindeman, 1926). Indeed, the works of Knowles and Lindeman were considered the most influential, in this regard, in the adult education literature (Brookfield, 1984).

Knowles (1970) made the presumption that the age of a learner should be *the* central factor that drives the principles and process elements that underpin teaching and learning. Knowles summarized the assumptions of “pedagogy” (didactical assumption of child learners; 1970), proposing that child learners do not need to

know how what they learn will apply to their lives; are dependant learners; experience is of little worth to them during the learning process; learning is subject-oriented and teacher-directed; and, the learning process is, in the majority, motivated by external motivators. However, such principles were not developed on empirical evidence, which may have strengthened Knowles's position and argument, and may have, perhaps, highlighted a damning problem in some traditional formal educational contexts.

In contrast, Knowles summarized the assumptions of "andragogy" (didactical assumptions of adult learners; 1970), proposing that adult learners need to know why they need to learn something, including how the knowledge or skill may be useful to them in their lives; have an individual self-concept; have a deep psychological need to be self-directed; experience is of high value to them in the learning process; learners learn in order to cope effectively with real-life situations; and, that learning is life-centered (or task-centered or problem-centered), prominently driven by intrinsic motivators.

Historically, there were some strong criticisms of andragogy, which included the idea that age is a key characteristic of a self-directed learner. For instance, when reviewing Knowles's (1970) book, London's (1973) perspective was that "The mischief lies primarily in the mythologizing of the practice of adult education as a result of the focus on the notion of andragogy as that which differentiates adults from non-adults" (p. 72). Indeed, some scholars argued that, when considering the nature of their learning processes, child and adult learners share several commonalities (e.g., Elias, 1979).

Also, if a learner's interaction with learning experiences influences one's "learner maturity" or self-directed learning competence, then it is probable that age alone should not determine the principles and process elements that underpin teaching and learning. Indeed, some years later and after receiving criticism, Knowles (1980) updated his perspective and acknowledged that age should not necessarily alone determine the teaching principles and processes used by teachers, but more often than not, principles and processes that guide teaching practices will fall between the pedagogy and andragogy model assumptions.

Moreover, reference is seldom made to the research Tough (1971) conducted upon 10-year-olds and 16-year-olds. Tough concluded that learning projects of young learners were "extensive" and "fairly similar" to adults' learning projects, but there were some observable differences. Ten-year-olds' learning pattern was more sporadic, which consisted of shorter bouts of learning, seldom longer than one hour. Furthermore, children had a wider range of scattered, rather than focused, learning bouts. Scattered learning bouts reflected learners' curiosity in pursuing knowledge and skills that were interesting and fun. Unlike adult learners, children did not show a strong *intent* to learn.

Sixteen-year-olds' learning was more focused than the 10-year-olds as they allocated far more time pursuing particular topics in learning, often with a stronger intent to learn, linked to the realization of need-to-know knowledge and skills needed for becoming responsible for one's "self". Nevertheless, unlike adults and more like 10-year-olds, much of the 16-year-olds' learning still focused on hobbies that sparked curiosity. Tough concluded:

Some clues about new roles for school teachers emerged from interviewing the 10-year-olds. Their out of school (“noncredit”) learning was often influenced by their teachers. Many learning projects, especially for girls, grew out of an activity or topic at the school, or a question or book suggested by the teacher. The interviewer, Jim Fair, has also suggested that schools can help the child develop the wide range of learning skills and the familiarity with various resources that are necessary for effective self-planned learning. (1971, p. 25)

Learning of younger children is perhaps so divergent and sporadic that it is probable that children had many more learning bouts that did not meet Tough’s criteria of a learning project (seven hours over a half-year period) and therefore it is likely that a good proportion of children’s learning was not captured in this study. Understanding the self-directed learning projects of children represents an interesting area for further research.

Moreover, some models of self-directed learning (e.g., Brockett & Hiemstra, 1991) highlight that within-adult learner differences in tendency and propensity toward self-directed learning should be considered. Both qualitative and quantitative studies have confirmed stark within-adult differences in this regard.

Quantitative empirical studies have utilized, mostly, questionnaire data in this respect. The Self-Directed Learning Readiness Scale, developed by Guglielmino (1978), has been, perhaps, the most commonly used instrument and studies employing the instrument have suggested extensive within-adult differences in self-directed learning competence, or “readiness” (cf. Merriam et al., 2007).

Guglielmino (1978) proposed that highly self-directed learners are persons who enjoy learning; exhibit initiative, independence, and persistence in learning; accept learning responsibility; view problems as challenges; are capable of self-discipline; have strong learning desire and skills including the ability to plan and pace learning; are self-confident; have a tendency to be goal orientated; and, have a high degree of curiosity. Nonetheless, it is important to point out that this definition of a self-directed learner was based on findings drawn from a focus group consisting of self-directed learning “experts”. Perhaps, findings of research reports that use the Self-Directed Learning Readiness Scale as a solidarity measure should be taken with caution in this regard, in the knowledge that the measure was determined only through focus group qualitative data. Differential methodologies in this respect would perhaps derive differential features of a self-directed learner.

Oddi (1986) developed another popular qualitative instrument, the Continuing Learning Inventory, which is intended to measure “three broad overlapping clusters” (p. 98), or salient characteristics, of self-directed learners: proactive drive, cognitive openness, and commitment to learning. It is important to point out that Oddi developed the measurement instrument from “recurring themes in the writing of experts on self-directed learning and from research findings suggesting empirical support for these variables” (p. 98). Nonetheless, Oddi did not however offer details of the “empirical support” for these variables. In addition, like authors of other popular inventories discussed in the present thesis, these factors were positioned as relatively stable traits driven by genetic disposition. Bidirectional consideration (i.e., the influence of self-directed learning on such tendencies, such

as proactive drive) was not given. The model of self-directed learning proposed in the present thesis (cf. Chapter 3; Figure 2) builds upon some of these assumptions.

In a recent study, Slater, Cusick, and Louie (2017) studied the variance in self-directed learning readiness of 584 first-year Australian undergraduate students through questionnaire measurement. The authors explained that self-directed learning was expected of health science graduates, but concluded that there was a wide variance in readiness between students, which was higher in females, increased with age and previous education, and was significantly associated with personality and specific vocation of study. Such research supports the thesis that learners are likely to need a varied level of support with self-directed learning, highlighting the difficulty of the task a teacher may have in successfully facilitating the self-directed learning process.

Furthermore, empirical studies have employed a range of questionnaire measures to examine the correlation between “proactive” personality characteristics and self-directed learning. A proactive personality is considered as a stable disposition: to “take personal initiative in a broad range of activities and situations” (Seibert, Kraimer, & Crant, 2001, p. 847). In this regard, Crant (2000) discussed that “As work becomes more dynamic and decentralized, proactive behavior and initiative become even more critical determinants of organizational success” (p. 435), defining proactive behavior as “taking initiative in improving current circumstances or creating new ones; it involves challenging the status quo rather than passively adapting to present conditions” (p. 436).

Indeed, motivation for self-directed learning (discussed in more detail in Chapter 3) has been positioned as “pivotal” for implementation and maintenance of self-directed learning (Garrison, 1997). In Chapter 3 of the present thesis, it is proposed that the nature of learning experiences a learner is exposed to, and how learners learn, should be fundamental considerations in regards to the initiation and maintenance of motivation for self-directed learning. The nature and treatment of educational experiences that potentially leads to a spiral in learner growth in this regard is addressed further in Chapter 4 of the present thesis.

Moreover, in a web-based survey of 183 employees, Major, Turner, and Fletcher (2006) linked motivation to learn to proactive personality, plus three (conscientiousness, openness, and extraversion) of the “big five” factors of personality (the other two factors being agreeableness and neuroticism, which did not significantly explain motivation). Conscientiousness was defined as a “tendency to be purposeful, organized, reliable, determined, and ambitious” (p. 928). Openness, could be viewed as a “tendency to have an active imagination, esthetic sensitivity, intellectual curiosity, and be attentive to feelings” (p. 928). Moreover, extraversion was defined as the “tendency to like people, prefer being in large groups, and desire excitement and stimulation; likely to be assertive, active, talkative” (p. 928). In this regard, further studies have investigated the relationship between such traits and self-directed learning.

For example, Lounsbury et al. (2009) sampled 398 middle school students, 568 high school students, and 1159 college students, through questionnaire measures. The authors reported that self-directed learning was related to cumulative grade-

point-average at all levels as well as to personality traits (openness, conscientiousness, emotional stability, and extraversion), narrow personality traits (optimism, career-decidedness, work drive, and self-actualization), vocational interests (realistic, investigative, artistic, and conventional, as well as science, medicine, and mathematics), cognitive aptitudes, and life as well as educational satisfaction. Again, many of these conclusions point to the complex multitude of personality factors that may influence one's tendency and propensity toward self-directed learning. The authors concluded that self-directed learning "can be seen in its multiple, significant correlations with so many different personality, interest, and ability measures" (p. 417). However, the authors proposed that, in sum, self-directed learners tend to,

have a firm sense of identity (including vocational identity); experience higher levels of life satisfaction; have higher levels of vocational interests for investigative, artistic, enterprising, and conventional occupations; and they are more likely to be conscientious, well-adjusted, optimistic, self-actualized, intuitive, hard-working, and open to new experiences. (p. 417)

Building on the work of Lounsbury et al. (2009) Kirwan, Lounsbury, and Gibson (2010) sampled 2102 college students employing questionnaire measurement instruments. The authors concluded that learner self-direction was significantly related to four of the big five traits: agreeableness, emotional stability, conscientiousness, and openness; and four narrow personality traits: sense of identity, tough-mindedness, optimism, and work drive. In this study, big five traits accounted for 37% of the variance in learner self-direction, narrow traits accounted

for an additional 15% of the variance (52% in total), suggesting that personality traits have a powerful influence on learners' tendency and propensity toward self-directed learning.

There were however some disagreements between the studies discussed above in regards to the correlations between big five traits, narrow personality traits, and learner self-direction (Kirwan et al., 2010; Lounsbury et al., 2009; Major et al., 2006). Nevertheless, a commonality between these studies was a *strong* correlation between learner self-directedness and *conscientiousness* and *openness* (from the big five traits) and *optimism* and *work drive* (from the narrow personality traits). A further potential limitation concerns the validity and reliability of the measurement instruments employed in these studies. Thus, concrete conclusions cannot be drawn, especially given the differences reported within studies. However, evidence is amounting in regards to the powerful impact of certain personality aspects upon learner tendency and propensity toward self-directed learning.

Additionally, qualitative studies have assisted to identify and confirm personality characteristics common to the self-directed learner. One notable historical study that highlighted personality characteristic demands for effective self-directed learning was the study of M. Gibbons et al. (1980) who analyzed biographies of twenty acknowledged experts who had no formal training beyond high school. The authors concluded that salient characteristics of these individuals included the capacity to maintain a sharp focus on one topic area; robustness in maintaining intrinsic motivation; valuing a vision of accomplishment, recognition,

and rewards; having the ability to effectively learn from a wide variety of methods and techniques; and, having drive, independence of thought, but also the capacity to be creative.

In sum, in regards to characteristics of self-directed learners, age was historically positioned as the fundamental characteristic of a self-directed learner: insomuch as there is an increasingly powerful drive to be self-directed as we age. However, it is probable that the learning projects of children and adolescents share many commonalities with that of adult learners, but one key difference of adult learning is that learning is often life-centered and adult learners may display more intent to learn. In addition, adult, expert, or “mature” learners’ self-directed learning projects are perhaps more comprehensive, focussed, and maintained. Again, further empirical studies are required to confirm these possibilities.

Lastly, models of self-directed learning and empirical studies on self-directed learning and personality traits suggest that there are wide within-adult differences in tendency and propensity toward self-directed learning. These within-adult learning differences should be considered when designing education intended to facilitate self-directed learning and should thus be considered when interpreting the findings of the present thesis.

### ***1.1.4 Contextual factors that influence the possibility for self-directed learning***

Contextual factors within a learner's context function in a dialectical fashion toward the self-directed learning process, in that they may influence the possibility and desirability for self-directed learning in the given context. Spear and Mocker (1984) referred to the "organizing circumstances" of a learning situation, which modulates the possibility and desirability for particular means and objectives of learning (Mocker & Spear, 1982; Spear & Mocker, 1984). Contextual factors operate to either promote or impede, in an extrinsic fashion, the permitting of learner control and responsibility of the learning process.

In this regard, Cross (1981) classified two types of contextual barriers that work alongside dispositional barriers toward self-directed learning. Situational barriers are related to the learner's immediate learning environment. Institutional barriers are barriers created by institutional practices and policies. Both of these barriers are potentially essential considerations for self-directed learning in a particular learning context (cf. Chapter 2).

In a wider perspective, Merriam et al. (2007) identified that the nature of a society at a particular time may determine to a large extent the means and objectives of learning. Indeed, academics that promote self-directed learning as a general outcome goal of education have been criticized for their lack of concern for external validity issues. For example, in reference to Brockett and Hiemstra's

(1991) work, Flannery (1993) wrote, “the authors extend their humanistic values across the globe by seeking examples of self-directed learning outside North America, suggesting a singular universality to self-directed learning” (p. 110). In this regard, some scholars have highlighted that formal education in many contexts, rather, stipulates teacher-directed learning (e.g., Dewey, 1938/1963; Freire, 1970; Hiemstra, 1994).

Moreover, Tough (2002) argued that there is perhaps a widespread tendency in formal educational settings for educators to “over control”:

For me, one of the fascinating questions is our over-control. It seems fairly well documented that in fact we over-control. We as educators, as parents, as supervisors, we have this tendency to over-control. We want our kids to grow up to be flexible, healthy, creative citizens, and how do we achieve that? Well, we micro-manage them, we make sure that every single minute they’re doing something creative and flexible and healthy. Then we wonder why they don’t gain the skill to make their own choices.

We do the same with our learners in a classroom. We set all the objectives, we tell them exactly how to learn, and the more I listened to adults talk about their own power and their own skill and confidence at learning, the more I began to question my teaching approach. Why was I making these choices for students? And, of course, I shifted toward being more learner-centred and letting learners make a lot of their own choices. (p. 6)

In a recent empirical study, Nasri (2017) investigated 30 Malaysian Higher Education teachers’ perspectives toward facilitating self-directed learning. She concluded that not all educators had accepted the idea of taking the role as a

learning facilitator and many educators were reluctant to move away from teacher-directed learning, including their traditional teacher authority position and role as a knowledge expert. However, the comments of the adult educators within this report appear to describe a process of academic inquiry, perhaps without conceptualizing self-directed learning as a pragmatic process, the importance of which is highlighted in this present thesis (cf. Chapters 3, 4, and 5).

Furthermore, studying the contextual factors that may influence an educator's tendency to "over control" could highlight the relative influence of particular contextual factors in a particular educational context that contribute toward this phenomenon. In this respect, it is noteworthy to consider the interplay between the differential contextual factors that contribute toward promoting or discouraging learners to assume control of directing the means and objectives of learning (cf. Chapter 2).

In this regard, Pilling-Cormick (1996) classified contextual factors as educator characteristics (personal beliefs, forms of control, and skills for sharing authority); social constraints (the cultural-political climate); and, environmental conditions (such as the physical aspects of the institution and classroom, and how the course and institution functions). However, perhaps what Pilling-Cormick (1996) did not consider is that, if learners display differences in propensity and tendency toward self-directed learning then they, the learners themselves, represent important contextual factors.

Finally, it seems important to consider that facilitating self-directed learning in formal educational settings may be viewed as a paradoxical idea. In this regard,

Brookfield (1988) argued that, “if self-direction is held to mean that the learner has complete control over the choice of the learning content, purpose, evaluative criteria and methods, then the educator ceases to be an educator in any meaningful sense” (p. 35). The present author’s position on this issue is documented in Chapter 3 of the present thesis, which contests Brookfield’s perspective and rather positions the educator as potentially “very important”, and “very meaningful”, in the process of facilitating self-directed learning in formal educational settings.

In sum, the nature of a society at a particular time may determine to a large extent the means and objectives of learning within a particular educational context, including whether self-directed learning is indeed possible or desirable. As such, contextual factors may operate to either promote or impede self-directed learning and contextual factors could act as barriers toward the successful implementation of a self-directed learning program or educational system that is designed to facilitate self-directed learning and foster learners’ self-directed learning competence. The importance of the potential influence of contextual factors upon the possibility and likelihood of self-directed learning in formal educational settings is further addressed in Chapter 2 of the present thesis.

### ***1.1.5 Aims and research questions of the present thesis***

Chapter 2 is an empirical case study that concerns the nature of teaching–learning transactions that facilitate self-directed learning in vocational education and training of young adults in England. It addresses in part the concern that fostering the skills necessary for self-directed learning is an important endeavor of vocational education and training in many contexts internationally. However, there is a distinct lack of studies that investigate the extent to which facilitation of self-directed learning is present within vocational education and training in different contexts. An exploratory thematic qualitative analysis of inspectors’ comments within general Further Education college Ofsted inspection reports was conducted to investigate the *balance of control* of the learning process between teacher and learner within vocational education and training of young adults in England. A clear difference between outstanding and inadequate provision is reported. Inadequate provision was overwhelmingly teacher-directed. Outstanding provision reflected a collaborative relationship between teacher and learner in directing the learning process, despite the Ofsted framework not explicitly identifying the need for learner involvement in directing the learning process. The chapter offers insight into the understanding of how an effective balance of control of learning between teacher and learner may be realized in vocational education and training settings and highlights the need to consider the modulating role of contextual factors.

Following the further research directions outlined in Chapter 2, Chapter 3 is a theoretical chapter that addresses the issue that fostering adult learners' competence to adapt appropriately to our ever-changing world is a primary concern of adult education. The purpose of the chapter is novel and examines whether the consideration of *modes of learning* (instruction, performance, and inquiry) could assist in the design of adult education that facilitates self-directed learning and enables learners to think and perform adaptively. The concept of modes of learning originated from the typology of Houle (1980). However, to date, no study has reached beyond this typology, especially concerning the potential of using modes of learning in the design of adult education. Specifically, an apparent oversight in adult learning theory is the foremost importance of the consideration of whether inquiry is included in the learning process: its inclusion potentially differentiates the purpose of instruction, the nature of learners' performance, and the underlying epistemological positioning. To redress this concern, two models of modes of learning are proposed and contrasted. The *reinforcing* model of modes of learning (instruction, performance, *without* inquiry) promotes teacher-directed learning. A key consequence of employing this model in adult education is that learners may become accustomed to habitually reinforcing patterns of perceiving, thinking, judging, feeling, and acting—performance that may be rather inflexible and represented by a distinct lack of a perceived need to adapt to social contextual changes: a lack of motivation for self-directed learning. Rather, the *adapting* model of modes of learning (instruction, performance, *with* inquiry) may facilitate learners to be adaptive in their performance—by encouraging an enhanced learner

sensitivity toward changing social contextual conditions: potentially enhancing learners' motivation for self-directed learning.

In line with the further research directions highlighted in Chapter 3, concerning the need to consider the nature and treatment of educational experiences that are conducive to learner growth and development, Chapter 4 presents a systematic review of the experiential learning theory; a theory that perhaps cannot be uncoupled from self-directed learning theory, especially in regard to understanding the cognitive aspect of self-directed learning, which represents an important direction for further research on self-directed learning. D. A. Kolb's (1984) experiential learning cycle is perhaps the most scholarly influential and cited model regarding experiential learning theory. However, a key issue in interpreting Kolb's model concerns a lack of clarity regarding what constitutes a *concrete experience*, exactly. A systematic literature review was conducted in order to examine: what constitutes a concrete experience and what is the nature of treatment of a concrete experience in experiential learning? The analysis revealed five themes: learners are involved, active, participants; knowledge is situated in place and time; learners are exposed to novel experiences, which involves risk; learning demands inquiry to specific real-world problems; and critical reflection acts as a mediator of meaningful learning. Accordingly, a revision to Kolb's model is proposed: experiential learning consists of *contextually rich* concrete experience, *critical* reflective observation, *contextual-specific* abstract conceptualization, and *pragmatic* active experimentation. Further empirical studies are required to test the model proposed. Finally, in Chapter 5 key findings of the studies are summarized,

including that the models proposed in Chapters 3 and 4 (Figures 2 and 4, respectively) may be important considerations for further research on self-directed learning.

## **Chapter 2—Study 1**

### **Vocational education of young adults in England: a systemic analysis of teaching–learning transactions that facilitate self-directed learning**

**This chapter has been previously published:**

Morris, T. H. (2018c). Vocational education of young adults in England: A systemic analysis of teaching–learning transactions that facilitate self-directed learning. *Journal of Vocational Education & Training*, 70, 619-643.  
doi:10.1080/13636820.2018.1463280

## 2.1 Introduction

Self-directed learning has been conceptualized as a *critical* workplace competence, but self-directed learning is often not successfully fostered during formal schooling and consequently not fully utilized by many adults during their working life (Kranzow & Hyland, 2016; Morrison & Premkumar, 2014). Workplace competence refers to an employee's ability to act in order to successfully manage their occupational requirements (Arnold, Nolda, & Nuisl von Rein, 2010). In particular, self-directed learning is essential in careers in which there is a demand for employees to manage rapidly changing work environments (Abele & Wiese, 2008; Bolhuis & Voeten, 2001; Cranton, 1992; Morrison & Premkumar, 2014).

There is a distinct lack of studies that investigate the extent to which facilitation of self-directed learning is present within vocational education and training in different contexts. The present research reports upon the *balance of control* of learning between teacher and learner within vocational education and training of young adults studying in Further Education (FE) colleges in England. Balance of control of learning is defined as the relative contribution of teacher and learner in directing the learning process. The theoretical background of self-directed learning and the importance of fostering self-directed learning in vocational education and training are reviewed, followed by an overview of vocational education and training provision in England, including the role of Ofsted—the government

inspection body that sets the standards and objectives for vocational education and training provision in England.

## **2.2 Self-directed learning**

### ***2.2.1 The foundations of self-directed learning***

Self-directed learning positions with humanistic philosophy and constructivist epistemology. A humanist learning orientation centres on the learner's needs and the possibility for personal growth towards self-actualization (Groen & Kawalilak, 2014). The most widely accepted definition (according to Guglielmino, Long, & Hiemstra, 2004) of self-directed learning is from Knowles (1975):

In its broadest meaning, 'self-directed learning' describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. (p. 18)

Self-directed learning is a core theoretical framework in adult education research (Garrison, 1992). In 1971, Tough showed that the majority of adult learning is self-directed, representing "major, highly deliberate effort to gain certain knowledge and skill (or to change in some other way)" (p. 1). Knowles (1970, 1975, 1980) theorized that adults have a deep psychological need to be self-directed and are

motivated by knowing why learning particular knowledge or skills may be important to them in their lives.

Knowles (1975) argued that self-directed learning is “a basic human competence—the ability to learn on one’s own” (p. 17). But at the same time, he identified that it is a mistake to assume that adults automatically have the necessary skills to be effective self-directed learners. Knowles promoted the facilitation of self-directed learning in formal education, but warned it can be “a very risky venture” (p. 44) and “Students entering into these programs without having learned the skills of self-directed inquiry will experience anxiety, frustration, and often failure, and so will their teachers” (p. 15).

Fostering the skills necessary for self-directed learning has been identified as an important outcome of education (Candy, 1991; Cranton, 1992). Moore (1972, p. 80) pointed out that “Most educational theories stipulate the desirability of learners’ acquiring sufficient skill in preparation, execution, and evaluation to conduct their own learning.” Rogers (1969) made a convincing argument that facilitation of self-directed learning is the most important goal of formal education: “A way must be found to develop a climate in the *system* in which the focus is not upon *teaching*, but the facilitation of self-directed *learning*” (p. 304; emphasis in original).

Models of self-directed learning have highlighted different dimensions of self-directed learning. For instance, Brockett and Hiemstra (1991) emphasized the need to consider personality characteristics of the learner: the desire or preference towards taking responsibility for the learning process. However, when reviewing

Brockett and Hiemstra's work, Flannery (1993) pointed out that it is also important to consider that self-directed learning is not possible in all contexts. Rather, the nature of a society at a particular time determines to a large extent the objectives and means of learning (Merriam et al., 2007).

Garrison (1997) aimed to develop a more comprehensive model of self-directed learning. He proposed that self-directed learning has three dimensions: motivation (entering/task), self-monitoring (responsibility) and self-management (control). Garrison explained that motivation "plays a very significant role in the initiation and maintenance of effort" (p. 26). Self-monitoring addresses metacognitive and cognitive processes: "monitoring the repertoire of learning strategies as well as an awareness of and an ability to think about our thinking" (p. 24). Garrison theorized that "self-management" within formal education may, paradoxically, rather represent a cooperative process, where "the control over management of learning tasks is realized in a collaborative relationship between teacher and learner" (p. 23). In regard to the balance of control of learning between teacher and learner Garrison explained, "Issues of control must balance educational norms and standards (e.g. what counts as worthwhile knowledge) with student choice and the responsibility for constructing personal meaning" (p. 23). To the knowledge of this author, research is lacking that has examined this hypothesis in vocational education and training.

### *2.2.2 The importance of fostering self-directed learning in vocational education and training*

Vocational education and training is evolving in individual ways in different countries (Bathmaker, 2017), but competency-based learning is becoming more commonplace including in the United States of America and within various European countries (Biemans, Nieuwenhuis, Poell, Mulder, & Wesselink, 2004; Jossberger, Brand-Gruwel, Boshuizen, & van de Wiel, 2010). For instance, in some vocational education and training institutions in the Netherlands, “students are given the opportunity to direct their own learning by selecting learning tasks that fit their needs and interests” (Kicken et al., 2009, p. 439). In these contexts, a portfolio is often used to document learning progress. But at the same time, such programs introduce a problem: learners often do not have the necessary skills for self-directed learning (Jossberger et al., 2010; Kicken et al., 2009). It is clear that students face difficulties with self-directed learning: “when students who are used to a teacher-directed learning environment suddenly enter an educational setting which demands them to direct their own learning, their lack of self-directed learning skills may impede them in becoming successful independent learners” (Kicken et al., 2009, p. 440).

Thus, it seems logical that the educator must assist learners to develop the necessary skills for self-directed learning (Jossberger et al., 2010; Kicken et al., 2009). In examining vocational education and training programs that actively encourage self-directed learning—a process defined by learner control over both

the objectives and means of learning (Mocker & Spear, 1982)—it appears that some teacher direction is preferential (e.g., Jossberger et al., 2010; Kicken et al., 2009). However, to date little research has been conducted that has described an effective *balance* of control between teacher and learner during the teaching–learning transaction.

There are a number of key benefits of fostering the necessary skills for self-directed learning. Self-directed learning is essential for employees to keep updated with knowledge and skills, especially for individuals in complex careers (Dunlap & Grabinger, 2003; Oddi, 1987). Knowles (1975, p. 15) referred to the “half-life” of facts (or skills), which predicts that half of knowledge learned will become obsolete in a particular period of time. Moreover, self-directed learning allows individuals to “upskill” in the event of changes in economic conditions such as labor market shifts, providing the individual with a certain protection against long-term unemployment (Barnes, Brown, & Warhurst, 2016). Furthermore, the proactive behavior associated with self-directed learning is directly associated with long-term career success (Seibert et al., 2001). Lucas, Spencer, and Claxton (2012, p. 9) summarize that vocational education and training should prioritize the enabling of working competence, which includes fostering the “wider skills for growth: having an inquisitive and resilient attitude towards constant improvement—the ‘independent learner’.”

## **2.3 Changing educational goals of vocational education and training in England**

On 29 March 2017, in order to commence the process of leaving the European Union, the Prime Minister of the United Kingdom Theresa May wrote to the President of the European Council Donald Tusk to trigger Article 50 of the treaty on the European Union (May, 2017). In preparation for entering a time period of uncertainty, the government initiated a Foresight project exploring the future of skills and lifelong learning in a changing world (Government Office for Science, 2016). As part of this project, Barnes et al. (2016) explained, “The education and skills system has a vital role to play in equipping individuals with the skills, competencies and attributes necessary to cope and manage with labour market and other shifts over their lifecourse.” Tuckett and Field (2016, p. 4) identified the problem that “The combination of an ageing demography, technological change, and increased international competition at work, alongside evidence of the wider benefits to health and well-being bestowed by learning, have led to an increased interest in promoting learning throughout adult life.” Changes in economic conditions are demanding changes in educational goals. Vocational education and training is set to play an important role in securing the United Kingdom’s future economic competitiveness (HM Government, 2017).

An important demographic change in England is that adolescents and young adults are remaining in formal education for longer. In 2015, the compulsory “school leaving age” in England was raised to 18 years, which stipulates that

persons should remain in full- or part-time education or training up until at least this age (European Commission, 2015). Moreover, the proportion of 16- to 18-year-olds in full-time education in England rose by 15 percentage points to 71% between 1997 and 2015 (UK Parliament, 2016).

In the academic year 2016–2017, 744,000 16- to 18-year-olds studied in FE colleges in England, in comparison to 433,000 16- to 18-year-olds who continued their studies in traditional schools (Association of Colleges, 2017). For the overwhelming majority of young adults studying in FE colleges in England, qualifications represent a variety of vocational education and training at ISCED<sup>1</sup> level 3 and very few students pursue vocational education and training qualifications in England above this level (HM Government, 2017). An additional 75,000 16- to 18-year-olds undertook an apprenticeship through FE colleges (Association of Colleges, 2017). Twenty-three per cent of these FE students were from an ethnic minority background and 17% had a learning difficulty or disability (Association of Colleges, 2017).

It is concerning that HM Government (2017) recently reported that vocational education and training in England has “fallen behind” in comparison to other vocational education and training systems such as in Germany and Norway (p. 37). Moreover, the government summarized that vocational education and training provision mostly represents lower level technical qualifications with a broad and generalized curriculum and “The existing system can be complex and confusing, which does not deliver for individuals, for the skills needs of employers, or for the wider economy” (p. 37).

However, in what appears to be a contradiction to these conclusions, Ofsted judged 77% of FE colleges as “good” or “outstanding” for “overall effectiveness” at their most recent inspection (Association of Colleges, 2017). Previously, researchers have analyzed Ofsted inspection reports to gain insight into various schooling issues such as: management and attendance (Reid, 2007); race equality (Osler & Morrison, 2002); radicalization (Mogra, 2016); child protection and safeguarding (Craven & Tooley, 2016); and resource management (Levačić & Glover, 1998). To the knowledge of the present author, no previous study has analyzed Ofsted reports in order to gain a systemic understanding of the extent to which teachers and learners assume control of directing the learning process. In the present study, teaching–learning transactions within Ofsted reports were analyzed in order to further our understanding of,

- What was the *balance of control* of the learning process between teacher and learner?

## **2.4 Method**

The methodological approach of this study was an exploratory thematic qualitative analysis of inspectors’ comments within general FE college Ofsted inspection reports.

### ***2.4.1 The inspection process***

Triangulation of data collection is used by Ofsted to make judgements presented in inspection reports. During FE college visits data collection includes: “observations of teaching, learning and assessment, as well as support arrangements, discussions with learners, scrutiny of learners’ work and the arrangements made for them to gain experience of work. Inspectors may undertake some inspection activities jointly with providers’ staff, such as visits to learning sessions, to evaluate the progress that learners are making” (Ofsted, 2017, p. 12). Pre-inspection analysis is made of institutions’ self-assessment and quality improvement plans, performance data, information about the local economic and social context and any additional information such as feedback from parents, carers or employers (Ofsted, 2017). Inter-inspector reliability is ensured by the lead inspector who monitors inspections, confirming that inspections are carried out in accordance with the principles of inspection and the ethical code of conduct (Ofsted, 2017).

Inspectors make judgements against Ofsted’s inspection framework (Ofsted, 2017). FE colleges are judged on their “overall effectiveness” of provision, but also on specific aspects such as effectiveness of management and leadership. The present study focused upon the inspection judgements of “quality of teaching, learning and assessment,” which like all other aspects of provision is rated by inspectors as either outstanding, good, requires improvement or inadequate. In the present paper, a comparative analysis was made between teaching, learning and

assessment rated as “outstanding” and “inadequate.” Ofsted-grade descriptors for these corresponding standards are presented in Table 1. Inspectors are expected to adopt a “best-fit” approach (Ofsted, 2017, p. 44), but grade descriptors are used as a guidance rather than a “box-ticking” exercise; inspectors are encouraged to utilize their expertise to make judgements (Baxter & Clarke, 2013; Ofsted, 2017).

### ***2.4.2 Data collection and analysis***

Archival data were retrieved from the UK Government Document Archive Office for Standards in Education in 2017 from all general FE colleges ( $n = 226$ ) in England. The most recent college inspection report from each institution was retrieved. The 226 inspection reports were sorted by “overall effectiveness” into the four possible outcome grade categories defined by Ofsted (2017): inadequate ( $n = 17$ ), requires improvement ( $n = 54$ ), good ( $n = 123$ ) or outstanding ( $n = 32$ ). A predefined inclusion criterion was that the inspection grading for “quality of teaching, learning and assessment” matched the inspection grading for “overall effectiveness” of the college. Thus, “outstanding” teaching, learning and assessment within “outstanding” institutions (overall effectiveness) was compared and contrasted with “inadequate” teaching, learning and assessment within “inadequate” institutions. From the 17 inadequate institutions, 11 met the inclusion criteria. In order to make a comparative analysis, a random sample ( $n = 11$ ) of outstanding FE college inspection reports, which also met the inclusion criteria, was also subject to analysis.

The analysis of inspectors' comments followed the six phases described by Braun and Clarke (2006). Data analysis software MAXQDA10 was used to code and organize the data. The 22 inspection reports were uploaded in PDF format into the software in order to begin the process of data coding and identifying themes. First, data familiarization was made where the investigator began to read the inspectors' comments and noted down initial ideas regarding possible codes and themes within the data. Even at the initial stage of analysis, it became clear that inspectors' descriptions of teaching–learning transactions were detailed and provided a rich insight into the balance of control of learning between teacher and learner. At the same time, it should be noted that the Ofsted framework was not considered a fitting frame to examine the research question of the current paper. Given the exploratory nature of the present study, the analysis was thus inductive in the sense that codes and themes were not predetermined, but defined and redefined during the analysis.

Using the data analysis software, inspection reports were subject to analysis: parts of sentences, whole sentences and groups of sentences were assigned initial codes such as “gateway skills,” “scenario based,” “competencies,” “expectations” and “environment.” Many were assigned multiple codes. During the progression of the analysis, new codes were defined and the initial analysis revisited and data were recoded, where applicable.

During data analysis and organization of the data, the researcher sought to identify themes in the data. Themes were identified and redefined a number of times during the analysis. Thematic maps were drawn to assist the organization of

themes to their pertaining sub-themes. After completion of the coding stage, the data software program was used to extract a Microsoft Excel (Microsoft Office Professional Plus, 2016) data document where data extracts were organized automatically by the software into two groups of data (outstanding and inadequate) and by themes and their pertaining sub-themes, which were identified at this stage of the analysis.

Data within this data document were then re-read and parts of the data were highlighted in order to begin the process of identifying representative extracts for the presentation of data. At the same time, further notes were made, which represented short summaries of the thematic content of the extracts. Examples of the notes are: “boring and uninspiring,” “well-planned, variety of methods, memorable, meaningful,” “not meeting the needs or interests of students” and “peer-feedback, frequent accurate feedback from a number of angles.” This process assisted in finalizing the themes and sub-themes presented in this report. At times, the data organization was complicated by the overlapping of data into various categories; the researcher took a “best-fit” approach to the classification of data. But, however, it is important to note that the researcher felt that this reflected the close interaction of the elements of the teaching–learning process that at times were difficult to separate.

A total of 10 sub-themes were identified in the data which represented dimensions of the teaching–learning transaction, which pertained to one of four learning process dimensions: planning learning, undertaking learning, reviewing learning or entering/task maintenance. Extracts that reflected each sub-theme were

taken from the data-sets in order to depict common teaching–learning transactional patterns within both outstanding and inadequate provision.

The analytical approach used in this study has a number of advantages including: highlighting similarities and differences between data-sets; suitability for informing policy development; and generating unanticipated insights (Braun & Clarke, 2006). The latter possibility was of particular importance given the “clear lack of documentation regarding how to promote and actualize self-directed learning” (Morrison & Premkumar, 2014, p. 1) and given that we are today unsure what an education designed for assisting learners to be self-directed may actually look like (Beese & Watson, 2016).

Although the present study was exploratory and inductive in nature, it is important to note that “researchers cannot free themselves of their theoretical and epistemological commitments, and data are not coded in an epistemological vacuum” (Braun & Clarke, 2006, p. 84). In this regard, it is necessary to identify that the researcher was familiar with Ofsted inspection processes, had experience of teaching vocational education and training within a FE college, had been himself rated as an “outstanding” teacher by Ofsted during a FE college inspection and was interpreting the data with the foresight of viewing self-directed learning as a process, with the presumption that the current methodology was not designed to examine differences or changes in learner characteristics towards being self-directed.

Ofsted inspection reports are Crown Copyright. Thus, all extracts were quoted verbatim from the 22 Ofsted inspection reports used for analysis. In data

presentation, extracts from outstanding and inadequate institutions were labelled “Outstanding” (1 to 11) and “Inadequate” (1 to 11), respectively. During the presentation of the findings, reference was made to Ofsted FE grade descriptors for quality of teaching, learning and assessment, *post hoc* of data analysis in order to draw conclusions in consideration of the Ofsted framework. In this regard, cross-reference was made to the nine grade Ofsted descriptors for outstanding teaching, learning and assessment labelled “OGD” (1 to 9) and the seven Ofsted grade descriptors for inadequate teaching, learning and assessment labelled “IGD” (1 to 7), further details of which are presented in Table 1.

<i>Outstanding teaching, learning and assessment reflects provision where,</i>	<b>Cross reference code</b>	<b>The judgement of the quality of teaching, learning and assessment is likely to be <i>inadequate</i> where one or more of the following applies,</b>	<b>Cross reference code</b>
Learners are curious, interested and keen to learn. They seek out and use new information to develop, consolidate and deepen their knowledge, understanding and skills. They thrive in learning sessions and, where appropriate, use their experiences in the workplace to further develop their knowledge, skills and understanding.	OGD1	Teaching and/or assessment is poorly planned.	IGD1
Learners are eager to know how they can improve their work and develop their knowledge, understanding and skills. They capitalise on opportunities to use feedback to improve. Staff check learners' understanding systematically and effectively, offering clearly directed and timely support that has a notable impact on improving learning.	OGD2	Weak assessment practice means that teaching fails to meet learners' needs.	IGD2
Staff are determined that learners achieve well. They have excellent subject knowledge and motivate and engage learners, who enjoy the work they complete. Staff have consistently high expectations of all learners' attitudes to learning and learners are set challenging targets to achieve.	OGD3	Learners or particular groups of learners are making inadequate progress because teaching does not develop their knowledge, understanding and skills sufficiently.	IGD3
Staff plan learning sessions and assessments very effectively so that all learners undertake demanding work that helps them to realise their potential. Staff identify and support any learner who is falling behind and enable almost all to catch up.	OGD4	Learners are not developing English, mathematics, ICT or employability skills adequately to equip them for their future progression.	IGD4
Staff gather a useful range of accurate assessment information and use this to give learners incisive feedback about what they can do to improve their knowledge, understanding and skills. Learners are committed to taking these next steps and their work shows that almost all are making substantial and sustained progress.	OGD5	Staff do not promote equality of opportunity or understanding of diversity effectively and this disadvantages individuals or groups of learners.	IGD5
Staff set work that consolidates learning, deepens understanding and develops skills, and prepares learners very well for their next steps.	OGD6	As a result of weak teaching, learning and assessment over time, learners or groups of learners make insufficient progress and are unsuccessful in attaining their learning goals and progressing to their planned next steps.	IGD6
Where appropriate, parents and/or employers are provided with clear and timely information that details the extent of learners' progress in relation to the standards expected and what they need to do to improve.	OGD7	Staff lack expertise and the ability to promote learning and learners do not see its relevance to their everyday lives and planned next steps.	IGD7
Staff are quick to challenge stereotypes and the use of derogatory language, including at work. Resources and teaching strategies reflect and value the diversity of learners' experiences and provide learners with a comprehensive understanding of people and communities beyond their immediate experience.	OGD8		
Staff promote, where appropriate, English, mathematics, ICT and employability skills exceptionally well and ensure that learners are well-equipped with the necessary skills to progress to their next steps.	OGD9		

**Table 1. Ofsted Framework: FE grade descriptors for outstanding (Ofsted, 2017, p. 44) and inadequate (p. 45) teaching, learning and assessment**

## **2.5 Findings**

There was a clear difference between outstanding and inadequate provision upon examination of teaching–learning transactions. In inadequate provision, teachers tended to hold control over directing the learning process. In outstanding provision, there was a share of control between teacher and learner. This was in spite of the Ofsted framework, which does not appear to explicitly identify the need for learner involvement in directing the learning process. Data are presented in accordance to the four themes which reflect dimensions of the learning process and their pertaining sub-themes identified during data analysis which reflect dimensions of the teaching–learning transaction. Some of the integral details presented are particularly insightful.

### ***2.5.1 Planning learning***

#### ***2.5.1.1 Goal and target setting***

In outstanding institutions, learners were given teacher guidance about setting aspirational but achievable goals; however, learners were encouraged to take a share of control for setting, monitoring and reviewing goals. It is important to note that learner involvement in directing the planning of learning is not identified by the Ofsted framework, which rather focuses upon the role of the teacher in

directing the short- and long-term planning of learning (OGD3, OGD4, and OGD5).

They [teachers] skilfully negotiate aspirational targets with learners who fully understand what they must do to reach these. (Outstanding 1)

Students are encouraged to take ownership of their own learning and to set, monitor and review their targets for improvement. (Outstanding 9)

On the contrary, there was no evidence in inadequate institutions of learner involvement in setting and monitoring goals. Expectations of learners were not high enough and teachers often failed to set challenging goals (IGD6). Moreover, it was clear that teachers did not set goals tailored to the learners' individual needs.

Students do not benefit from challenging targets in each of the components of their study programmes. As a result, the progress that most students make relative to their starting point is slow. (Inadequate 1)

As a result of weak planning, too few teachers use information about learners' starting points and, as a result, almost half of learners are working below their expected target grades. (Inadequate 7)

### *2.5.1.2 Progression pathways*

Progression pathways may be interpreted as higher order planning of learning. Before starting college, students in outstanding institutions were provided with a

choice of qualifications and given thorough advice and guidance, which enabled learners to take control in making an informed decision concerning their preferred qualification course for study and professional pathway.

Initial advice and guidance are extremely thorough and ensure that students are able to make an informed choice of course. (Outstanding 9)

Trainees receive particularly good information, advice and guidance. Careers advice is outstanding. A very high proportion of learners' progress to appropriate HE or employment. (Outstanding 6)

The college pays particularly good attention to the needs expressed by employers. It responds very positively, ensuring learners have opportunities to gain additional qualifications in those skills advocated by employers. (Outstanding 5)

In contrast, there was a lack of support for learners to enable them to make informed decisions regarding their individual progression pathways in inadequate FE colleges. Ofsted acknowledges that collectively such poor planning leads to poor learner progression (IGD6).

Careers advice and guidance are inadequate. Too few learners and apprentices are provided with impartial advice and guidance to support them in making informed and accurate decisions about their next steps in education, employment or training. (Inadequate 11)

As a result, learners do not receive a tailored programme adapted to their particular needs and starting points, and the majority make inadequate progress. (Inadequate 9)

## ***2.5.2 Undertaking learning***

### *2.5.2.1 Classroom control*

In outstanding institutions, it was apparent that teachers organized learning opportunities that aimed to foster the skills for independent learning. The development of such skills was targeted through a range of learning activities which were organized by the teacher. Ofsted's framework identifies the requirement for the teacher to direct learning activities (OGD4), which includes the need for fostering of such "skills" (OGD1 and OGD9).

They develop the ability to work well on their own when studying and problem solving. (Outstanding 4)

Learners are strongly encouraged and supported to take responsibility for their own learning. (Outstanding 11)

In the most effective lessons, students develop good independent learning and research skills. As a result of the enthusiasm and expert direction of teachers, students are interested and motivated, and work well with each other and in group discussions. (Outstanding 4)

Teachers carefully use group work and research activities to develop students' team working and communication skills and to promote independent learning. (Outstanding 9)

On the contrary, in inadequate institutions such learning opportunities were not apparent and reference to teachers organizing learning opportunities that aimed to foster skills for independent learning was distinctly absent (refer to IGD3). Rather, "learning" appeared to be teacher-directed.

Teachers tend to dominate lessons and do not provide enough opportunities for students to explore topics or find solutions to problems. (Inadequate 4)

Learners studying level 3 hair and media makeup courses are too dependent on the teacher to provide information and direct them in their practical work. (Inadequate 6)

### *2.5.2.2 Structuring learning opportunities*

In outstanding institutions, teachers structured lessons that enabled individualized learning opportunities. Again, Ofsted's framework portrays the role of the teacher *as responsible* in arranging such learning opportunities (OGD1, OGD4, OGD5, and OGD9). Teachers appeared to provide a framework for learning, but students were given a degree of flexibility and control to individualize their learning. Inspectors identified the importance of access to appropriate resources as an enabling factor in this process.

Students enjoy and learn quickly from the stretch and challenge provided by the varied and stimulating tasks set by their teachers. (Outstanding 4)

Teachers set imaginative and challenging tasks and assessments that motivate learners to create highly individual portfolios of work. (Outstanding 3)

The college's virtual learning environment and the excellent range of resources in the library are used very well in much of the college to develop and improve independent learning and research skills. (Outstanding 2)

In contrast, teachers within inadequate institutions planned uniform tasks for students. This is linked to poor planning, failing to meet the needs of students and insufficient progression over time, which is indicative of inadequate provision (IGD1, IGD2, and IGD6). Furthermore, the lack of availability of quality resources was identified as a barrier for learner-directed inquiry.

Teachers do not plan to meet the needs of the wide range of learners' abilities; they teach a 'one-size-fit-all' approach to the whole group of learners, use assessment poorly and place little emphasis on skills development. (Inadequate 6)

Staff have not developed good materials to help their learners continue their learning outside of the classroom. In many cases, they have developed a few resources for the college's virtual learning environment, which is used principally as a repository for the often low-quality presentations teachers

use in lessons. Consequently, most learners are unable to make effective use of this resource for independent study. (Inadequate 3)

### *2.5.2.3 Knowledge and skills applied to real world settings*

Outstanding institutions had formed strong industrial and community links and learning of knowledge and skills was *applied* to real-world settings (especially work place settings). This is identified by Ofsted as important in vocational education and training (OGD1).

They pepper their teaching with industrial comparisons and scenarios, inspiring students to match commercial time restraints, protocols and professional standards. (Outstanding 8)

On the contrary, there was an apparent lack of vocational application of knowledge and skills in inadequate institutions. This is identified by Ofsted as indicative of inadequate provision (IGD7).

They do not relate topics adequately to students' current interests, future jobs or everyday experiences. In these lessons students quickly lose interest, are uninspired and become distracted. (Inadequate 5)

#### *2.5.2.4 Learner support*

Learner support was an important theme for enabling effective progression in gaining knowledge, skills and competencies, which reflected Ofsted's requirement for the need for clear direction and timely support (OGD2 and OGD4).

Students receive outstanding care, guidance and support. The additional support received by some students often proves to be a key factor in their success. (Outstanding 10)

Learners value the coaching and support provided to help them overcome barriers to learning, including the setting of short-term achievable goals for attendance, personal organisation and self-confidence. (Outstanding 2)

In inadequate institutions, there was evidence of some instances of inappropriate support. Specifically, "help" to complete work was provided, rather than providing support to enable students to work independently.

...staff provide too much help and do not focus sufficiently on supporting them to develop the necessary skills to work independently. (Inadequate 5)

### *2.5.2.5 Higher order cognitive processes and knowledge dimensions*

In outstanding institutions, teachers enabled students to engage in learning that targeted higher order cognitive processes (e.g., evaluation and creativity) and knowledge dimensions (e.g., procedural and metacognitive knowledge) of learning (Anderson et al., 2001). This is not explicitly demanded by Ofsted, but the framework does refer to the need for students to deepen their knowledge, understanding and skills (OGD1).

They [learners] also have a thorough understanding of their responsibility to undertake research and use it to develop their thinking and stimulate their creativity. (Outstanding 4)

On intermediate level art and design they [learners] develop very good critical analysis skills. (Outstanding 7)

They [teachers] continually encourage learners very skilfully to reflect, explore and apply new meanings, technical language, knowledge and concepts to their work. (Outstanding 3)

Conversely, it was evident that higher order cognitive processes and knowledge dimensions were not routinely included within learning episodes in inadequate institutions. In this regard, Ofsted refers to insufficient development of knowledge, understanding and skills (IGD3).

Learners do not reflect on how well they develop their ability to work and learn without help from their teachers, or on what they can do to improve these skills. (Inadequate 9)

Few teachers ensure that their learners develop their higher level thinking skills and master and apply theory fluently. (Inadequate 6)

### ***2.5.3 Reviewing learning***

#### ***2.5.3.1 Feedback and monitoring***

Effective feedback was highlighted as an important theme for the progression of students by inspectors. In outstanding institutions, feedback was threefold: self-assessment, teacher assessment and peer assessment. The Ofsted framework highlights the need for effective teacher assessment, but does not refer to the need for self- and peer assessment (OGD5 and OGD7).

Students are aware of their learning targets and are encouraged to take charge of their own learning and monitor their own progress. (Outstanding 9)

Learners receive positive and helpful feedback from their teachers in lessons and this aids them to progress and improve their work. (Outstanding 3)

... [Learners] are encouraged to reflect as individuals on future development needs. (Outstanding 8)

... [Learners] make particularly good use of their time and peer-assess finished work. (Outstanding 10)

Finally, students in outstanding institutions also assisted in reviewing the quality of provision.

Learners contribute fully to the development of the curriculum. They participate actively in learner consultation groups. They feel their opinions are valued highly by college staff as their feedback is used to improve the provision. (Outstanding 7)

In comparison, the practice of self- and peer assessment was distinctly absent in inadequate institutions. Furthermore, inspectors commented upon the lack of quality and timely feedback that was given by teachers to learners, which is also identified by Ofsted as a key factor that leads to insufficient learner progress (IGD6).

Teachers' feedback on learners' assessed work does not provide sufficient detail on how learners can improve their work. Errors in spelling, punctuation and grammar persist in learners' work because these are not systematically corrected by their teachers. (Inadequate 11)

Learners often continue to make the same basic errors and mistakes within their written work and do not receive the support they need to develop and make progress. (Inadequate 10)

Teachers often provide feedback on learners' written work that is superficial and does not provide the guidance learners need to improve the quality of subsequent work. (Inadequate 3)

## ***2.5.4 Entering/task maintenance***

### ***2.5.4.1 Expectations***

Outstanding institutions had established a “culture” of high expectations, which concurred with the demands of Ofsted for constant high expectations for all learners (OGD3).

The Principal, senior managers and governors have established a culture of high expectations for staff and students alike. (Outstanding 10)

They have an unrelenting determination to ensure learners achieve to their full potential. (Outstanding 3)

Teachers and other staff did not take responsibility for establishing a culture of high expectations in inadequate institutions.

In too many subject areas, teachers' expectations of what learners can achieve are too low. Subsequently, the standard of learners' work is not consistently of a high quality and too often is not of the standard expected by employers. (Inadequate 8)

Senior leaders have allowed the quality of provision to decline to unacceptably low standards. (Inadequate 11)

#### *2.5.4.2 Inspiring environments*

Finally, in outstanding institutions, teachers worked with other staff to establish inspiring learning environments. In this respect, the Ofsted framework identifies the need for learners to be “curious, interested and keen to learn” (OGD1).

Managers, teachers and support staff are extremely effective role models for learners in setting high professional standards and promoting a culture of inclusion, courtesy and respect for each other. (Outstanding 7)

Inspiring learning environments were often not present in inadequate institutions. In many lessons, learners lose interest and become bored because too many lessons are uninspiring and lack sufficient pace or challenge to motivate learners to attend, work hard and make good progress. (Inadequate 9)

The findings of this report offer a rich insight into the understanding of the balance of control of the learning process between teacher and learner in vocational education and training provision of young adults in England (refer to Table 2 for a

summary). The systemic nature of the present study was a notable strength, providing an overview of teaching–learning transactions in both outstanding and inadequate vocational education and training provision in England. These findings are likely to be interesting and useful for a multitude of stakeholders including: curriculum developers; government policy-makers; and vocational education and training teachers, managers and support staff, both within England and in other international contexts.

Themes in outstanding provision				Themes in inadequate provision			
Learning process dimension	Teaching-learning transaction dimension	Teacher	Learner	*Ofsted grade descriptor	Teacher	Learner	**Ofsted grade descriptor
Planning learning	Goal and target setting	Teachers assist and advise in setting, monitoring, and reviewing challenging targets.	Enables learners to assume partial control and responsibility.	OGD3 OGD4 OGD5	Teachers set targets, which are not always challenging.	Learners often do not assist in target setting and may not be challenged.	IGD6
	Progression pathways	Teachers offer accurate and individualized guidance about possible pathways.	Learners are enabled to make informed guided decisions.		Teachers may not provide accurate and individualized guidance about possible pathways.	Learners may make decisions, but decisions may not be informed or appropriately guided.	IGD6
Undertaking learning	Classroom control	Teachers build student-centred environments and offer student control and responsibility.	Enables students to work on individualized tasks independently or in groups, allowing the development of competencies alongside skills and knowledge. Enables learners to assume more control and responsibility of progressing in their learning.	OGD1 OGD4 OGD9	Teachers can dominate in a teacher-centred environment. Teachers hold control and responsibility of the learning process. For instance, teachers set the pace and methods for learning.	Learners do not assume control and responsibility for undertaking learning. Students become bored, learning progress is slowed, and learning is seldom focussed on the development of competencies.	IGD3
	Structuring learning opportunities	Teachers organize individualized learning opportunities and resources.	Enables individualized learning of knowledge, competencies, and skills.	OGD1 OGD4 OGD5 OGD9	Inflexible uniform learning experiences are arranged by teachers.	Learning is not differentiated.	IGD1 IGD2 IGD6
	Knowledge and skills applied to real world settings	Teachers arrange learning opportunities that enable students to apply knowledge and skills to real world settings (especially work place settings).	Enables learners to make individual meaning of knowledge and skill.	OGD1	Teaching of core knowledge and skills do not always provide opportunities that enable students to apply knowledge and skills to real world settings.	Students may not gain an understanding of why learning of such knowledge or skills are important.	IGD7
	Learner support	Teachers ensure appropriate support for students to enable continual progress in gaining knowledge, skills, and competencies.	Enables learners to overcome barriers to progression, competence development, and to assume control and responsibility for learning.	OGD2 OGD4	Support may not always be effective. Teachers may assist work completion rather than promoting independent learning.	Barriers to learner progression may persist. Students may not develop competencies to enable independent learning.	
	Higher order cognitive processes and knowledge dimensions	Teachers stage learning opportunities that target both lower and higher order dimensions of learning.	Students are not confined to rote learning. They take the opportunity for deep learning of a topic area and practice higher order learning processes and dimensions.	OGD1	Teachers stage learning opportunities that target mainly lower order dimensions of learning.	Students are often confined to rote learning.	IGD3
Reviewing learning	Feedback and monitoring	Teachers provide expert monitoring and feedback and enable opportunities for self- and peer-assessment.	Learners are encouraged to reflect upon progress and perform self- and peer-assessment. Students are involved in giving feedback for provision development.	OGD5 OGD7	Teacher feedback is given, but is not always precise, timely, or appropriate.	Students may not be involved in feedback and monitoring. Learners are not appropriately guided in order to progress effectively.	IGD6
Entering/task maintenance	Expectations	Teachers set high expectations, as part of a "culture" of high expectations.	Learners accept high expectations and are likely to meet these expectations.	OGD3	Teachers set expectations, but often do not demand high expectations.	Learners may not have high expectations and are likely to underachieve, or drop out of college.	
	Inspiring environments	Teachers create inspiring learning environments.	Learners are inspired and motivated.	OGD1	Teachers create the learning environment, which may not inspire.	Learners may not be inspired nor motivated.	

**Table 2. Summary: description of themes identified in the data (including cross references made to \*outstanding and \*\*inadequate grade descriptors that were considered post hoc of data analysis (refer to Table 1))**

## 2.6 Discussion

Quite profoundly, inadequate provision in the present study reflected teacher-directed learning where teachers directed the objectives and means of learning (Knowles, 1970, 1975, 1980). Such teaching–learning transactions are reflective of traditional or more didactical approaches (Dewey, 1938/1963; Hiemstra, 1994). In which, as Freire (1970, p. 58) explained, “Education thus becomes an act of depositing, in which the students are depositories and the teacher is the depositor.” This represents a real concern, regarding the small but significant proportion of FE colleges in England to which this conclusion applies. Moreover, this finding was indicative of a recent United Kingdom Government report which identified that “there is also an issue with the number of young people with weak basic skills who ‘churn’ through a series of low-level and other qualifications that do not prepare them for further study or employment” (HM Government, 2017, p. 40).

A key finding of this report was that outstanding vocational education and training provision in England reflected a “mid-way” between teacher-directed learning and self-directed learning (refer to Knowles, 1975, 1980). This balance of control of learning between teacher and learner represented a “collaborative relationship” proposed by Garrison (1997, p. 23).

This report provides some clues regarding how the skills for self-directed learning may be fostered in vocational education and training. For instance, students were encouraged to take ownership for setting goals, but teachers and support staff provided guidance towards setting challenging but achievable goals.

During the undertaking of learning, teachers guided learning activities, providing a framework for learning (Arnold, 2015). But, at the same time, such tasks enabled a degree of flexibility for students to direct the objectives and means of learning. For example, portfolios were used to facilitate this possibility. Portfolios have been previously identified as “facilitative” for self-directed learning in vocational education and training (e.g., Kicken et al., 2009). Furthermore, in the present report it appeared that learner access to quality resources facilitated independent and group research. Additionally, timely and quality support enabled learners to overcome barriers to progressing independently. Moreover, feedback appeared to be a key factor in enabling progression of independent learning. Feedback in outstanding provision was threefold: self-assessment, peer assessment and teacher assessment.

The ability to apply theory to practice is of particular importance in vocational education and training. Thus, as well as the “process” of learning, consideration should be given to the resultant “learning processing”—the cognitive aspect. Garrison (1992) explained, “most conceptualizations of self-directed learning are preoccupied with external control issues, this is an incomplete view of the learning process” (p. 141). But, “internally self-directedness in terms of constructing meaning is absolute” (p. 141). In this regard, Rogers (1969, p. 4) refers to the type of learning where learners are able to make “personal meaning” of knowledge and skills. This dimension of self-directed learning reflects the constructivist epistemological stance and historical assumptions of self-directed learning (Knowles, 1980; Piaget, 1964; Tough, 1971). In the present study, one important

factor that differentiated outstanding provision was the role of teachers in arranging learning opportunities that enabled students to place knowledge or skills in *their* “real world”; thus, learners were enabled to apply what they were learning to their particular vocation.

Another imperative finding of this present paper was the hierarchical order of teaching–learning transactions. Historically, the hierarchical order of the process of self-directed learning was not considered (Knowles, 1970, 1975, 1980). The importance of higher order planning of progression pathways was highlighted in this present study. In outstanding institutions, teachers and support staff guided students to make informed choices. Again, such processes fit with the underlying humanistic assumptions of self-directed learning: that every individual has a fitting place in the world; education that is tailored toward enabling self-actualization is more likely to coincide with learner motivation (Groen & Kawalilak, 2014; Maslow, 1943, 1954; Rogers, 1969).

However, in consideration of the nature of vocational education and training in England, there are problems with this basic assumption. Importantly, if all students are directing their progression pathways, collectively, the skill set across a generation may not match the economic demands at that particular time. It is necessary to point out that students’ decisions regarding their progression pathway is restricted in England: confined by the qualification offering of FE colleges. In this respect, it should be considered that the United Kingdom Government recently described the curriculum offering of vocational education and training in England as largely “broad” and “generalist” (HM Government, 2017, p. 39) that “does not

deliver for individuals, for the skills needs of employers, or for the wider economy” (p. 37). These macro-level considerations should be taken into account when interpreting this report.

### ***2.6.1 Limitations and suggestions for further research***

The present study had some limitations. The cross-sectional design did not allow insight to the possible fostering of skills for self-directed learning over time (refer to Grow, 1991). Longitudinal studies would allow examination of the impact of teaching–learning transactions upon the fostering of skills for self-directed learning. Furthermore, it was not possible to examine individual differences in learner desire or preference towards taking responsibility for self-directed learning (Brockett & Hiemstra, 1991). In addition, both the present paper and FE Ofsted framework were systemic and generalizable in nature, whereby teaching, learning and assessments were judged irrespective of the nature of vocation focus or qualification structure. The strength of the present paper is that it provides an overview of the nature of vocational education and training in England, in regard to the research question. However, further research examining specific vocation and qualification demands, both within England and in other international contexts, may uncover discrete patterns in the balance of control of learning between teacher and learner.

Moreover, it should be considered that the findings presented in this report were a composition of the interaction of inspectors’ perceptions of teaching–

learning transactions and interpretation of these judgments was made by a researcher who was an experienced FE college vocational education and training teacher. A potential weakness of this present study was the lack of consideration of inter-researcher reliability. Nevertheless, at the same time, the specific professional experience of the researcher likely assisted in making sense of inspectors' comments. But it is important to consider that the findings presented in this report reflect an interaction of three frames of reference: researcher interpretation of inspectors' interpretations within Ofsted's framework.

### ***2.6.2 Implications for practice***

The findings of this report exemplify how an effective balance of control of directing the learning process may be realized between teacher and learner in vocational education and training. This includes the need to consider the hierarchical order of control issues in regard to directing the objectives of learning. For instance, balancing control of directing progression pathways between learners' interests and economic demands seems imperative in any given vocational education and training setting internationally.

In addition, the present research identifies the need to consider the modulating effect of contextual factors upon the transactional balance of control of learning between teacher and learner. For instance, the differences discussed in this report between outstanding and inadequate institutions emphasize the impact of the individual institution, including the teacher, in allowing more or less learner self-

direction. Moreover, inspectors reported favorably upon teaching–learning transactions where teachers offered students a share of control of directing the learning process. This was in spite of the Ofsted framework that clearly highlights the role of the teacher, but does not appear to explicitly identify the need for learner involvement in directing the learning process—rather, principally reflecting a traditional teacher-directed educational model (Dewey, 1938/1963; Freire, 1970; Hiemstra, 1994; Knowles, 1970, 1975, 1980). Considering the crucial role inspection bodies have upon influencing *learning culture*—which may act to inhibit or promote certain kinds of learning (Hodkinson & James, 2003; James & Biesta, 2007)—it would appear appropriate that the Ofsted framework is reformed to highlight the importance of facilitating self-directed learning.

In conclusion, the present paper offers insight into the understanding of how an effective balance of control of learning between teacher and learner may be realized in vocational education and training settings and highlights the need to consider the modulating role of contextual factors.

## Note

1. The International Standard Classification of Education (ISCED) is a statistical framework that categories education into levels from 0 (early childhood) to 8 (doctoral level or equivalent) maintained by the United Nations Educational, Scientific and Cultural Organization (UNESCO (United Nations Educational, Scientific and Cultural Organization) 2012). The most recent version is ISCED 2011.

## **Chapter 3—Study 2**

# **Adaptivity through self-directed learning to meet the challenges of our ever-changing world**

**This chapter has been previously published:**

Morris, T. H. (2018a). Adaptivity through self-directed learning to meet the challenges of our ever-changing world. *Adult Learning*. Advance online publication. doi:10.1177/1045159518814486

### 3.1 Introduction

Fostering adult learners' competence to adapt appropriately to our ever-changing world is a foremost concern for a multitude of stakeholders of adult education. This includes not only adult educators, curriculum developers, managers, and government policy-makers but also personnel concerned with human resource development. The purpose of the present article is novel and examines whether the consideration of *modes of learning* (instruction, performance, and inquiry) could assist in the design of adult education that facilitates self-directed learning and enables learners to think and perform adaptively.

The concept of modes of learning originated from the typology of Houle (1980). This was the first theoretical framework that sought to classify learning activities of adult professionals by their structural forms (Cervero & Dimmock, 1987).

Houle (1980) identified three "major and overlapping modes of learning" (p. 31): instruction, "the process of disseminating established skills, knowledge, or sensitiveness" (p. 32); inquiry, "the process of creating some new synthesis, idea, technique, policy, or strategy of action" (p. 31); and performance (later renamed reinforcement; Houle, 1984), "the process of internalizing an idea or using a practice habitually, so that it becomes a fundamental part of the way in which a learner thinks about and undertakes his or her work" (p. 32).

However, to the knowledge of the present author, no study has reached beyond Houle's typology, especially concerning the potential of using modes of learning in the design of adult education to assist in the facilitation of self-directed learning.

Self-directed learning is a means to change—representing “major, highly deliberate effort to gain certain knowledge and skill (or to change in some other way)” (Tough, 1971, p. 1). Self-directed learning seems imperative in a world that is becoming ever more complex and changeable, where much benefit is gained from adapting behavior accordingly (Brooks & Edwards, 2013; Dzubinski, Hentz, Davis, & Nicolaidis, 2012).

For example, an owner of a clothing shop could be proactive in keeping up-to-date with the current fashion trends and then change what clothes they sell accordingly, with great business success. A competing shop owner may not attend to the changing fashion trends and not change the clothes they sell and become bankrupt in time.

A paint manufacturer that has been producing the same powder coating paint for industry for many years could face declining demand. Rather, a competing business could notice that demand for such paint was in decline. They could proactively learn about what type of paint is in demand and change their manufacturing and product offering accordingly, growing their business.

An unemployed person could explain that they have no work because, for example, they are a coal miner and the coalmine closed 15 years ago. However, fifteen years ago, a co-worker who was also made redundant noticed that due to

environmental policy change there was a growing demand for renewable energy and sought training and employment in the field of solar energy.

This article addresses, in part, the concern that “traditional” forms of adult education, which entail teacher-directed processes of knowledge and skill inculcation, are often not effective nor suitable for preparing adult learners for life (cf. Alston et al., 2016; Brooks & Edwards, 2013).

An overview of the concept of self-directed learning as a critical competence that enables adaptivity is discussed, followed by a summary of factors that could influence motivation for self-directed learning. Afterward, a theoretical argument is presented that modes of learning may be an important consideration in the design of adult education, especially regarding learner initiation and maintenance of motivation for self-directed learning.

### **3.2 Self-directed learning as a critical competence**

Self-directed learning is a *critical* competence that empowers adults to adapt accordingly to fluid and complex social contextual changes (Abele & Wiese, 2008; Helderbran, 2017; Kranzow & Hyland, 2016; Marsick & Watkins, 1992, 1996). Education that targets the fostering of self-directed learning competence offers “great promise” in preparing adults for their working life (Boyer, Edmondson, Artis, & Fleming, 2014, p. 20).

Advantages of fostering self-directed learning competence include avoidance of knowledge and skill obsolescence (Cranton, 1992; Gould, 1978; Morrison &

Premkumar, 2014; Oddi, 1987); enabling individuals to “upskill” in the event of changes in economic conditions, providing them with a certain protection against long-term unemployment (Barnes et al., 2016); empowering emancipatory action (Bagnall & Hodge, 2018; Freire, 1970); and facilitating learners’ progression toward self-actualization (Groen & Kawalilak, 2014; Maslow, 1943; Rogers, 1969).

Self-directed learning does not occur in a social or contextual vacuum. Recent scholarly discussion has highlighted that there is a need for learners to balance personal goals with societal needs (Guglielmino, 2008; Morris, 2018c; Tan, 2017). This perspective builds upon Garrison’s (1997) hypothesis that, in formal education, the educator inevitably plays a very important collaborative role in assisting students to appreciate the need to consider “what counts as worthwhile knowledge” (p. 23).

Moreover, Tan (2017) proposed that self-directed learning is ultimately underpinned by a “shared moral vision” (p. 250) of the “individual” and the “collective” (p. 251). She criticized Knowles’s (1975) definition of self-directed learning due to him not considering the “collective,” claiming that he defined self-directed learning as “a process in which individuals take the initiative *without the help of others . . .*” (Tan, 2017, p. 251, citing Knowles, 1975, p. 18, as cited in Mezirow, 1985, p. 17, with italics added).

Nonetheless, Tan (2017) made a fundamental citation error in this regard: Knowles’s definition *does* actually acknowledge the “collective” aspect of self-directed learning:

In its broadest meaning, “self-directed learning” describes a process in which individuals take the initiative, *with or* without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. (Knowles, 1975, p. 18, with italics added)

In this regard, Morris (2018c) systemically analyzed teacher–learner transactions that foster self-directed learning in Further Education colleges in England. This report concluded that “outstanding” adult learning in this context represented a “balance of control” between (a) learners assuming control of directing the learning process, and (b) the educator providing direction to assist learners to appreciate the societal and environmental demands. A distinct limitation of this study, and a commonality in scholarly work on self-directed learning, was a lack of consideration of a broad range of factors that may influence learners’ motivation for self-directed learning.

### **3.3 Motivation for self-directed learning**

In reference to self-determination theory of motivation (Ryan & Deci, 2017), Rigby and Ryan (2018) discuss multiple kinds of motivations, which fall on a “spectrum of *motivational quality*” (p. 136; emphasis in original). They explain that “volitional, high-quality motivation” is “energized directly by the employees’

needs, values, and interest” (p. 136), which is “evident when one pursues goals and values that are *personally meaningful*” (p. 137; emphasis in original).

In line with self-determination theory, the majority of adult learning is characterized by a process that is life-centered and self-directed, motivated by highly practical reasons, personal interest, curiosity, and/or enjoyment (cf. Tough, 1971). Intrinsic reasons to pursue learning, such as a desire for job satisfaction or quality of life, are viewed as the most potent motivators for self-directed learning (Knowles, Holton, & Swanson, 2015).

In addition, it may be important to consider factors inherent in a learner’s context that may influence their motivation for self-directed learning (Morris, 2018c). For example, McCartney and colleagues (2016) identified that peer/social group is an important factor. Matsuo (2015) highlighted the significance of learners having a workplace developmental network. Moreover, it may be important to consider that the learner(s) themselves also represent an important contextual factor (Tessmer & Richey, 1997).

In this regard, characteristics of learners are likely to have a powerful influence on their tendency and propensity toward self-directed learning (Alharbi, 2018; Barry & Egan, 2018; Merriam, 2018). For instance, empirical studies have reported strong correlations between learner self-directedness and conscientiousness, openness (big five traits), optimism, and work drive (narrow traits; Kirwan et al., 2010, 2014; Lounsbury et al., 2009; Major et al., 2006).

Furthermore, a learner’s self-regulatory processes are likely to have a significant influence on their motivation for self-directed learning. Educators

should consider that learners are active agents and self-regulate, to various degrees, cognitive, motivational, affective, and social contextual aspects of their learning process (Jones, 2017; Pintrich, 2004; Zimmerman, 1990).

However, there is relatively less understanding of how the process of self-directed learning, in terms of management of learning tasks, influences a learner's motivation for self-directed learning. Historical studies reported that a positive or negative experience of self-directed learning might affect further motivation to pursue self-directed learning (e.g., Kasworm, 1983; Knowles, 1975).

Staged models of self-directed learning address this concern. Staged models advocate a gradual move from teacher-directed learning to self-directed learning (cf. Arnold, 2015; Grow, 1991; Morris, 2018b).

Moreover, Langer's series of empirical studies (refer to Langer, 2017) emphasized the central importance of considering the *nature* of the learning process—how learners learn. Langer referred to a common educational problem of “teaching certainty” (p. xxiii), where “teaching puts a premium on absolute answers” (p. xxiii). Her experimental studies demonstrated that learners may develop a tendency to apply the “learned” information to new life-situations—often inappropriately—mindlessly. She concluded that “perspective-free facts create an illusion of knowing” (p. xxiii). Rather, maintaining meticulous attention toward detail of the social and environmental context seems imperative for the self-directed learner to first identify a “need” to adapt to a social contextual change.

The following section examines whether consideration of modes of learning may assist in the understanding of how to design adult education that fosters

learners' sensitivity to changes in social contextual conditions. A perceived need to adapt to change is theoretically a pivotal mediator for the initiation and maintenance of motivation for self-directed learning (Rigby & Ryan, 2018; Ryan & Deci, 2017).

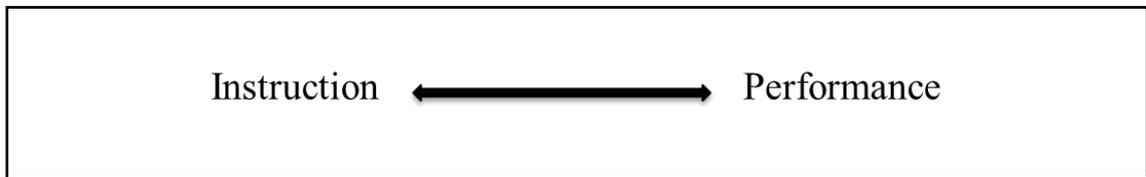
### **3.4 Models of modes of learning**

Two models of modes of learning are proposed and contrasted in the forthcoming discussion: the reinforcing model of modes of learning (instruction, performance, *without* inquiry) and the adapting model of modes of learning (instruction, performance, *with* inquiry). Whether or not inquiry is included in the learning process is an important consideration: It potentially differentiates the purpose of instruction, the nature of learners' performance, and the underlying epistemological positioning.

#### ***3.4.1 The reinforcing model of modes of learning***

When educators facilitate instruction without inquiry, learners' performance may represent a process of reinforcing (Figure 1). In this instance, performance concurs with Houle's (1980) definition. Education may reflect a number of didactical concepts, such as the traditional education model (Dewey, 1938/1963), the pedagogy model (Knowles, 1970, 1980), or the banking concept (Freire, 1970)—

a process representing teacher-directed learning: where the educator directs the learning means and objectives.



**Figure 1. Reinforcing model of modes of learning**

In a teacher-directed learning process, learning objectives are definable at the planning stage and are intended to be uniform, and the successful accomplishment of which defines the learning “success.” Positive or negative feedback can be used to shape learning outcomes toward the socially approved behavior—the pre-determined learning objectives.

An educational curriculum may be systematically arranged in a stepwise fashion so that learners progressively target more difficult learning objectives. Thus, learning in this regard is a process of moving back and forth between the modes of instruction and performance (cf. Figure 1).

When educators employ the reinforcing model of modes of learning, behaviorist assumptions are upheld, the ultimate objective of which is to control learners’ behavior (Skinner, 1971/1987; Thorndike, 1898; Watson, 1913): to shape their growth in a particular direction (Bruner, 1966). Thus, the process benefits from learners acting meekly and uncritically rather than actively or judgmentally (Dewey, 1916/2013).

The adult educator may deem that, in certain but perhaps limited educational circumstances, employing the reinforcing model of modes of learning seems logical. In this regard, Houle (1980) discussed that established skills, knowledge, or sensitiveness may be instructed to professional persons then practiced and monitored to ensure effective implementation.

For example, a fast food franchise that has restaurants in different cities may require that their products, such as burgers or coffee, are standardized across the business. In such a circumstance, the reinforcing model of modes of learning may be deemed the most fitting model by the company's educator.

Moreover, when the educator considers that facilitating learner inquiry could be potentially dangerous, such as in the teaching of basic first aid, beginner gymnastics, or preliminary driving lessons, the reinforcing model of modes of learning may be judged most appropriate.

In these examples, formal instruction may be followed by repetitive practice, supported by feedback regarding the "correctness" of the learner's performance. The adult educator could, feasibly, in all of the previous examples, move away from the reinforcing model of modes of learning, perhaps in a more advanced stage of the education course, or/and when any potential inherent danger has passed.

Yet, operating the reinforcing model of modes of learning may lead to learners' understanding being assimilated uncritically. Subsequently, learners may become accustomed to reinforcing habitual patterns of perceiving, thinking, judging, feeling, and acting, rather than adapting to social contextual changes through practicing self-directed learning (Arnold, 2017; Mezirow, 1978, 1991, 2009).

Such educational processes support Langer's (2017) concept of mindless learning, in which learners become ignorant, or desensitized, to changes in social contextual conditions. A key consequence is that learners may apply the knowledge or skills learned in contexts with differential conditions without noticing the need to adapt accordingly (Langer, 2017).

Specifically, under such educational processes, the educator does not encourage learners to attend toward the possibility that the information learned may *not* retain its correctness across context or time.

In this regard, in a series of lectures Dewey (1915/2010) identified that often in such education "facts" are commonly taught with their contextual information removed. When learners act *passively* in the inculcation process of knowledge or skill, meaning schemes may develop that are broad and rigid—decontextualized—which, in other words, "may distort our ways of knowing" (Mezirow, 1991, p. 5).

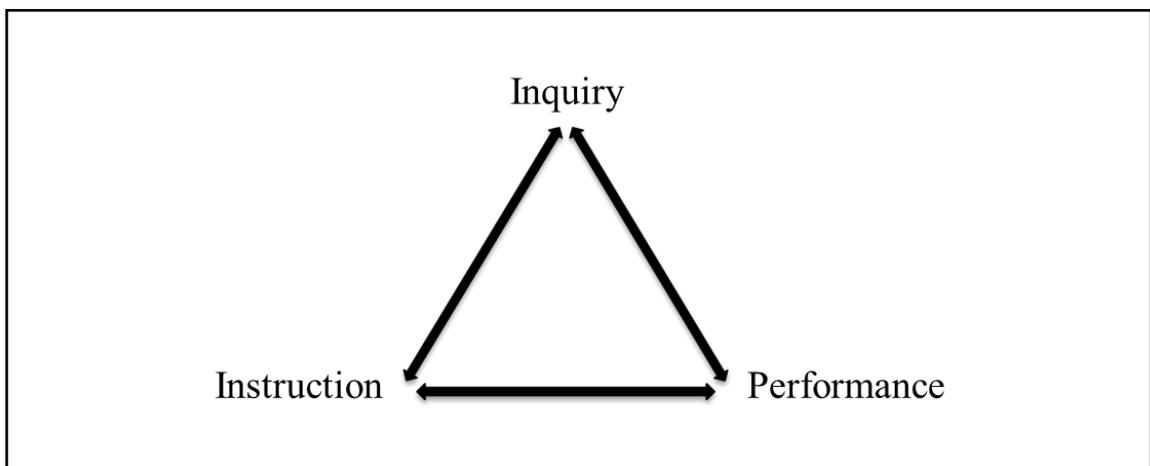
A key consequence of this may be represented by learner cognitive defensiveness, which includes the fear of failure and avoidance of new ideas and activities, displayed in a distinct learner "rigidity" accompanied by a lack of a tendency and propensity toward self-directed learning (Oddi, 1986, p. 99).

When educators facilitate the reinforcing model of modes of learning, learners may begin to perceive that what they know, in terms of knowledge or skill, is "true," generally, irrespective of social or contextual conditions. This *reduced sensitivity* toward changing conditions may result in a distinct lack of a perceived need to adapt to social contextual changes and, subsequently, a lack of motivation for self-directed learning. This is especially important because establishing

cognitive interest is perhaps the strongest motivator for self-directed learning (Kim & Merriam, 2004; Rigby & Ryan, 2018; Ryan & Deci, 2017).

### ***3.4.2 The adapting model of modes of learning***

In accordance with the adapting model of modes of learning (Figure 2), the addition of the inquiry mode in the learning process differentiates the nature of the learners' performance, the underlying epistemological positioning of the learning process, and the purpose of the instruction.



**Figure 2. Adapting model of modes of learning**

Importantly, Houle's (1980) definition of performance is no longer appropriate. Rather, the learners' performance becomes an *active* process of *adapting* in which understanding is *critically* construed.

An adult educator should appreciate that, with regard to an adult's working life, adaptive performance potentially positively modulates long-term career success (Seibert et al., 2001) and has been positioned as the *conditio sine qua non* of professional expertise (Ward, Gore, Hutton, Conway, & Hoffman, 2018). Adaptivity is defined as “the ability to employ multiple ways to succeed and the capacity to move seamlessly among them” (Hoffman et al., 2014, pp. 51-52).

Moreover, the inclusion of inquiry in the learning process alters the educational epistemological positioning. Rather, the process of inquiry champions constructivism, in which learning represents an individual, interpretive, and active process (cf. Merriam et al., 2007; Rogers-Shaw, Carr-Chellman, & Choi, 2018).

Jonassen (1999) identified that the fundamental difference of a constructivist learning environment is that the process, referred to as an “inquiry project” in the present article, is driven by “the question or issue, the case, the problem, or the project that learners attempt to solve or resolve” (p. 218). He highlighted that “nearly every conception of constructivist learning recommends engaging learners in solving authentic problems” (p. 221).

In this regard, M. Gibbons (2002) discussed that the process of creating solutions to inquiry projects necessitates a learning process/learner competence to undertake “scientific-like investigations” (p. 8). In the learning process, learning outcomes may not be uniform and cannot be definitely predicted in advance. Importantly, *creative* outcomes are possible in the process.

Furthermore, the purpose of “instruction” changes. The objective of instruction includes a process of identifying human or material resources that could assist the

creation of a solution to the inquiry project (cf. Dzubinski et al., 2012; Knowles, 1975). In most circumstances, learners would seemingly benefit from considering the *fittingness* of established knowledge and skills to *specific* inquiry projects.

The educators themselves, other experienced persons, or the learner's own experience may represent a valuable human resource (Lindeman, 1926; Merriam, 2008). Moreover, because inquiry projects are inevitably real-world based, gaining pragmatic feedback either through active experimentation or reflection on concrete experience seems imperative (D. A. Kolb, 2015; A. Y. Kolb & Kolb, 2013).

In addition, the adapting model of modes of learning complements and extends the scholarly discussion concerning self-directed learning being a process of collaboration (Guglielmino, 2008; Knowles, 1975; Morris, 2018c; Tan, 2017). Indeed, the process of inquiry may be supported through working with others, especially through Socratic dialogue (Kasl & Yorks, 2002; Storey & Wang, 2017).

The adapting model of modes of learning may support the fostering of learner appreciation that adult learning does not occur in a social or contextual vacuum. In this regard, Langer (2017) explained that it is important that learners learn to become confident with uncertainty—appreciating that knowledge or skill may not be fitting across context and may become outdated in time.

To realize this, an attitude of cognitive openness—a key characteristic of self-directed learners—seems essential. Cognitive openness has been defined as an “openness to new ideas and activities, ability to adapt to change, and tolerance of ambiguity” (Oddi, 1986, p. 99). In essence, a learner perception may be fostered

that “no knowledge is secure, that only the process of *seeking* knowledge gives a basis for security” (Rogers, 1969, p. 104; emphasis in original).

In terms of cognitivist theory, underlined by Gestalt principles, learning is a process of finding out which parts of nature belong as parts of their functional wholes (Koffka, 1935). In this respect, Bruner (1966) explained that curiosity is “a response to uncertainty and ambiguity” (p. 43) and “curiosity is almost a prototype of the intrinsic motive. Our attention is attracted to something that is unclear, unfinished, or uncertain” (p. 114). Thus, learner appreciation that no knowledge is truly secure in the course of time or across context seems imperative for the maintenance of curiosity and motivation for self-directed learning.

Finally, the adapting model of modes of learning may represent a model of self-directed learning in its own right. In this regard, the model could be used to facilitate self-directed learning in formal educational settings, when learners are enabled to assume control over both learning objectives and means—a central tenet differentiating the self-directed learning process (Mocker & Spear, 1982; Sawatsky et al., 2017).

For an adult educator, the idea of instruction being part of self-directed learning may seem somewhat paradoxical. However, if inquiry is the process of creating a fitting solution to a question, issue, case, or problem, then learner exposure to a wealth of information concerning established knowledge or skills seems imperative.

Nevertheless, the self-directed learning process is differentiated in that learners retain control by directing, *choosing*, which knowledge or skills are most fitting

for their inquiry project. To retain control over learning means a learner could proactively seek human or material resources. This may be via a multitude of media, such as a book, video, blog, website, lecture, and/or discussion with an expert in the field, such as with another learner or the educator.

Following receipt of the information, the process demands that learners think critically and judgmentally concerning its fittingness for their inquiry project, thus supporting an individual, active, and differentiated learning process. Importantly, the learner may deem, or choose, that *no* established knowledge or skill is fully fitting to his or her inquiry project. In such a case, the learner could attempt to be creative to design novel knowledge or skill that may be more appropriate.

Moreover, it is also possible that in formal education settings, learners assume control over their learning objectives. This is exemplified in some vocational education institutions in the Netherlands (Kicken et al., 2009). In this educational context, learners are required to self-determine their own learning objectives in accordance with their individual professional needs; upholding the humanistic assumptions of self-directed learning (cf. Merriam, 2018)

If learners do not have the necessary skills for self-directed learning, which they commonly do not (Kicken et al., 2009), then the educator could, as per staged models of self-directed learning (e.g., Grow, 1991), initially assume a share of control of directing the learning process. Then, as learners gradually gain the necessary skills for self-directed learning, the educator may gradually remove their share of control as learners become competent in the process of self-directed learning.

### **3.5 Practical implementation and further research directions**

To implement the adapting model of modes of learning in practice may require an alternative didactical framework. In this regard, building on the work of Hoffman and colleagues (2014), Ward et al. (2018) proposed a set of didactical principles to support the fostering of adaptive performance, which includes relevant inquiry projects that become increasingly challenging; feedback that stimulates critical thinking and reflection; challenging deadlines; opportunity to make cross-comparison between cases/projects, especially concerning the fittingness of concepts and their contextual differences; and opportunity for instruction that provides learners with a rich conceptual/theoretical repertoire. Fostering learner skill to self-employ such a didactical framework is seemingly *critical* for fostering self-directed learning competence.

These principles, developed based on the review of scholarly research, represent a starting point for educators (Hoffman et al., 2014; Ward et al., 2018). Nevertheless, further empirical research is required to test the effectiveness of such principles in practice. Jossberger et al. (2017) call for further research and didactical understanding in this regard.

The adapting model of modes of learning could provide a useful framework for further empirical research, especially concerning the understanding of how to facilitate self-directed learning in formal educational settings. Case studies and longitudinal studies may be particularly useful for examining the nature of

teacher–learner transactions in differential contexts. Moreover, as per the conclusions of Morris (2018c), it is possible that there are discrete patterns in the balance of control of learning between teacher and learner in specific vocations.

Finally, it is important to point out that a third model of modes of learning was not considered in the present article—the interaction of inquiry and performance, without instruction—which rather represents a process of discovery or play. In this regard, Kirschner, Sweller, and Clark (2006) argued that inquiry-based teaching that involves minimal guidance (no instruction) “does not work” (p. 75). Bruner (1973) described the act of discovery as rather “the most inefficient technique possible for regaining what has been gathered over a long period of time” (p. 69). Nonetheless, further research should not discount the possible value and importance of a discovery/play model of modes of learning, especially in terms of childhood cognitive development (cf. Davids, Güllich, Shuttleworth, & Araújo, 2017).

### **3.6 Conclusion**

In the present article, two models of modes of learning (Figures 1 and 2) are proposed and contrasted, which could be useful for educators to guide the design of adult education. When educators employ the *reinforcing* model of modes of learning, a teacher-directed learning process is promoted. A key consequence is that learners may become accustomed to reinforcing habitual patterns of perceiving, thinking, judging, feeling, and acting—performance that may be rather

inflexible and represented by a distinct lack of a perceived need to adapt to social contextual changes: a lack of motivation for self-directed learning.

Rather, the *adapting* model of modes of learning may assist educators to design education that encourages learners to become adaptive in their performance. Positioning with constructivist epistemology, an inquiry project drives the learning process. Critical thinking is fundamental in facilitating successful learning outcomes. Learners are encouraged to appreciate that knowledge is not secure across context or time, encouraging an enhanced learner sensitivity toward changing social contextual conditions—potentially a pivotal mediator for the initiation and maintenance of motivation for self-directed learning.

## **Chapter 4—Study 3**

# **Experiential learning—a systematic review and revision of Kolb’s model**

**This chapter has been previously published:**

Morris, T. H. (2019a). Experiential learning—a systematic review and revision of Kolb’s model. *Interactive Learning Environments*. Advance online publication. doi:10.1080/10494820.2019.1570279

## 4.1 Introduction

What is fascinating about *learning* is that it cannot occur without *experience*. Imagine trying to learn to tie shoelaces without having the practical experience of having hands-on laces. On the other hand, try to forget your knowledge of how to ride a bike. Perhaps most notably, John Dewey (1938/1963) proposed that although not all experiences are equally educative, “all genuine education comes about through experience” (p. 25).

Experiential learning theory takes a fundamentally different view of the learning process in comparison to behavioral learning theory. It places life experience as a central and necessary part of the learning process, where “*knowledge is created through the transformation of experience*” (D. A. Kolb, 2015, p. 49; emphasis in original). However, relatively little empirical research has been conducted on experiential learning (Bergsteiner, Avery, & Neumann, 2010; Jarvis, 2012).

Nonetheless, according to D. A. Kolb (2015), over the past 20 years research on experiential learning has more than quadrupled in many fields such as management, education, information science, psychology, medicine, nursing, accounting, and law. This includes a renewed interest in and attention to employing experiential learning in formal educational settings, especially in Higher Education. Thus, furthering our understanding of the concept of experiential

learning and how to facilitate it is an important area for research, especially given the limitations of experiential learning theory highlighted in the following section.

## 4.2 Kolb's experiential learning cycle

D. A. Kolb's (1984) experiential learning cycle remains the most widely influential and cited model, or "clearest expression", of experiential learning theory (Seaman, Brown, & Quay, 2017, p. 3). Kolb (1984) theorized that,

Learners, if they are to be effective, need four different kinds of abilities—*concrete experience* abilities (CE), *reflective observation* abilities (RO), *abstract conceptualization* abilities (AC), and *active experimentation* (AE) abilities. That is, they must be able to involve themselves fully, openly, and without bias in new experiences (CE). They must be able to reflect on and observe their experiences from many perspectives (RO). They must be able to create concepts that integrate their observations into logically sound theories (AC), and they must be able to use these theories to make decisions and solve problems (AE). (p. 30; emphasis in original)

More than thirty years onwards, D. A. Kolb (2015) defended his theoretical position against a multitude of critiques (e.g., Bergsteiner et al., 2010; Bergsteiner & Avery, 2014; Jarvis, 2012; Miettinen, 2000; Schenck & Cruickshank, 2015) that the experiential learning process consists of,

a four-stage cycle involving four adaptive learning modes (p. 66)...[where] Learning arises from the resolution of creative tension among these four learning modes. This process is portrayed as an idealized learning cycle or spiral where the learner “touches all the bases” – experiencing (CE), reflecting (RO), thinking (AC), and acting (AE) – in a recursive process that is sensitive to the learning situation and what is being learned. (p. 51)

Kolb acknowledged that he discovered or “noticed the dimensions” (D. A. Kolb, 2015, p. 56) of the theory in the works of prominent twentieth-century scholars Kurt Lewin, John Dewey, and Jean Piaget and attempted to “integrate the common themes in their work into a systematic framework that can address twenty-first century problems of learning and education” (p. xvii). Intertwined with experiential learning theory is the concept of learning styles (outside the scope of the present paper; refer to A. Y. Kolb & Kolb, 2013, for review; Schenck & Cruickshank, 2015, for critique).

A damning critique of experiential learning theory is that it lacks sound theoretical and empirical foundations (cf. Coffield, Moseley, Hall, & Ecclestone, 2004; Miettinen, 2000). In particular, Miettinen (2000) noted that D. A. Kolb’s interpretation of the key works, upon which his model was assembled, fundamentally “gives a unilateral and erroneous picture” (p. 65) of the original theories.

Miettinen also argued that D. A. Kolb’s work is eclectic. Consequently, the phases of the learning cycle “do not connect to each other in any organic or necessary way” (p. 61).

In addition, some scholars (e.g., Seaman et al., 2017) proposed that Kolb's model in its current form actually presents as a barrier to a clearer understanding and successful facilitation of experiential learning. Alternative models have been proposed (e.g., Bergsteiner & Avery, 2014; Miettinen, 2000; Schenck & Cruickshank, 2015). However, these alternative models also lack sound empirical foundations.

Kolb's model remains the principle and most influential model in experiential learning theory (Seaman et al., 2017). Nevertheless, the lack of empirical foundation to the model remains a foremost concern.

A key issue in interpreting the Kolb model, that remains unresolved, is the issue of interpretation of what is meant, exactly, by a "concrete experience". In this regard, Bergsteiner et al. (2010) describe Kolb's typology as "highly muddled" (p. 32).

For example, Blenkinsop, Nolan, Hunt, Stonehouse, and Telford (2016) note that many educators will not consider activities such as reading a book or sitting listening to a traditional lecture a concrete experience or part of experiential learning, whereas some educators would. This confusion seems somewhat ironic given that *experience* is, theoretically, the central and perhaps most salient feature of experiential learning theory.

Further understanding in this regard may assist the successful facilitation of and contribute to scholarly work on the concept. To address this concern, the aim of the present study was to understand how educators interpret the meaning of a

“concrete experience”. A systematic literature review of empirical studies on experiential education was conducted in a genuine attempt to examine, in experiential learning,

*Research Question 1: what constitutes a concrete experience?*

*Research Question 2: what is the nature of treatment of a concrete experience?*

## **4.3 Methodology**

An inductive thematic analysis was conducted upon data collected through a systematic and targeted literature review.

### ***4.3.1 Data collection***

The systematic literature review was conducted on the premise that there is a tendency and nature of knowledge to develop and advance over time, especially in scholarly journals. A sample of 60 journal articles (summarized in Table 3) from a total of 1323 published journals in the targeted depository were analyzed in the present study. Data were drawn initially from the most recent up-to-date empirical literature on experiential learning (starting with advance online publications).

---

**Document classification during systematic analysis:**

Authors, date of publication

***Violence/poverty prevention program:***Browne & Roll, 2016;  
Gass, Gough, Armas, & Dolcino, 2016***Middle school:***McBride, Chung, & Robertson, 2016;  
James & Williams, 2017;  
Scogin, Kruger, Jekkals, & Steinfeldt, 2017***Teacher education:***Burns, & Danyluk, 2017;  
Glazier, Bolick, & Stutts, 2017***Study/experience abroad:***Pipitone, 2018;  
Harper, 2018;  
Pipitone & Raghavan, 2017***Adult education workshop:***

Glowacki-Dudka et al., 2017

***Out-of-school learning:***Wainwright, Bingham, & Sicwebu, 2017;  
Fifolt, Morgan, & Burgess, 2018;  
Füz, 2018;  
Djonko-Moore, Leonard, Holifield, Bailey, &  
Almughyirah, 2018***Sport education:***

Newman, Alvarez, &amp; Kim, 2017

***Adventure/ outdoor therapy:***Davidson, Ewert, & Chang, 2016;  
Ritchie, Patrick, Corbould, Harper, & Oddson, 2016;  
Roberts, Stroud, Hoag, & Combs, 2016;  
Russell & Gillis, 2017;  
Karoff et al., 2017***Work experience/employment as experiential learning:***Fede, Gorman, & Cimini, 2018;  
Sonti, Campbell, Johnson, & Daftary-Steel, 2016;  
Barron, Khosa, & Jones-Bitton, 2017***Service-learning:***Bennett, Sunderland, Bartleet, & Power, 2016;  
Lovat & Clement, 2016;  
Barnes, 2016;  
Bialka & Havlik, 2016;  
Knackmuhs, Farmer, & Reynolds, 2017;  
Fisher, Sharp, & Bradley, 2017;  
Hou & Pereira, 2017;  
Larsen, 2017;  
Jia, Jung, & Ottenbreit-Leftwich, 2018;  
Ricke, 2018***Museum/art/historic sites:***Blair, 2016;  
Blenkinsop et al., 2016;  
Dorfsman & Horenczyk, 2018***Outdoor studies/outdoor******activities/wilderness/fieldwork:***Collins, Sibthorp, & Gookin, 2016;  
McGowan, 2016;  
Ribbe Jr, Cyrus, & Langan, 2016;  
Cooley, Burns, & Cumming, 2016;  
Asfeldt & Beames, 2017;  
Bailey, Johann, & Kang, 2017;  
Gress, & Hall, 2017;  
Deringer, 2017;  
Asfeldt, Hvenegaard, & Purc-Stephenson, 2018;  
Hougham, Nutter, & Graham, 2018;  
Schary & Waldron, 2017;  
Grimwood, Gordon, & Stevens, 2018;  
Smith & Segbers, 2018;  
S. Gibbons, Ebbeck, Gruno, & Battey, 2018***All girl camp:***

Whittington, Garst, Gagnon, &amp; Baughman, 2017

***Review papers:***Seaman et al., 2017;  
Munge et al., 2018***Higher education:***Coker, Heiser, Taylor, & Book, 2017;  
Breunig, 2017;  
Murphy, Wilson, & Greenberg, 2017;  
Roberts, 2018;  
Isaak, Devine, Gervich, & Gottschall, 2018;  
Jordan, Gagnon, Anderson, & Pilcher, 2018

---

**Table 3. Summary of journal articles included in the review**

The investigator reviewed the sample in a stepwise nature. Journal articles were drawn from the Journal of Experiential Education, with the premise that the editors and peer-reviewers are experts in the field of experiential learning and publish articles that are fitting with the concept.

All articles were fully read by the investigator, who sought themes in the data. The investigator systematically drew on further research published in each preceding year of publication until themes were finalized and further data did not appear to significantly further the findings and conclusions drawn.

#### ***4.3.2 Data analysis***

Data analysis software MAXQDA10 was used to code and organize the data. The 60 journal articles were uploaded in PDF format into the software in order to begin the process of data coding and identifying themes. The analysis followed six phases suggested by Braun and Clarke (2006) and exemplified by Morris (2018c), which involves the investigator (1) familiarizing themselves with the data (2) generating initial codes (3) searching for themes (4) reviewing themes (5) defining and naming themes, and (6) producing the report.

Data familiarization was made where the investigator began to read the articles in full and noted down initial ideas regarding possible themes and codes within the data. The analysis was inductive in that codes and themes were not predetermined, but defined and redefined during the analysis. Using the data analysis software, parts of sentences, whole sentences, and groups of sentences were assigned one or

more code(s). During the analysis new codes were defined and the initial analysis was revisited and data were recoded, where applicable. Themes were Identified and redefined a number of times during the analysis. A thematic map was drawn (Figure 3) to assist the organization of themes.

After completion of the coding stage, the data software program was used to extract a Microsoft Excel data document with data extracts. At times, the data organization was complicated by the overlapping of data into the themes identified at this stage of the analysis and the researcher took a “best-fit” approach to the classification of the data. The researcher made further notes about the data extracts, which assisted the process of finalizing the themes presented in this report (refer to Figure 3). Post hoc of data analysis, the themes were critically analyzed against the dimensions of D. A. Kolb’s (1984) experiential learning model (cross-references shown in Figure 3).

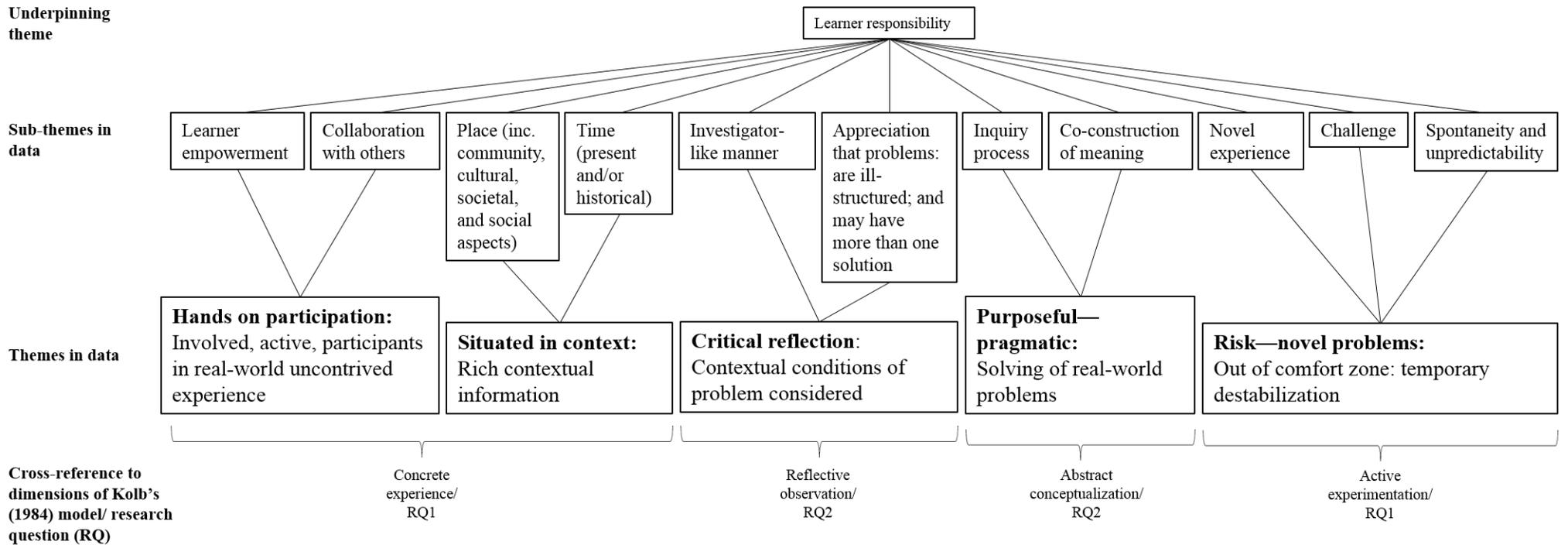


Figure 3. Thematic map

## **4.4 Results**

The results give a rich overview of the conceptualization of experiential learning in accordance with the studies analyzed. A notable observation when eyeballing Figure 3 (summary of themes in data) is that learner responsibility was the underpinning theme of the concept. This should be considered by readers when interpreting the findings presented. Five themes were identified; three relating to research question 1, two relating to research question 2 and are discussed in detail in the forthcoming sections of this report, which is followed by a proposed revision to D. A. Kolb's (1984) learning cycle.

### ***4.4.1 Research question 1: what constitutes a concrete experience?***

In experiential learning, learners are involved, active, engaged, participants in the learning process. Learner participation is central, where “learning by doing” is a founding concept (Munge et al., 2018). It is a “hands on” task-oriented process (Blair, 2016; Dorfsman & Horenczyk, 2018), which is based on direct experience (Blair, 2016; Seaman et al., 2017) that necessitates that learners are active in the process (Füz, 2018; Munge et al., 2018).

Learners are placed physically, often in collaboration with others, in rich contextual learning environments that represent in the present moment, uncontrived, experience (Karoff et al., 2017). Learners assume full or collaborative responsibility for the learning process (cf. Hou & Pereira, 2017). Physical contact seems important in the process (Füz, 2018). Jordan et al. (2018) explain that students are engaged socially, intellectually, and physically, which supports the embodied nature of experiential learning.

Coker et al. (2017) highlight that the process of experiential learning can demand a significant amount of time and effort. They refer to two dimensions, breadth and depth, which provide unique benefits: depth (time invested) is perhaps important for higher order thinking. Whereas, breadth (different types of experiences) is essential for fostering softer skills such as social competence.

Knowledge is situated in context: emphasizing place and time. Experiential learning occurs in a specified place (Smith & Segbers, 2018), in which interactions and contact with people are key (Harper, 2018). Pipitone (2018) conceptualizes place, which has both geographical and conceptual aspects (cf. Harper, 2018), as “landscapes full of sociocultural and historical meanings to be engaged with” (p. 59).

Engagement with the place is imperative in modulating participants to think more deeply and critically about the societal norms and power structures that surround them (Deringer, 2017), providing a broader life experience (Ribbe Jr et al., 2016). Pipitone and Raghavan (2017) highlight the importance of “social

interactions, engagement with local rhythms and histories, and intentional narrative activities” (p. 264) in grasping the nature of the experience.

Moreover, Smith and Segbers (2018) explain that students learn from and learn how to live with people from a variety of cultural backgrounds, which can assist learners to appreciate transculturality. This “attends to the way in which humanity has moved about the globe with single cultures now intertwined” (Smith & Segbers, 2018, p. 77).

Community engagement is central to the process (Deringer, 2017), where learners themselves are central to the context (cf. Burns & Danyluk, 2017). Blair (2016) identifies that the nature of knowledge construction is a social process (highlighting the works of Dewey, Piaget, and Vygotsky).

Furthermore, Fifolt et al. (2018) discuss the role of experiential learning in bringing a community together. This is particularly evident in service-learning (cf. Bennett et al., 2016). Pipitone (2018) discuss that to consider the learning space or place associated with the learning experience is to consider the socio-cultural and socio-spatial aspects of learning.

Blair (2016) identifies that experience is also bound in time as well as place. In this regard, appreciation of the historical aspects of knowledge may necessitate a triangulation of learning means, which could include for example historical artifacts and videos of the historical occasion. Dorfsman and Horenczyk (2018) example that “educational museums are composed of objects, documents, and narratives that together create a learning experience” (p. 1).

Learning involves risk, as experiential learning incorporates novel, challenging, experiences. Learners must respond to and accept challenge and behave with spontaneity to a new, novel, learning place or space that involves unpredictability and experimentation (Davidson et al., 2016; Füz, 2018; Karoff et al., 2017; Whittington et al., 2017).

Isaak et al. (2018) point out that risk and uncertainty is inevitable in engagement with the realworld. Experiences are unique, thus learners are unlikely to experience a uniform experience twice (Asfeldt & Beames, 2017).

In addition, experiential learning is more often than not a collaborative process. S. Gibbons et al. (2018) provide examples of collaborative challenges: balancing a group on a small object or group negotiation of a challenging obstacle course. Karoff et al. (2017) discuss that for such novel experiences learners do not have a “script”, which promotes task difficulty. In this regard, support and trust from co-actors in the learning process seem essential (cf. Dorfsman & Horenczyk, 2018).

Moreover, the educator inevitably plays a very important role in facilitating the process, such as assisting learners to remain open to trying novel solutions to problems, encouraging tenacious attitudes, and promoting the effectiveness of communication skills (Isaak et al., 2018).

Additionally, the process is often progressive in difficulty. Educators gradually increase the difficulty of the intellectual, social, emotional, and/or physical challenge (S. Gibbons et al., 2018).

#### ***4.4.2 Research question 2: what is the nature of treatment of a concrete experience?***

Critical reflection is imperative in the process, which may act as a mediator of meaning-making. The complex nature of problem-solving involved with experiential learning demands higher order thinking (Collins et al., 2016). It is not surprising, therefore, that experiential learning fosters critical thinking skills (cf. James & Williams, 2017; Scogin et al., 2017).

Reflection and analysis, which is often undertaken both alone (e.g., quiet time for journaling; Harper, 2018) and in collaboration with others, are two central features of the experiential learning process (Fede et al., 2018; Isaak et al., 2018).

In reference to the works of Dewey (1938/1963), Asfeldt et al. (2018) discuss that reflection plays a central role in the learning process and is vital for making meaning of experience (cf. Deringer, 2017). In this regard, scholars generally position with a constructivist stance toward meaning-making (e.g., Dorfsman & Horenczyk, 2018; Grimwood et al., 2018; Isaak et al., 2018).

Dialogue in collaboration with others, such as with the instructor and peers, allows further (double loop) deeper critical reflection (Asfeldt et al., 2018; Collins et al., 2016). This often demands that learners critically reflect upon their previously uncritically assimilated abstract conceptualizations, where learner self-awareness is brought about and new or revised understanding is construed (cf. Hou & Pereira, 2017).

Consequently, experiential learning is often an emotionally intense experience, as metacognitive awareness of “self” is gained. Larsen (2017) concludes that experiential learning is a “highly charged, emotional experience” (p. 279).

Learning is purposeful and demands learners to take responsibility to act pragmatically to find solutions, through an inquiry process, to specific real-world problems. Learners have clear and purposeful roles and responsibilities in the learning process (Bialka & Havlik, 2016; Fifolt et al., 2018).

Learning is problem-based, often project-based (Scogin et al., 2017). Thus, utilizes inquiry-driven learning methodologies (Munge et al., 2018). Terms associated with experiential learning include inquiry-based learning, student-directed learning, active learning, problem-based learning, service-learning, and project-based learning (Blair, 2016; Breunig, 2017).

Furthermore, Fede et al. (2018) point out that a key feature is that students are responsible for decision making throughout the process. This demands initiative and stimulates learner intellectual and emotional engagement.

Thus, there is an emphasis on learner *choice*, which Isaak et al. (2018) identify as the sine qua non of experiential learning. In sum, learners are offered autonomy and are empowered to make decisions (Barron et al., 2017; Dorfsman & Horenczyk, 2018).

Learners may negotiate solutions through creative means, the outcome of which cannot be predicted at the start of the learning process. Learners often

complete problem-solving activities in small teams. S. Gibbons et al. (2018) example that “Typically, participants work in groups of six to eight on physically challenging tasks that require elements of communication, cooperation, trust, and risk” (p. 3). Isaak et al. (2018) discuss a “sense of connection” (p. 34) as learners work collaboratively.

Learner communication is essential for the success of the process (S. Gibbons et al., 2018), as students learn with and from each other (Murphy et al., 2017), pondering solutions through dialogue (Glowacki-Dudka et al., 2017). Consequently, relationships tend to develop through the process (Fifolt et al., 2018).

The process of finding solutions to problems may inherently stipulate creative ideas and creative solutions. Thus, demanding learners to think creatively (Collins et al., 2016; Isaak et al., 2018; Jordan et al., 2018; Scogin et al., 2017).

In particular, Collins et al. (2016) point out that the process involves the solving of ill-structured problems, which is positioned as a critical competence in contemporary complex societies. They identify three important aspects: creativity, tolerance for novelty, and cognitive flexibility, in which *adaptability* is a central feature, which enables the bridging between theory and practice (Barnes, 2016).

### ***4.4.3 Revision to Kolb's model***

An aim of the present study was to understand how educators interpret the meaning of a “concrete experience”. In the studies examined, concrete experience represented highly contextualized, primary, experience that involves hands-on learner experience in uncontrived real-world situations.

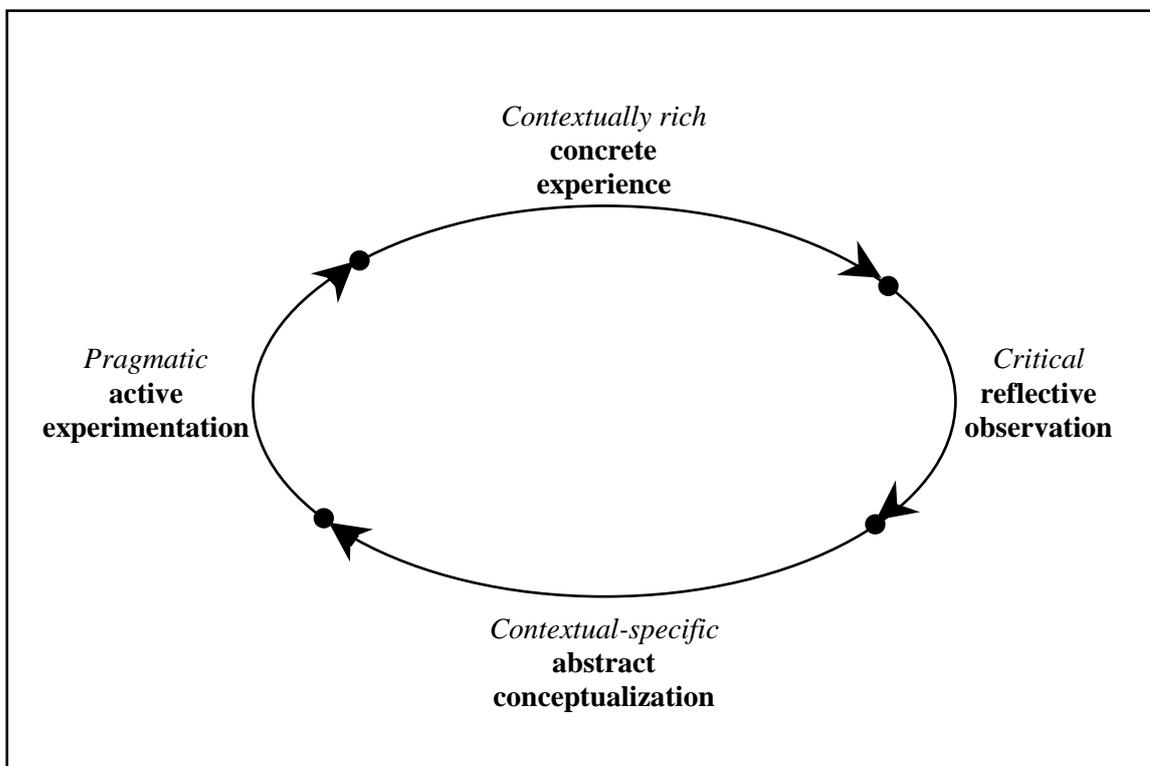
This is contrary to D. A. Kolb's (1984, 2015) own conceptualization that experiential learning refers to “the individual learning process that applied in all situations and arenas of life, a holistic process of learning” (2015, p. xx). This finding represents a clear and important difference in the conceptualization of what constitutes a concrete experience and seemingly warrants a revision to Kolb's learning cycle (Figure 4).

The present paper did provide support for four dimensions of experiential learning, as per D. A. Kolb's model (1984). The five themes identified in the analysis coupled closely with Kolb's four dimensions (refer to Figure 3), with however some very subtle but significant differences, which are summarized in Figure 4. These seemingly very important differences are explained further in the following sections.

As noted in the methodology section of the present report, the data organization was complicated by the overlapping of the data into the themes identified. In this regard, themes, which are represented in the proposed model (Figure 4), were

clearly very organically adjoined, which addresses Miettinen's (2000) concern of Kolb's model that its dimensions do not couple in a very organic or necessary way.

Moreover, the proposed model takes into account graphical syntax issues highlighted by Bergsteiner et al. (2010) that (1) in accepted modeling practice time-lines should represent activities, and (2) simplification of the model can be achieved by removing the horizontal and vertical bidirectional arrows on Kolb's model, which merely highlights orthogonal bipolar relationships between active experimentation and reflective observation, and concrete experience and abstract conceptualization (Figure 4). The proposed changes to the Kolb model are detailed in the following sections.



**Figure 4.** Experiential Learning Cycle (a revision to D. A. Kolb's 1984 model)

#### 4.4.3.1 *Concrete experience*

In the studies examined in the present report, learners were involved, active, engaged, participants in the learning process. Learners were placed physically, often in collaboration with others, in *contextually* rich learning environments that represented in the present moment, uncontrived, “hands on”, real-world primary concrete experiences (e.g., Grimwood et al., 2018; Larsen, 2017; Schary & Waldron, 2017).

The idea of a “contextually rich” concrete experience (refer to Figure 4) actually falls against Kolb’s own conceptualization of experiential learning theory, who rather viewed concrete experiences as experiences that occur in “all situations and arenas of life” (D. A. Kolb, 2015, p. xx) that come through the sensory cortex (A. Y. Kolb & Kolb, 2013).

An important distinction between the model proposed in the present paper and the Kolb model, concerning the interpretation of what is considered a concrete experience in experiential learning theory, is highlighted in one theme in the data of the present report: that knowledge is situated in context: emphasizing place (including community, cultural, societal, and/or social aspects) and time (present and/or historical).

A key aspect of the learning process concerns learners learning to appreciate that knowledge is situated in context: fluid across time and place. Again, the need for learning to be situated in context was not stipulated in D. A. Kolb’s conceptualization of experiential learning (1984, 2015).

However, the present research report found that, rather, experiential learning is conceptualized by educators and scholars as a process in which learners are immersed in learning experiences that contain the fullest contextual information possible, in which the experiential learning process takes place.

In this regard, Jarvis (2012), in particular, voiced a clear critique of D. A. Kolb's model: that it does not take into consideration the social context of learning. Again, the studies examined in the present paper highlighted that the social context of learning has a central place in experiential learning theory.

For example, in examining experiential learning from a socio-spatial perspective, Pipitone and Raghavan (2017) identified meaning-making as both a “participatory and collaborative process mediated through the body and embedded within social, spatial, and temporal realities” (p. 265) and it is through our *body's senses* that we are able to experience place.

Embodiment is a central consequence of immersing learners physically in the learning space. This is a key area for further research, which is discussed in more detail in the conclusions of the present report.

#### 4.4.3.2 *Reflective observation*

D. A. Kolb (1984, 2015) did not stress the need for “critical” reflection in his conceptualization of experiential learning: he did not differentiate between the requirement for critical or non-critical reflection during the learning process.

However, it became clear in the present study that the solving of problems in context stipulates the need for critical reflection. Indeed, some authors (e.g., Harper, 2018) acknowledged that their course of experiential learning was informed by critical theory (Brookfield, 2001; Mezirow, 1981).

In this regard, the studies analyzed in the present report highlighted that *critical* reflective observation is essential in the process (Figure 4), which acts as a mediator of meaning-making. In the process, learners must act in an investigator-like manner and test the fittingness of new or pre-existing abstract conceptualizations against the present moment real-world experience (cf. Barron et al., 2017).

That is, in order to effectively solve problems situated in a context that are posed during the learning process, considering the details of the conditions of the context seems imperative because problems are inherently context specific (cf. Langer, 2017). In the studies examined in the present paper, problems were authentic, but also generally open-ended (Scogin et al., 2017), with a purposeful aim (Breunig, 2017), where there was a need for learners to be comfortable with ambiguity and uncertainty (Ricke, 2018).

This may be understood further in terms of the Socratic concept that learners may approach the learning situation with a stance that all knowledge is provisional: learners may appreciate that they do not yet “know” and that solutions to problems in a real-world context are context specific (cf. Scott, 2018). Through experiential learning, learners may begin to appreciate the fluidity of contextual-conditions across place and time and become comfortable with change and uncertainty (cf. Langer, 2017).

Indeed, in remodeling Dewey’s theory on experience and reflective thought and action, Miettinen (2000) interprets Dewey’s ideas in a different way to D. A. Kolb: depicting a process of learning that includes defining the problem and studying the conditions of the problem situation in order to formulate a working hypothesis. The model presented by Miettinen (2000) is seemingly complementary to the model proposed in the present paper and may, in addition, assist readers to understand the meaning of experiential learning.

#### *4.4.3.3 Abstract conceptualization*

Resultant from critical reflection on contextually rich concrete experience, the present model proposes that abstract conceptualizations may construe critically, that is, contextual-specific (Figure 4).

Again, D. A. Kolb (1984, 2015) did not make the distinction between the formation of uncritically or critically assimilated abstract conceptualizations.

Conversely, the proposed model predicts that in order for the model to operate as a spiral, with increasing complexity as a human develops and matures, *contextual-specific* abstract conceptualizations are mandatory.

A key aspect of this concerns learners learning to appreciate that the conditions of the context may change across time and place and therefore all knowledge is provisional and needs testing in context. This could be conceptualized as a “working hypothesis” (as per Dewey’s ideas, described in Miettinen, 2000), which when passed through active experimentation in new concrete experiences they become, potentially, higher order concepts.

The importance of appreciating that abstract conceptualizations construe as contextual-specific in experiential learning theory (critically assimilated), rather than contextual-indifferent (uncritically assimilated), is found in critical theory. Mezirow’s (1978, 1981, 1991) work highlights that when abstract conceptualizations are uncritically assimilated, we get “caught in our own history and are reliving it” (1978, p. 101; readers are encouraged to read further in this regard: Mezirow, 1991). This form of learning may actually limit a person’s growth potential toward becoming the person they could be (cf. Arnold, 2017).

In this regard, it is possible to plot a very different alternative learning cycle which involves (1) contextually-poor experience (2) uncritical reflective observation (3) contextual-indifferent abstract conceptualization, and (4) reinforcing/repeating active experimentation. Rather than a spiral, this cycle would represent a circle, where actions are repeated and would, rather, complement behaviorist epistemology (cf. Murtonen et al., 2017).

Indeed, it seems important to point out that experiential learning theory does not capture all forms of human learning; and probably no learning model will ever do so (Merriam et al., 2007).

#### 4.4.3.4 *Active experimentation*

A key potential benefit of *contextual-specific* abstract conceptualizations is that they may enable learners to act pragmatically – to base their actions on their concrete experiences – in active experimentation with an encounter with a new concrete experience. In other words, this involves *testing* the fittingness of abstract conceptualizations formulated against new concrete experiences.

Indeed, Roberts (2018) explains that a central tenet of experiential learning is found in the etymology of the word “experience”, which means “to test”, or “to risk” in Latin. In this regard, the process integrally involves risk, as experiential learning incorporates novel, challenging, experiences. Learners must respond to, accept the challenge of, and behave with spontaneity to the unpredictability that is inherent in the process.

It should be considered that experiential learning is a process that deliberately places learners out of their comfort zones and, consequently, learners may learn to appreciate that conditions change, sometimes very discretely, across time and place. Bailey et al. (2017) discuss that novelty and challenge, inherent in

experiential learning, facilitates the process of inducing cognitive dissonance, as learners are challenged and “destabilized” (cf. Glazier et al., 2017; McGowan, 2016).

It was clear in the analysis of the present paper that experiential learning is a process in which the concrete experiences “push the edges of what they [the learners] are familiar with” (Grimwood et al., 2018, p. 9). Wainwright et al. (2017) discuss that immersion in a new place or space is one aspect that induces unfamiliarity.

D. A. Kolb (1984) did acknowledge that active experimentation involves utilizing “theories to make decisions and solve problems” (p. 30). However, the model proposed in the present paper (Figure 2) makes the distinction, which was not made by D. A. Kolb (1984, 2015), that because, in the real-world, problems are inherently contextual-specific and ill-structured learners must become accustomed to considering the conditions in which problems are situated; in order to facilitate learners to progress successfully, in a spiral of learning, toward maturation and growth.

## **4.5 Conclusions and future works**

The present study provides a rich insight into how educators may conceptualize and facilitate the concept of experiential learning (refer to Figure 3 for a summary of themes). The findings warranted subtle but key adjustments to D. A. Kolb’s

(1984, 2015) learning cycle (Figure 4), which are proposed as important considerations in further works on experiential learning theory.

The revision to Kolb's model proposed addresses many key critiques that: there is a shortage of a sound empirical foundation to the model (e.g., Coffield et al., 2004; Miettinen, 2000), the dimensions of the model do not connect to each other cohesively (e.g., Jarvis, 2012; Miettinen, 2000), and the model typology lacks clarity (Bergsteiner et al., 2010).

There were some weaknesses of the present study. In particular, although the systematic nature of the study allowed a rich insight into how educators conceptualize and facilitate experiential learning in practice, most studies reviewed were limited to contexts that represented out-of-classroom experience.

There may be multiple reasons for this, including that physically getting out of the classroom may assist to facilitate experiential learning. In this case, examining the factors that encourage or discourage out-of-classroom experience seems essential. Moreover, publication bias toward what is seen as experiential learning cannot be ruled out.

Furthermore, many of the studies analyzed were conducted in North America. This is an important consideration because it is possible that there are differential conceptualizations of experiential learning in different contexts. Moreover, studying the factors that limit the facilitation of experiential learning was not an aim of the present study but is an important area for future research.

Empirical testing of the proposed model is required, with potentially further revisions. Further studies may focus to address other critiques, which was not

possible in the present research; especially concerns of further modeling issues, including whether the arrows should be bidirectional rather than unidirectional and whether concrete experience should be assigned as the starting point (cf. Jarvis, 2012).

Furthermore, the complexity of the experiential learning process (as depicted in Figure 3) should not be taken for granted. In this regard, further research could consider the facilitation of experiential learning from an educator's perspective, including how to train educator competence to facilitate experiential learning.

Moreover, another key area for further research concerns how over time one's learning spiral may become more complex, as a human develops and matures. In this regard, some scholars in the field of experiential learning have realized the need to appreciate complementary knowledge in the field of cognitive sciences (e.g., Schenck & Cruickshank, 2015).

Specifically, as identified in the present paper, embodiment that accompanies the experiential learning process represents a very important focus for further studies. Embodiment is a relatively underdeveloped area of research in educational and cognitive sciences (refer to Dijkerman & Lenggenhager, 2018; Kiefer & Trumpp, 2012, for reviews).

Further studies should appreciate the recent findings from cognitive sciences that suggests that embodiment is an essential part of fostering a learner's deep conceptual understanding. In particular, in a review article Kiefer and Trumpp (2012) discuss that over the last decades scholars wrongly assumed that when perceptual and motor systems coded knowledge in abstract-symbolic format,

modality-specific sensory-motor information was lost. Rather, there is surmounting evidence that cognition is, vitally, based on *reinstatements* of sensing (using the relevant sensory organs), and/or feeling/acting (using the motor/proprioceptive organs) that accompanied the original experience.

Thus, when learners are immersed, *with their body*, in a contextually rich experience, sensory-motor information becomes embodied in memory traces. It is thought that embodiment is essential for deep conceptual understanding and “for human cognition to develop at the highest level” (Kiefer & Trumpp, 2012, p. 19). In other words, potentially, to secure deep and meaningful learning the body cannot be decoupled from the mind during the process of learning.

Indeed, in some educational contexts, such as in the vocational education and training of adults in the Netherlands, there has been a shift away from domain-specific knowledge taught in classrooms (mind work, no body work) exactly because it has been realized that such education does not foster learners’ deep conceptual understanding of workplace knowledge and skills (cf. Biemans et al., 2004; Descy & Tessaring, 2002; Jossberger et al., 2010, 2018).

In this regard, experiential learning is a particular form of learning that, in addition to the many other possible learner benefits gained from the process detailed in the present paper, has much potential to foster learners’ deep conceptual understanding. Experiential learning is potentially applicable, but to date perhaps hugely unrealized, in a wide variety of educational contexts.

## **Chapter 5**

### **Final conclusions and future works**

## 5.1 Final conclusions and further research directions

Self-directed learning was defined as a process in which a learner controls their learning objectives and means in order to meet personal goals or the perceived demands of their personal context, where the learner(s) themselves represent a central and salient feature of their differentiated context: representing a learning process in which a learner's learning means and objectives are highly individual (cf. Chapter 1).

The author positioned self-directed learning as a *critical* competence for adults living in our modern world, where social contextual conditions are changing rapidly (cf. Chapters 2 and 3). In this regard, fostering learners' self-directed learning competence should represent a foremost endeavor in many formal educational contexts. Self-directed learning competence was defined as the ability of a learner to successfully and efficiently undertake self-directed learning.

It was outlined that this report may be useful for a multitude of educational stakeholders including educators, curriculum developers, managers, and government policy-makers, but also personnel concerned with human resource development.

However, what is highlighted in this thesis is the complexity of the self-directed learning construct. Multiple dimensions of self-directed learning and the underpinning foundational positions are discussed in detail in Chapter 1 of this

report. Previous scholarly conceptualizations and models of self-directed learning have emphasized one or more of three dimensions: (1) the process of learning—the management of learning tasks (2) personality characteristics of the learner, and (3) factors within the learner’s context that influence the possibility for learners to undertake self-directed learning. Chapter 1 outlines that self-directed learning positions with humanistic philosophy and constructivist epistemology. The pragmatic life-centered aspect of the self-directed learning process is emphasized in Chapters 2, 3, and 4, which represents a key further research direction.

In Chapter 1, the author discussed the need to consider the cognitive aspect of the self-directed learning construct. This includes self-regulatory processes, but also how knowledge is construed during the learning process. In this regard, Chapters 3 and 4 of the present thesis, in part, addresses this concern. In particular, in Chapter 3 the present author identifies that perhaps self-regulation demonstrated in competent self-directed learners is not equivocal to the self-regulatory processes required to effectively learn from a teacher-directed learning process. Again, understanding how self-regulatory demands differ in self-directed learning in comparison to teacher-directed learning seems an important further research direction, especially concerning furthering our understanding of the didactics involved in fostering learners’ skills that are necessary to successfully and efficiently undertake self-directed learning.

In considering the pragmatic dimension of the self-directed learning process, the nature of how a learner learns seems a vital consideration of further research on self-directed learning. Specifically, building upon the theoretical positions and

model of self-directed learning proposed in Chapter 3 (cf. Figure 2), it is discussed in Chapter 4 that to enable the maintenance of motivation for self-directed learning, or to promote a spiral in learner growth, it seems essential to consider (1) the nature of a concrete experience during the learning process (2) the nature of how learners reflect on a concrete experience (3) the nature of abstract conceptualizations that form, and (4) whether these knowledge constructions enable the self-directed learner to be pragmatic in active experimentation.

Importantly, it is proposed in Chapter 4 that these aspects of the learning process are essential to appreciate when considering the types of educational experiences that enable a spiral in personal development of a learner, rather than or compared to a learning process that promotes learners to move in circles, or sideways regarding their personal development: representing an exciting direction for further research on self-directed learning. In the following sections, the key findings and further research directions outlined in Chapters 2, 3, and 4 are summarized.

### ***5.1.1 Study 1***

Chapter 2 presents an empirical case study that examines the nature of teaching–learning transactions that facilitate self-directed learning in vocational education and training of young adults in England. It addresses in part the concern that fostering the skills necessary for self-directed learning is an important endeavor of vocational education and training in many educational contexts internationally. To

the knowledge of the present author, this was the first study to examine an educational system holistically in order to gauge whether in practice self-directed learning is facilitated in the formal education of young adult learners or not, in a specified context.

The study was an exploratory thematic qualitative analysis of inspectors' comments within general Further Education college Ofsted inspection reports that was conducted to investigate the balance of control of the learning process between teacher and learner within vocational education and training of young adults in England. The findings of this report exemplify how an effective balance of control of directing the learning process may be realized between teacher and learner in vocational education and training.

The report identifies the need to consider the hierarchical order of control issues in regards to directing the objectives of learning. For instance, balancing control of directing progression pathways between learners' interests and economic demands seems imperative in any given vocational education and training setting internationally. The importance of higher order planning of progression pathways was outlined, including that students' decisions regarding their progression pathways is restricted to the curriculum offering within a given educational context. These macro-level considerations should be taken into account when interpreting this report.

In addition, the chapter identifies the need to consider the modulating effect of contextual factors upon the transactional balance of control of learning between teacher and learner. For instance, the differences discussed in this report between

outstanding and inadequate institutions emphasize the impact of the individual institution, including the teacher, in allowing more or less learner self-direction.

This study reports that “inadequate” vocational education provision in the examined educational context reflected teacher-directed learning where teachers directed the objectives and means of learning, reflective of traditional or more didactical approaches. This represents a real concern, regarding the small but significant proportion of FE colleges in England to which this conclusion applies. A key finding of this report was that outstanding vocational education and training provision in England reflected a “mid-way” between teacher-directed learning and self-directed learning. This balance of control of learning between teacher and learner represented a “collaborative relationship” between teacher and learner.

The report provides some clues regarding how the skills for self-directed learning may be fostered in vocational education and training. For instance, students were encouraged to take ownership for setting goals, but teachers and support staff provided guidance toward setting challenging but achievable goals. During the undertaking of learning, teachers guided learning activities, providing a framework for learning. But, at the same time, such tasks enabled a degree of flexibility for students to direct the objectives and means of learning. For example, portfolios were used to facilitate this possibility. Furthermore, it appeared that learner access to quality resources facilitated independent and group research. Additionally, timely and quality support enabled learners to overcome barriers to progressing independently. Feedback appeared to be a key factor in enabling

progression of independent learning. Feedback in “outstanding” provision was threefold: self-assessment, peer assessment and teacher assessment.

The ability to apply theory to practice is of particular importance in vocational education and training. Thus, as well as the “process” of learning, it was highlighted that consideration should be given to the resultant “learning processing”—the cognitive aspect of learning. In this study, one important factor that differentiated outstanding provision was the role of teachers in arranging learning opportunities that enabled students to place knowledge or skills in their “real world”; thus, learners were enabled to apply what they were learning to their particular vocation.

In sum, the author reported a clear difference between outstanding and inadequate provision in this educational context. Inadequate provision was overwhelmingly teacher-directed. Outstanding provision reflected a collaborative relationship between teacher and learner in directing the learning process, despite the Ofsted inspectorate body framework not explicitly identifying the need for learner involvement in directing the learning process. The chapter offers insight into the understanding of how an effective balance of control of learning between teacher and learner may be realized in vocational education and training settings and highlights the need to consider the modulating role of contextual factors.

In light of the limitations of our present understanding of the cognitive aspect of the process of self-directed learning and concerning the further research directions outlined in Chapter 2, Chapter 3 addresses, in part, the concern that

fostering adult learners' competence to adapt appropriately to our ever-changing world is a primary objective of adult education.

### ***5.1.2 Study 2***

Chapter 3 is a theoretical study, which proposes that the consideration of modes of learning (instruction, performance, and inquiry), a concept that originated from the typology of Houle (1980), could assist in the design of adult education that facilitates self-directed learning and enables learners to think and perform adaptively. Previous to this study, no study has reached beyond the typology of Houle, especially concerning the potential of using modes of learning in the design of adult education. The author identifies that an apparent oversight in adult learning theory was the foremost importance of the consideration of whether inquiry is included in the learning process: its inclusion potentially differentiates the purpose of instruction, the nature of learners' performance, and the underlying epistemological positioning.

To redress this concern, two models of modes of learning are proposed and contrasted in Chapter 3. The reinforcing model of modes of learning (instruction, performance, without inquiry) promotes teacher-directed learning. A key consequence of employing this model in adult education is that learners may become accustomed to habitually reinforcing patterns of perceiving, thinking, judging, feeling, and acting—performance that may be rather inflexible and represented by a distinct lack of a perceived need to adapt to social contextual

changes: a lack of motivation for self-directed learning. Rather, the adapting model of modes of learning (instruction, performance, with inquiry) may facilitate learners to be adaptive in their performance—by encouraging an enhanced learner sensitivity toward changing social contextual conditions: potentially enhancing learners' motivation for self-directed learning.

The study identifies that in order to implement the adapting model of modes of learning in practice may require an alternative didactical framework. In this regard, it is discussed that fostering learners' skill to self-employ such a didactical framework is seemingly critical for fostering self-directed learning competence.

In sum, in Chapter 3, two models of modes of learning (Figures 1 and 2) are proposed and contrasted, which could be useful for educators to guide the design of adult education. When educators employ the reinforcing model of modes of learning, a teacher-directed learning process is promoted. Rather, the adapting model of modes of learning may assist educators to design education that encourages learners to become adaptive in their performance. Positioning with constructivist epistemology, an inquiry project drives the learning process. It is discussed that critical thinking is fundamental in facilitating successful learning outcomes. Learners are encouraged to appreciate that knowledge is not secure across context or time, encouraging an enhanced learner sensitivity toward changing social contextual conditions—potentially a pivotal mediator for the initiation and maintenance of motivation for self-directed learning.

Finally, it is important to point out that a third model of modes of learning was not considered in the chapter—the interaction of inquiry and performance, without

instruction—which rather represents a process of discovery or play. Further research should not discount the possible value and importance of a discovery or play model of modes of learning, especially in terms of childhood cognitive development.

The adapting model of modes of learning (Figure 2) could provide a useful framework for further empirical research, especially concerning the understanding of how to facilitate self-directed learning in formal educational settings. Case studies and longitudinal studies may be particularly useful for examining the nature of teaching–learning transactions in differential contexts. Moreover, as per the conclusions of Chapter 2, it is discussed that it is possible that there are discrete patterns in the balance of control of learning between teacher and learner in specific vocations.

### ***5.1.3 Study 3***

In line with the further research directions highlighted in Chapter 3, concerning the need to consider the nature and treatment of educational experiences that are conducive to learner growth and development, Chapter 4 presents a systematic review of the experiential learning theory; a theory that perhaps cannot be uncoupled from self-directed learning theory, especially in regards to understanding the cognitive aspect of self-directed learning, which presents as an important direction for further research on self-directed learning.

In this regard, the report identifies that a key issue in interpreting D. A. Kolb's 1984 Experiential Learning Cycle model concerns a lack of clarity regarding what constitutes a concrete experience, exactly. A systematic literature review was conducted in order to examine: what constitutes a concrete experience and what is the nature of treatment of a concrete experience in experiential learning?

In the empirical studies examined in Chapter 4, learners were involved, active, engaged, participants in the learning process. Learners were placed physically, often in collaboration with others, in contextually rich learning environments that represented in the moment, uncontrived, "hands on", real-world primary concrete experiences.

The idea of a "contextually rich" concrete experience (refer to Figure 4) actually falls against D. A. Kolb's (1984, 2015) own conceptualization of experiential learning theory, who rather viewed concrete experience as to encompass all experiences that occur in all situations. An important difference concerning the interpretation of what is considered a concrete experience in experiential learning theory was highlighted in one theme in the data of the study: that knowledge is situated in context: emphasizing place and time.

Moreover, the study found that, rather, experiential learning is conceptualized by educators and scholars as a process in which learners are immersed in learning experiences that contain the fullest contextual information possible, in which the experiential learning process takes place. The study also highlights that the social context of learning has a central place in experiential learning theory. Embodiment

is a central consequence of immersing learners physically in the learning space, which represents a key area for further research.

Moreover, it was clear in the present study that the solving of problems in context stipulates the need for critical reflection. In this regard, the study concluded that critical reflective observation is essential in the process (Figure 4), which acts as a mediator of meaning making.

In order to effectively solve problems situated in context that are posed during the learning process, considering the details of the conditions of the context seems imperative because solutions to problems are inherently context specific. In the studies examined in Chapter 4, problems were authentic, but also generally open-ended, with a purposeful aim, where there was a need for learners to be comfortable with ambiguity and uncertainty.

It was discussed that this may be understood further in terms of the Socratic concept that learners may approach the learning situation with a stance that all knowledge is provisional: where learners become to appreciate that they do not yet “know” and that solutions to problems in a real-world context are context specific.

It is discussed that a key consequence of learners undertaking critical reflection on contextually rich concrete experience is that abstract conceptualizations may construe critically, that is, contextual-specific (Figure 4). The proposed model predicts that in order for the model to operate as a spiral, with increasing complexity as humans develop and mature, contextual-specific abstract conceptualizations are mandatory.

A key aspect of this concerns learners becoming to appreciate that the conditions of the context may change across time and place and therefore all knowledge is provisional and needs testing in context. This could be conceptualized as a “working hypothesis”, which when passed through active experimentation in new concrete experiences they become, potentially, higher order concepts.

The study proposes that a key consequence of contextual-specific abstract conceptualizations is that they may enable learners to act pragmatically—to base their actions on their concrete experiences—in active experimentation with an encounter with a new concrete experience. In other words, this involves testing the fittingness of abstract conceptualizations formulated against new concrete experiences. In this regard, the process integrally involves risk.

It should be considered that experiential learning is a process that deliberately places learners out of their comfort zones and, consequently, learners may become to appreciate that conditions change, sometimes very discretely, across time and place.

The model proposed in this chapter may be considered in further research that concerns the nature of treatment of an educational experience intended to facilitate learner growth, a foremost concern of self-directed learning theory, which positions with humanistic philosophical assumptions.

Moreover, it is discussed that empirical testing of the proposed model is required, with potentially further revisions. The chapter identifies that further studies may focus to address other critiques, which was not possible in the study.

Furthermore, it was suggested that the complexity of the experiential learning process as depicted in Figure 3 should not be taken for granted. In this regard, further research could consider facilitation of experiential learning from an educator's perspective, including how to train educator competence to facilitate experiential learning.

In addition, another key area for further research concerns how over time one's learning spiral may become more complex, as a human develops and matures. Further studies should appreciate the recent findings from cognitive science that suggests that embodiment is an essential part of fostering a learner's deep conceptual understanding. The author highlights in this chapter that, potentially, to secure deep and meaningful learning the body cannot be decoupled from the mind during the process of learning. This falls against traditional conceptualizations of formal education that involve mind work (no bodywork), inside walls of classrooms, away from the context in which solutions to problems are generated.

To conclude, this thesis highlights the need to consider the *pragmatic* dimension of the self-directed learning construct. Further studies should consider that self-directed learning in adulthood often represents a means to solving or resolving life-centered problems in context. In order for a learner to fully understand problems and evaluate solutions generated against problems in context, and to enable a spiral in personal development, it seems advantageous that learners are immersed with their body in hands on learning environments.

## References

- Abele, A. E., & Wiese, B. S. (2008). The nomological network of self-management strategies and career success. *Journal of Occupational and Organizational Psychology, 81*, 733-749. doi:10.1348/096317907X256726
- Alharbi, H. A. (2018). Readiness for self-directed learning: How bridging and traditional nursing students differs? *Nurse Education Today, 61*, 231-234. doi:10.1016/j.nedt.2017.12.002
- Alston, G. D., Clegg, T. E., Clodfelter, R. J. Jr., Drye, K. C., Farrer, J. V., Gould, D., . . . Ray, S. L. (2016). Reflections from graduate adult learners about service learning. *Adult Learning, 27*, 175-177. doi:10.1177/1045159515615844
- Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., . . . Wittrock, M. C. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives, abridged edition*. White Plains, NY: Longman.
- Arnold, R. (2015). *How to teach without instructing: 29 smart rules for educators*. Lanham, MD: Rowman & Littlefield.

- Arnold, R. (2017). *The power of personal mastery: Continual improvement for school leaders and students*. Lanham, MD: Rowman & Littlefield.
- Arnold, R. (2019). *Escape from teaching*. Lanham, MD: Rowman & Littlefield.
- Arnold, R. (in press). *Fake news in science and education: Leaving weak thinking behind*. Lanham, MD: Rowman & Littlefield.
- Arnold, R., Nolda, S., & Nuissl von Rein, E. (Eds.) (2010). *Wörterbuch erwachsenenbildung* [Dictionary of adult education]. Tübingen: UTB.
- Asfeldt, M., & Beames, S. (2017). Trusting the journey: Embracing the unpredictable and difficult to measure nature of wilderness educational expeditions. *Journal of Experiential Education*, 40, 72-86. doi:10.1177/1053825916676101
- Asfeldt, M., Hvenegaard, G., & Purc-Stephenson, R. (2018). Group writing, reflection, and discovery: A model for enhancing learning on wilderness educational expeditions. *Journal of Experiential Education*, 41, 241–260. doi:10.1177/1053825917736330
- Association of Colleges. (2017). *College key facts 2016/17*. Association of Colleges. Retrieved from <https://indd.adobe.com/view/2ecfd04e-047c-49cc-91d3-18f9bdb9ca73>
- Bagnall, R. G., & Hodge, S. (2018). Contemporary adult and lifelong education and learning: An epistemological analysis. In M. Milana, S. Webb, J. Holford, R. Walker, & P. Jarvis (Eds.), *Palgrave international handbook*

*on adult and lifelong education and learning* (pp. 13-34). Basingstoke, UK: Palgrave Macmillan.

Bailey, A. W., Johann, J., & Kang, H. K. (2017). Cognitive and physiological impacts of adventure activities: Beyond self-report data. *Journal of Experiential Education, 40*, 153-169. doi:10.1177/1053825917701250

Barnes, M. E. (2016). The student as teacher educator in service-learning. *Journal of Experiential Education, 39*, 238-253. doi:10.1177/1053825916643831

Barnes, S.-A., Brown, A., & Warhurst, C. (2016). *Education as the underpinning system: Understanding the propensity for learning across the lifetime*. London, England: Foresight, Government Office for Science. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/590419/skills-lifelong-learning-learning-across-the-lifetime.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/590419/skills-lifelong-learning-learning-across-the-lifetime.pdf)

Barron, D., Khosa, D., & Jones-Bitton, A. (2017). Experiential learning in primary care: Impact on veterinary students' communication confidence. *Journal of Experiential Education, 40*, 349-365. doi:10.1177/1053825917710038

Barry, M., & Egan, A. (2018). An adult learner's learning style should inform but not limit educational choices. *International Review of Education, 64*, 31-42. doi:10.1007/s11159-017-9694-6

Bathmaker, A.-M. (2017). Post-secondary education and training, new vocational and hybrid pathways and questions of equity, inequality and social mobility:

introduction to the special issue. *Journal of Vocational Education & Training*, 69, 1-9. doi:10.1080/13636820.2017.1304680

Baxter, J., & Clarke, J. (2013). Farewell to the tick box inspector? Ofsted and the changing regime of school inspection in England. *Oxford Review of Education*, 39, 702-718. doi:10.1080/03054985.2013.846852

Beckers, J., Dolmans, D. H., Knapen, M. M., & van Merriënboer, J. J. (2018). Walking the tightrope with an e-portfolio: imbalance between support and autonomy hampers self-directed learning. *Journal of Vocational Education & Training*. Advance online publication. doi:10.1080/13636820.2018.1481448

Beckers, J., Dolmans, D., & van Merriënboer, J. (2016). e-Portfolios enhancing students' self-directed learning: A systematic review of influencing factors. *Australasian Journal of Educational Technology*, 32(2), 32-46. doi:10.14742/ajet.2528

Beese, E. B., & Watson, S. L. (2016). Development of learner self-direction over the course of a home education. *International Journal of Self-Directed Learning*, 13(2), 15-37. Retrieved from <https://www.sdlglobal.com/journals>

Bennett, D., Sunderland, N., Bartleet, B. L., & Power, A. (2016). Implementing and sustaining higher education service-learning initiatives: Revisiting Young et al.'s organizational tactics. *Journal of Experiential Education*, 39, 145-163. doi:10.1177/1053825916629987

- Bergsteiner, H., & Avery, G. C. (2014). The twin-cycle experiential learning model: reconceptualising Kolb's theory. *Studies in Continuing Education*, 36, 257-274. doi:10.1080/0158037X.2014.904782
- Bergsteiner, H., Avery, G. C., & Neumann, R. (2010). Kolb's experiential learning model: critique from a modelling perspective. *Studies in Continuing Education*, 32, 29-46. doi:10.1080/01580370903534355
- Bialka, C. S., & Havlik, S. A. (2016). Partners in learning: Exploring two transformative university and high school service-learning partnerships. *Journal of Experiential Education*, 39, 220-237. doi:10.1177/1053825916640539
- Biemans, H., Nieuwenhuis, L., Poell, R., Mulder, M., & Wesselink, R. (2004). Competence-based VET in the Netherlands: background and pitfalls. *Journal of Vocational Education & Training*, 56, 523-538. doi:10.1080/13636820400200268
- Blair, D. J. (2016). Experiential learning for teacher professional development at historic sites. *Journal of Experiential Education*, 39, 130-144. doi:10.1177/1053825916629164
- Blenkinsop, S., Nolan, C., Hunt, J., Stonehouse, P., & Telford, J. (2016). The lecture as experiential education: The cucumber in 17th-century Flemish art. *Journal of Experiential Education*, 39, 101-114. doi:10.1177/1053825916641434

- Bolhuis, S., & Voeten, M. J. (2001). Toward self-directed learning in secondary schools: What do teachers do? *Teaching and Teacher Education, 17*, 837-855. doi:10.1016/S0742-051X(01)00034-8
- Boyer, S. L., Edmondson, D. R., Artis, A. B., & Fleming, D. (2014). Self-directed learning: A tool for lifelong learning. *Journal of Marketing Education, 36*, 20-32. doi:10.1177/0273475313494010
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77-101. doi:10.1191/1478088706qp063oa
- Breunig, M. (2017). Experientially learning and teaching in a student-directed classroom. *Journal of Experiential Education, 40*, 213-230. doi:10.1177/1053825917690870
- Brockett, R. (1983). Self-directed learning and the hard-to-reach adult. *Lifelong learning: The Adult Years, 6*(8), 16-18.
- Brockett, R. G., & Hiemstra, R. (1991). *Self-direction in adult learning: Perspectives on theory, research, and practice. Routledge series on theory and practice of adult education in North America*. New York, NY: Routledge.
- Brookfield, S. D. (1984). The contribution of Eduard Lindeman to the development of theory and philosophy in adult education. *Adult Education Quarterly, 34*, 185-196. doi:10.1177/0001848184034004001

- Brookfield, S. D. (1986). *Understanding and facilitating adult learning: A comprehensive analysis of principles and effective practices*. Buckingham, UK: McGraw-Hill.
- Brookfield, S. D. (1988). Conceptual, methodological and practical ambiguities in self-directed learning. In H.B Long and Associates, *Self-directed learning: Application and theory* (pp. 1-10). Athens, GA: The University of Georgia.
- Brookfield, S. D. (2001). Repositioning ideology critique in a critical theory of adult learning. *Adult Education Quarterly*, 52, 7-22. doi:10.1177/07417130122087368
- Brooks, A. K., & Edwards, K. (2013). *Consulting in uncertainty: The power of inquiry*. New York, NY: Routledge.
- Browne, L. P., & Roll, S. (2016). Toward a more just approach to poverty simulations. *Journal of Experiential Education*, 39, 254-268. doi:10.1177/1053825916643832
- Bruner, J. S. (1966). *Toward a theory of instruction*. New York, NY: Harvard University Press.
- Bruner, J. S. (1973). *The relevance of education*. New York, NY: W. W Norton.
- Burns, A., & Danyluk, P. (2017). Applying Kolb's model to a nontraditional preservice teaching practicum. *Journal of Experiential Education*, 40, 249-263. doi:10.1177/1053825917696832
- Caffarella, R. S. (1993). Self-directed learning. *New directions for Adult and Continuing Education*, 57, 25-35. doi:10.1002/ace.36719935705

- Candy, P. C. (1991). *Self-direction for lifelong learning. A comprehensive guide to theory and practice*. San Francisco, CA: Jossey-Bass.
- Cervero, R. M., & Dimmock, K. H. (1987). A factor analytic test of Houle's typology of professionals' modes of learning. *Adult Education Quarterly*, 37, 125-139. doi:10.1177/0001848187037003001
- Coffield, F., Moseley, D., Hall, E., & Ecclestone, K. (2004). *Learning styles and pedagogy in post-16 learning. A systematic and critical review*. London: Learning and Skills Research Centre. Retrieved from <http://www.leerbeleving.nl/wp-content/uploads/2011/09/learning-styles.pdf>
- Coker, J. S., Heiser, E., Taylor, L., & Book, C. (2017). Impacts of experiential learning depth and breadth on student outcomes. *Journal of Experiential Education*, 40, 5-23. doi:10.1177/1053825916678265
- Collins, R. H., Sibthorp, J., & Gookin, J. (2016). Developing ill-structured problem-solving skills through wilderness education. *Journal of Experiential Education*, 39, 179-195. doi:10.1177/1053825916639611
- Cooley, S. J., Burns, V. E., & Cumming, J. (2016). Using outdoor adventure education to develop students' groupwork skills: A quantitative exploration of reaction and learning. *Journal of Experiential Education*, 39, 329-354. doi:10.1177/1053825916668899
- Crant, J. M. (2000). Proactive behavior in organizations. *Journal of Management*, 26, 435-462. doi:10.1177/014920630002600304

- Cranton, P. (1992). *Working with adult learners*. Middletown, OH: Wall & Emerson.
- Craven, B. M., & Tooley, J. N. (2016). Safeguarding children: Ofsted and regulatory failure. *Economic Affairs*, 36, 64-79. doi:10.1111/ecaf.12167.
- Cross, K. P. (1981). *Adults as learners: Increasing participation and facilitating learning*. San Francisco, CA: Jossey-Bass.
- Dauids, K., Güllich, A., Shuttleworth, R., & Araújo, D. (2017). Understanding environmental and task constraints on talent development: Analysis of micro-structure of practice and macro-structure of developmental histories. In J. Baker, S. Cobley, J. Schorer, & N. Wattie (Eds.), *The Routledge handbook of talent identification and development* (pp. 192-206). New York, NY: Routledge.
- Davidson, C., Ewert, A., & Chang, Y. (2016). Multiple methods for identifying outcomes of a high challenge adventure activity. *Journal of Experiential Education*, 39, 164-178. doi:10.1177/1053825916634116
- Deringer, S. A. (2017). Mindful place-based education: Mapping the literature. *Journal of Experiential Education*, 40, 333-348. doi:10.1177/1053825917716694
- Descy, P. & Tessaring, M. (2002). *Training and learning for competence. Second Report on vocational training research in Europe*. Cedefop Reference series. Luxembourg: EUR-OP. Retrieved from [www.cedefop.europa.eu/files/4009\\_en.pdf](http://www.cedefop.europa.eu/files/4009_en.pdf)

- Dewey, J. (1908). What does pragmatism mean by practical? *The Journal of Philosophy, Psychology and Scientific Methods*, 5, 85-99. Retrieved from <https://www.jstor.org/journal/jphilpsycsciemet>
- Dewey, J. (1963). *Experience and education*. New York, NY: Collier Books. (Original work published 1938)
- Dewey, J. (2010). *The school and society and the child and the curriculum*. Chicago, IL: The University of Chicago Press. (Original work published 1915)
- Dewey, J. (2013). *Essays in experimental logic*. Mineola, NY: Dover Publications. (Original work published 1916)
- Dijkerman, C., & Lenggenhager, B. (2018). The body and cognition: The relation between body representations and higher level cognitive and social processes. *Cortex*, 104, 133-139. doi:10.1016/j.cortex.2018.06.001
- Djonko-Moore, C. M., Leonard, J., Holifield, Q., Bailey, E. B., & Almughyirah, S. M. (2018). Using culturally relevant experiential education to enhance urban children's knowledge and engagement in science. *Journal of Experiential Education*, 41, 137-153. doi:10.1177/1053825917742164
- Dorfsman, M. I., & Horenczyk, G. (2018). Educational approaches and contexts in the development of a heritage museum. *Journal of Experiential Education*, 41, 170-186. doi:10.1177/1053825917740155
- Dunlap, J. C., & Grabinger, S. (2003). Preparing students for lifelong learning: A review of instructional features and teaching methodologies. *Performance*

*Improvement Quarterly*, 16, 6-25. doi:10.1111/j.1937-8327.2003.tb00276.x

Dzubinski, L., Hentz, B., Davis, K. L., & Nicolaidis, A. (2012). Envisioning an adult learning graduate program for the early 21st century: A developmental action inquiry study. *Adult Learning*, 23, 103-110. doi:10.1177/1045159512452844

Elias, J. L. (1979). Andragogy revisited. *Adult Education Quarterly*, 29, 252-256. doi:10.1177/074171367902900404

Elias, J. L., & Merriam, S. B. (1995). *Philosophical foundations of adult education*. Melbourne, FL: Krieger Publishing.

European Commission. (2015). *Education and training monitor 2015: United Kingdom*: Publications Office of the European Union. Retrieved from [http://ec.europa.eu/dgs/education\\_culture/repository/education/tools/docs/2015/monitor2015-uk\\_en.pdf](http://ec.europa.eu/dgs/education_culture/repository/education/tools/docs/2015/monitor2015-uk_en.pdf)

Fede, J. H., Gorman, K. S., & Cimini, M. E. (2018). Student Employment as a model for experiential learning. *Journal of Experiential Education*, 41, 107-124. doi:10.1177/1053825917747902

Fifolt, M., Morgan, A. F., & Burgess, Z. R. (2018). Promoting school connectedness among minority youth through experience-based urban farming. *Journal of Experiential Education*, 41, 187-203. doi:10.1177/1053825917736332

- Fisher, E. E., Sharp, R. L., & Bradley, M. J. (2017). Perceived benefits of service learning: A comparison of collegiate recreation concentrations. *Journal of Experiential Education*, 40, 187-201. doi:10.1177/1053825917700922
- Flannery, D. D. (1993). Book Review: Self-direction in adult learning, by R.G. Brockett & R. Hiemstra. *Adult Education Quarterly*, 43, 110-112. doi:10.1177/0741713693043002005
- Freire, P. (1970). *Pedagogy of the oppressed*. New York, NY: Continuum.
- Füz, N. (2018). Out-of-school learning in Hungarian primary education: Practice and barriers. *Journal of Experiential Education*, 41, 277-294. doi:10.1177/1053825918758342
- Garrison, D. R. (1992). Critical thinking and self-directed learning in adult education: An analysis of responsibility and control issues. *Adult Education Quarterly*, 42, 136-148. doi:10.1177/074171369204200302
- Garrison, D. R. (1997). Self-directed learning: Toward a comprehensive model. *Adult Education Quarterly*, 48, 18-33. doi:10.1177/074171369704800103
- Gass, M., Gough, S., Armas, A., & Dolcino, C. (2016). Play for peace as a violence prevention model: Achieving voluntad y convivencia. *Journal of Experiential Education*, 39, 412-426. doi:10.1177/1053825916674978
- Gibbons, M. (2002). *The self-directed learning handbook: Challenging adolescent students to excel*. San Francisco, CA: Jossey-Bass.

- Gibbons, M., Bailey, A., Comeau, P., Schmuck, J., Seymour, S., & Wallace, D. (1980). Toward a theory of self-directed learning: A study of experts without formal training. *Journal of Humanistic Psychology, 20*, 41-56. doi:10.1177/002216788002000205
- Gibbons, S., Ebbeck, V., Gruno, J., & Battey, G. (2018). Impact of adventure-based approaches on the self-conceptions of middle school physical education students. *Journal of Experiential Education, 41*, 220–232.. doi:10.1177/1053825918761996
- Glazier, J., Bolick, C., & Stutts, C. (2017). Unstable ground: Unearthing the realities of experiential education in teacher education. *Journal of Experiential Education, 40*, 231-248. doi:10.1177/1053825917712734
- Glowacki-Dudka, M., Mullett, C., Griswold, W., Baize-Ward, A., Vctor-Suits, C., Londt, S. C., & Williams-Hawkins, M. (2017). Walking the talk: Expectations and intentions of a popular education workshop. *Journal of Experiential Education, 40*, 377-393. doi:10.1177/1053825917712733
- Gould, R. L. (1978). *Transformations: Growth and change in adult life*. New York, NY: Simon & Schuster.
- Government Office for Science. (2016). *New foresight project to explore lifelong learning*. Government Office for Science. Retrieved from <https://www.gov.uk/government/news/new-foresight-project-to-explorelifelong-learning>

- Gress, S., & Hall, T. (2017). Diversity in the outdoors: National outdoor leadership school students' attitudes about wilderness. *Journal of Experiential Education, 40*, 114-134. doi:10.1177/1053825916689267
- Grimwood, B. S., Gordon, M., & Stevens, Z. (2018). Cultivating nature connection: Instructor narratives of urban outdoor education. *Journal of Experiential Education, 41*, 204–219. doi:10.1177/1053825917738267
- Groen, J., & Kawalilak, C. (2014). *Pathways of adult learning: Professional and education narratives*. Toronto, ON: Canadian Scholars' Press.
- Grow, G. O. (1991). Teaching learners to be self-directed. *Adult Education Quarterly, 41*, 125-149. doi:10.1177/0001848191041003001
- Guglielmino, L. M. (1978). Development of the self-directed learning readiness scale. (Doctoral dissertation, University of Georgia, 1977). *Dissertation Abstracts International, 38*, 6467A.
- Guglielmino, L. M. (2008). Why self-directed learning? *International Journal of Self-Directed Learning, 5*(1), 1-14. Retrieved from <https://www.sdlglobal.com/journals>
- Guglielmino, L. M., Long, H. B., & Hiemstra, R. (2004). Self-direction in learning in the United States. *International Journal of Self-Directed Learning, 1*(1), 1-17. Retrieved from <https://www.sdlglobal.com/journals>
- Harper, N. J. (2018). Locating self in place during a study abroad experience: Emerging adults, global awareness, and the Andes. *Journal of Experiential Education, 41*, 295–311. doi:10.1177/1053825918761995

- Helterbran, V. R. (2017). Lessons in lifelong learning: Earning a bachelor's degree in retirement. *Adult Learning*, 28, 12-19. doi:10.1177/1045159516643942
- Hiemstra, R. (1994). Helping learners take responsibility for self-directed activities. In R. Hiemstra & R. G. Brockett (Eds.) *Overcoming resistance to self-direction in adult learning: New directions for adult and continuing education*, (pp. 81-87). San Francisco, CA: Jossey-Bass.
- HM Government. (2017). *Building our industrial strategy*. Green Paper. HM Government. Retrieved from <https://www.gov.uk/government/consultations/building-our-industrial-strategy>
- Hodkinson, P., & James. D. (2003). Transforming learning cultures in further education. *Journal of Vocational Education & Training*, 55, 389-406. doi:10.1080/13636820300200236.
- Hoffman, R. R., Ward, P., Feltovich, P. J., DiBello, L., Fiore, S. M., & Andrews, D. (2014). *Accelerated expertise: Training for high proficiency in a complex world*. New York, NY: Psychology Press.
- Hou, S. I., & Pereira, V. (2017). Measuring infusion of service-learning on student program development and implementation competencies. *Journal of Experiential Education*, 40, 170-186. doi:10.1177/1053825917699518
- Hougham, R. J., Nutter, M., & Graham, C. (2018). Bridging natural and digital domains: Attitudes, confidence, and interest in using technology to learn

- outdoors. *Journal of Experiential Education*, 41, 154–169.  
doi:10.1177/1053825917751203
- Houle, C. O. (1980). *Continuing learning in the professions*. San Francisco, CA: Jossey-Bass.
- Houle, C. O. (1984). *Patterns of learning. New perspectives on life-span education*. San Francisco, CA: Jossey-Bass.
- Isaak, J., Devine, M., Gervich, C., & Gottschall, R. (2018). Are we experienced? Reflections on the SUNY experiential learning mandate. *Journal of Experiential Education*, 41, 23-38. doi:10.1177/1053825917740377
- James, D., & Biesta, G. (2007). *Improving learning cultures in further education*. London and New York: Routledge.
- James, J. K., & Williams, T. (2017). School-based experiential outdoor education: A neglected necessity. *Journal of Experiential Education*, 40, 58-71.  
doi:10.1177/1053825916676190
- Jarvis, P. (2012). *Adult learning in the social context*. London and New York: Routledge.
- Jia, X., Jung, J., & Ottenbreit-Leftwich, A. (2018). Learning technology integration from a service-learning project: Connecting preservice teachers to real-world problems. *Journal of Experiential Education*, 41, 261–276.  
doi:10.1177/1053825917738269

- Jonassen, D. H. (1999). Designing constructivist learning environments. In C. M. Reigeluth (Ed.), *Instructional-design theories and models: A new paradigm of instructional theory* (Vol. II, pp. 215-239). Mahwah, NJ: Lawrence Erlbaum.
- Jones, J. A. (2017). Scaffolding self-regulated learning through student-generated quizzes. *Active Learning in Higher Education*. Advance online publication. doi:10.1177/1469787417735610
- Jordan, K. A., Gagnon, R. J., Anderson, D. M., & Pilcher, J. J. (2018). Enhancing the college student experience: Outcomes of a leisure education program. *Journal of Experiential Education*, 41, 90-106. doi:10.1177/1053825917751508
- Jossberger, H., Brand-Gruwel, S., Boshuizen, H., & Van de Wiel, M. (2010). The challenge of self-directed and self-regulated learning in vocational education: A theoretical analysis and synthesis of requirements. *Journal of Vocational Education & Training*, 62, 415-440. doi:10.1080/13636820.2010.523479
- Jossberger, H., Brand-Gruwel, S., van de Wiel, M. W., & Boshuizen, H. (2017). Learning in workplace simulations in vocational education: A student perspective. *Vocations & Learning*, 11, 179-204. doi:10.1007/s12186-017-9186-7
- Karoff, M., Tucker, A. R., Alvarez, T., & Kovacs, P. (2017). Infusing a peer-to-peer support program with adventure therapy for adolescent students with

autism spectrum disorder. *Journal of Experiential Education*, 40, 394-408.  
doi:10.1177/1053825917727551

Kasl, E., & Yorks, L. (2002). Collaborative inquiry for adult learning. *New Directions for Adult and Continuing Education*, Summer 2002(94), 3-12.  
doi:10.1002/ace.54

Kasworm, C. E. (1983). An examination of self-directed contract learning as an instructional strategy. *Innovative Higher Education*, 8, 45-54.  
doi:10.1007/BF00889559

Kegan, R. (2009). What “form” transforms. A constructive-developmental approach to transformative learning. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists in their own words* (pp. 35-54). Abingdon: Routledge.

Kicken, W. S., Brand-Gruwel, S., van Merriënboer, J. J., & Slot, W. (2009). The effects of portfolio-based advice on the development of self-directed learning skills in secondary vocational education. *Educational Technology Research & Development*, 57, 439-460. doi:10.1007/s11423-009-9111-3

Kiefer, M., & Trumpp, N. M. (2012). Embodiment theory and education: The foundations of cognition in perception and action. *Trends in Neuroscience and Education*, 1, 15-20. doi:10.1016/j.tine.2012.07.002

Kim, A., & Merriam, S. B. (2004). Motivations for learning among older adults in a learning in retirement institute. *Educational Gerontology*, 30, 441-455.  
doi:10.1080/03601270490445069

- Kirschner, P. A., Sweller, J., & Clark, R. E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist, 41*, 75-86. doi:10.1207/s15326985ep4102\_1
- Kirwan, J. R., Lounsbury, J. W., & Gibson, L. W. (2010). Self-directed learning and personality: The big five and narrow personality traits in relation to learner self-direction. *International Journal of Self-Directed Learning, 7*(2), 21-34. Retrieved from <https://www.sdlglobal.com/journals>
- Kirwan, J. R., Lounsbury, J. W., & Gibson, L. W. (2014). An examination of learner self-direction in relation to the big five and narrow personality traits. *SAGE Open, 4*(2), 1-14. doi:10.1177/2158244014534857
- Knackmuhs, E., Farmer, J., & Reynolds, H. L. (2017). Student outcomes of eco-restoration service-learning experiences in urban woodlands. *Journal of Experiential Education, 40*, 24-38. doi:10.1177/1053825916679182
- Knowles, M. S. (1970). *The modern practice of adult education: Andragogy versus pedagogy*. New York: New York Association Press.
- Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. Chicago, IL: Follett.
- Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy* (revised and updated). New York, NY: Cambridge.

- Knowles, M. S. (2001). Contributions of Malcolm Knowles. In K. O. Gangel & J. C. Wilhoit (Eds.) *The Christian handbook on adult education* (pp. 91-103). Grand Rapids, MI: Baker Books.
- Knowles, M. S., Holton, E. F., & Swanson, R. A. (2015). *The adult learner: The definitive classic in adult education and human resource development* (Vol. 8). Oxon, UK: Routledge.
- Koffka, K. (1935). *Principles of Gestalt psychology*. New York, NY: Harcourt, Brace, & World.
- Kolb, A. Y., & Kolb, D. A. (2013). *The Kolb Learning Style Inventory 4.0: A comprehensive guide to the theory, psychometrics, research on validity and educational applications*. Philadelphia, PA: Hay Group.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall.
- Kolb, D. A. (2015). *Experiential learning: Experience as the source of learning and development* (second edition). Upper Saddle River, NJ: Pearson.
- Kranzow, J., & Hyland, N. (2016). Self-directed learning: Developing readiness in graduate students. *International Journal of Self-Directed Learning*, 13(2), 1-14. Retrieved from <https://www.sdlglobal.com/journals>
- Langer, E. J. (2017). *The power of mindful learning*. Boston, MA: Perseus.

- Larsen, M. A. (2017). International service-learning: Rethinking the role of emotions. *Journal of Experiential Education*, 40, 279-294. doi:10.1177/1053825917706379
- Levačić, R., & Glover, D. (1998). Relationship between efficient resource management and school effectiveness: evidence from Ofsted secondary school inspections. *School Effectiveness and School Improvement*, 9, 95-122. doi:10.1080/0924345980090105
- Lindeman, E. C. (1926). *The meaning of adult education*. New York, NY: New Republic.
- London, J. (1973). Adult education for the 1970's: Promise or illusion? Book review: the modern practice of adult education: andragogy versus pedagogy, by M. S. Knowles. *Adult Education Quarterly*, 24, 60-72. doi:10.1177/074171367302400105
- Long, H. B. (1989). Self-directed learning: Merging theory and practice. In Long, H. B. (Ed.), *Self-directed learning: Emerging theory and practice* (pp. 1-12). Norman, Ok: Research Center for Continuing Professional and Higher Education of the University of Oklahoma.
- Lounsbury, J., Levy, J., Park, S., Gibson, L., & Smith, R. (2009). An investigation of the construct validity of the personality trait of self-directed learning. *Learning and Individual Differences*, 19, 411-418. doi:10.1016/j.lindif.2009.03.001

- Lovat, T., & Clement, N. (2016). Service learning as holistic values pedagogy. *Journal of Experiential Education*, 39, 115-129. doi:10.1177/1053825916628548
- Lucas, B., Spencer, E., & Claxton, G. (2012). *How to teach vocational education: a theory of vocational pedagogy*. London: City & Guilds Centre for Skills Development. Retrieved from <http://repository.winchester.ac.uk/82/1/Lucas%2C%20Spencer%20and%20Claxton%20%282012%29%20How%20to%20teach%20vocational%20education%20%28VocPed1%2C%20CG%29.pdf>.
- Major, D. A., Turner, J. E., & Fletcher, T. D. (2006). Linking proactive personality and the big five to motivation to learn and development activity. *Journal of Applied Psychology*, 91, 927-935. doi:10.1037/0021-9010.91.4.927
- Marsick, V. J., & Watkins, K. E. (1992). Continuous learning in the workplace. *Adult Learning*, 3(4), 9-12. doi:10.1177/104515959200300404
- Marsick, V. J., & Watkins, K. E. (1996). Adult educators and the challenge of the learning organization. *Adult Learning*, 7(4), 18-20. doi:10.1177/1045159517750664
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50, 370-396. doi:10.1037/h0054346
- Maslow, A. H. (1954). *Motivation and Personality*. Manhattan, NY: Harper & Brothers.

- Matsuo, M. (2015). A framework for facilitating experiential learning. *Human Resource Development Review*, 14, 442-461. doi:10.1177/1534484315598087
- May, T. M. (2017). *Prime minister's letter to European Council president Donald Tusk*. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/604079/Prime\\_Ministers\\_letter\\_to\\_European\\_Council\\_President\\_Donald\\_Tusk.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/604079/Prime_Ministers_letter_to_European_Council_President_Donald_Tusk.pdf)
- McBride, A. M, Chung, S., & Robertson, A. (2016). Preventing academic disengagement through a middle school-based social and emotional learning program. *Journal of Experiential Education*, 39, 370-385. doi:10.1177/1053825916668901
- McCartney, R., Boustedt, J., Eckerdal, A., Sanders, K., Thomas, L., & Zander, C. (2016). Why computing students learn on their own: Motivation for self-directed learning of computing. *ACM Transactions on Computing Education (TOCE)*, 16(1), 2. doi:10.1145/2747008
- McGowan, A. L. (2016). Impact of one-semester outdoor education programs on adolescent perceptions of self-authorship. *Journal of Experiential Education*, 39, 386-411. doi:10.1177/1053825916668902
- Merriam, S. B. (2008). Adult learning theory for the twenty-first century. *New Directions for Adult and Continuing Education*, Fall 2008(119), 93-98. doi:10.1002/ace.309

- Merriam, S. B. (2018). Adult learning theory: Evolution and future directions. In K. Illeris (Ed.), *Contemporary theories of learning* (pp. 83-96). New York, NY: Routledge.
- Merriam, S. B., Caffarella, R. S., & Baumgartner, L. M. (2007). *Learning in adulthood: A comprehensive guide*. San Francisco, CA: Jossey-Bass.
- Mezirow, J. (1978). Perspective transformation. *Adult Education Quarterly*, 28, 100-110. doi:10.1177/074171367802800202
- Mezirow, J. (1981). A critical theory of adult learning and education. *Adult Education Quarterly*, 32, 3-24. doi:10.1177/074171368103200101
- Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco, CA: Jossey-Bass.
- Mezirow, J. (2009). Transformative learning theory. In J. Mezirow & E. W. Taylor (Eds.), *Transformative learning in practice: Insights from community, workplace, and higher education* (pp. 18-32). San Francisco, CA: Jossey-Bass.
- Miettinen, R. (2000). The concept of experiential learning and John Dewey's theory of reflective thought and action. *International Journal of Lifelong Education*, 19, 54-72. doi:10.1080/026013700293458
- Mocker, D. W., & Spear, G. E. (1982). *Lifelong learning: Formal, nonformal, informal and self-directed*. Columbus, OH: ERIC Clearinghouse on Adult, Career, and Vocational Education. Retrieved from <http://files.eric.ed.gov/fulltext/ED220723.pdf>

- Mogra, I. (2016). The “trojan horse” affair and radicalisation: an analysis of Ofsted reports. *Educational Review*, 68, 444-465. doi:10.1080/00131911.2015.1130027.
- Moore, M. G. (1972). Learner autonomy: The second dimension of independent learning. *Convergence*, 5(2), 76-88.
- Morris, T. H. (2018a). Adaptivity through self-directed learning to meet the challenges of our ever-changing world. *Adult Learning*. Advance online publication. doi:10.1177/1045159518814486
- Morris, T. H. (2018b). Book review: How to teach without instructing: 29 smart rules for educators, by R. Arnold. *Adult Education Quarterly*, 68, 80-81. doi:10.1177/0741713617706967
- Morris, T. H. (2018c). Vocational education of young adults in England: A systemic analysis of teaching–learning transactions that facilitate self-directed learning. *Journal of Vocational Education & Training*, 70, 619-643. doi:10.1080/13636820.2018.1463280
- Morris, T. H. (2019a). Experiential learning—a systematic review and revision of Kolb’s model. *Interactive Learning Environments*. Advance online publication. doi:10.1080/10494820.2019.1570279
- Morris, T. H. (2019b). An analysis of Rolf Arnold’s systemic-constructivist perspective on self-directed learning. In M. Rohs, M. Schiefner-Rohs, I. Schüßler, & H-J. Müller (Eds.), *Educational perspectives on transformations and change processes*. Bielefeld, Germany: WBV Verlag

- Morrison, D., & Premkumar, K. (2014). Practical strategies to promote self-directed learning in the medical curriculum. *International Journal of Self-Directed Learning*, 11(1), 1-12. Retrieved from <https://www.sdlglobal.com/journals>
- Munge, B., Thomas, G., & Heck, D. (2018). Outdoor fieldwork in higher education: Learning from multidisciplinary experience. *Journal of Experiential Education*, 41, 39-53. doi:10.1177/1053825917742165
- Murphy, L., Wilson, J., & Greenberg, S. (2017). Equine-assisted experiential learning in occupational therapy education. *Journal of Experiential Education*, 40, 366-376. doi:10.1177/1053825917712732
- Murtonen, M., Gruber, H., & Lehtinen, E. (2017). The return of behaviourist epistemology: A review of learning outcomes studies. *Educational Research Review*, 22, 114-128. doi:10.1016/j.edurev.2017.08.001
- Nasri, N. M. (2017). Self-directed learning through the eyes of teacher educators. *Kasetsart Journal of Social Sciences*. Advance online publication. doi:10.1016/j.kjss.2017.08.006
- Newman, T. J., Alvarez, M. A. G., & Kim, M. (2017). An experiential approach to sport for youth development. *Journal of Experiential Education*, 40, 308-322. doi:10.1177/1053825917696833
- Oddi, L. F. (1986). Development and validation of an instrument to identify self-directed continuing learners. *Adult Education Quarterly*, 36, 97-107. doi:10.1177/0001848186036002004

- Oddi, L. F. (1987). Perspectives on self-directed learning. *Adult Education Quarterly*, 38, 21-31. doi:10.1177/0001848187038001003
- Ofsted. (2017). *Further education and skills inspection handbook (revised July 2017)*. Retrieved from <https://www.gov.uk/government/publications/further-education-and-skillsinspection-handbook>
- O'shea, E. (2003). Self-directed learning in nurse education: a review of the literature. *Journal of Advanced Nursing*, 43, 62-70. doi:10.1046/j.1365-2648.2003.02673.x
- Osler, A., & Morrison, M. (2002). Can race equality be inspected? Challenges for policy and practice raised by the Ofsted school inspection framework. *British Educational Research Journal*, 28, 327-338. doi:10.1080/01411920220137421
- Piaget, J. (1964). Development and learning. In R. E. Ripple & V. N. Rockcastle (Eds.), *Piaget rediscovered* (pp. 7-20). New York: Cornell University Press.
- Pilling-Cormick, J. (1996). *Development of the self-directed learning perception scale* (Doctoral dissertation, University of Toronto). Retrieved from National Library of Canada. (0-612-41543-0)
- Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16, 385-407. doi:1040-726X/04/1200-0385/0

- Pipitone, J. M. (2018). Place as pedagogy: Toward study abroad for social change. *Journal of Experiential Education*, 41, 54-74. doi:10.1177/1053825917751509
- Pipitone, J. M., & Raghavan, C. (2017). Socio-spatial analysis of study abroad students' experiences in/of place in Morocco. *Journal of Experiential Education*, 40, 264-278. doi:10.1177/1053825917709823
- Reid, K. (2007). An evaluation of Ofsted reports on LEAs' management of attendance issues. *Educational Management Administration & Leadership*, 35, 395-413. doi:10.1177/1741143207078181.
- Ribbe Jr, R., Cyrus, R., & Langan, E. (2016). Exploring the impact of an outdoor orientation program on adaptation to college. *Journal of Experiential Education*, 39, 355-369. doi:10.1177/1053825916668900
- Ricke, A. (2018). Finding the right fit: Helping students apply theory to service-learning contexts. *Journal of Experiential Education*, 41, 8-22. doi:10.1177/1053825917750407
- Rigby, C. S., & Ryan, R. M. (2018). Self-determination theory in human resource development: New directions and practical considerations. *Advances in Developing Human Resources*, 20, 133-147. doi:10.1177/1523422318756954
- Ritchie, S. D., Patrick, K., Corbould, G. M., Harper, N. J., & Oddson, B. E. (2016). An environmental scan of adventure therapy in Canada. *Journal of Experiential Education*, 39, 303-320. doi:10.1177/1053825916655443

- Roberts, J. (2018). From the editor: The possibilities and limitations of experiential learning research in higher education. *Journal of Experiential Education*, 41, 3-7. doi:10.1177/1053825917751457
- Roberts, S. D., Stroud, D., Hoag, M. J., & Combs, K. M. (2016). Outdoor behavioral health care: Client and treatment characteristics effects on young adult outcomes. *Journal of Experiential Education*, 39, 288-302. doi:10.1177/1053825916655445
- Rogers, C. R. (1969). *Freedom to learn*. Columbus, OH: Charles Merrill.
- Rogers-Shaw, C., Carr-Chellman, D. J., & Choi, J. (2018). Universal design for learning: Guidelines for accessible online instruction. *Adult Learning*, 29, 20-31. doi:10.1177/1045159517735530
- Rohs, M., & Ganz, M. (2015). MOOCs and the claim of education for all: A disillusion by empirical data. *The International Review of Research in Open and Distributed Learning*, 16(6), 1-19. doi:10.19173/irrodl.v16i6.2033
- Russell, K., & Gillis, H. L. (2017). The adventure therapy experience scale: The psychometric properties of a scale to measure the unique factors moderating an adventure therapy experience. *Journal of Experiential Education*, 40, 135-152. doi:10.1177/1053825917690541
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York, NY: The Guilford Press.

- Sawatsky, A. P., Ratelle, J. T., Bonnes, S. L., Egginton, J. S., & Beckman, T. J. (2017). A model of self-directed learning in internal medicine residency: A qualitative study using grounded theory. *BMC Medical Education, 17*, 1-9. doi:10.1186/s12909-017-0869-4
- Schary, D. P., & Waldron, A. L. (2017). The challenge course experience questionnaire: A facilitator's assessment tool. *Journal of Experiential Education, 40*, 295-307. doi:10.1177/1053825917708400
- Schenck, J., & Cruickshank, J. (2015). Evolving Kolb: Experiential education in the age of neuroscience. *Journal of Experiential Education, 38*, 73-95. doi:10.1177/1053825914547153
- Schmidt-Hertha, B., & Rohs, M. (2018). Medienpädagogik und erwachsenenbildung. *Medien Pädagogik: Zeitschrift für Theorie und Praxis der Medienbildung, 30*, i-viii. doi:10.21240/mpaed/30/2018.03.06.X.
- Scogin, S. C., Kruger, C. J., Jekkals, R. E., & Steinfeldt, C. (2017). Learning by experience in a standardized testing culture: Investigation of a middle school experiential learning program. *Journal of Experiential Education, 40*, 39-57. doi:10.1177/1053825916685737
- Scott, P. (2018). Compliance and creativity: Dilemmas for university governance. *European Review, 26*(S1), S35-S47. doi:10.1017/S1062798717000527
- Seaman, J., Brown, M., & Quay, J. (2017). The evolution of experiential learning theory: Tracing lines of research in the JEE. *Journal of Experiential Education, 40*, NP1-NP21. doi:10.1177/1053825916689268

- Seibert, S. E., Kraimer, M. L., & Crant, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology, 54*, 845-874. doi:10.1111/j.1744-6570.2001.tb00234.x
- Skinner, B. F. (1987). *Beyond freedom and dignity*. New York, NY: Bantam Books. (Original work published in 1971)
- Slater, C. E., Cusick, A., & Louie, J. C. (2017). Explaining variance in self-directed learning readiness of first year students in health professional programs. *BMC Medical Education, 17*(1), 207. doi:10.1186/s12909-017-1043-8
- Smith, H. A., & Segbers, T. (2018). The impact of transculturality on student experience of higher education. *Journal of Experiential Education, 41*, 75-89. doi:10.1177/1053825917750406
- Song, L., & Hill, J. R. (2007). A conceptual model for understanding self-directed learning in online environments. *Journal of Interactive Online Learning, 6*(1), 27-42. Retrieved from <https://www.ncolr.org/>
- Sonti, N. F., Campbell, L. K., Johnson, M. L., & Daftary-Steel, S. (2016). Long-term outcomes of an urban farming internship program. *Journal of Experiential Education, 39*, 269-287. doi:10.1177/1053825916655444
- Spear, G. E., & Mocker, D. W. (1984). The organizing circumstance: Environmental determinants in self-directed learning. *Adult Education Quarterly, 35*, 1-10. doi:10.1177/0001848184035001001

- Storey, V. A., & Wang, V. C. (2017). Critical friends protocol: Andragogy and learning in a graduate classroom. *Adult Learning*, 28, 107-114. doi:10.1177/1045159516674705
- Tan, C. (2017). A Confucian perspective of self-cultivation in learning: Its implications for self-directed learning. *Journal of Adult and Continuing Education*, 23, 250-262. doi:10.1177/1477971417721719
- Tessmer, M., & Richey, R. C. (1997). The role of context in learning and instructional design. *Educational Technology Research & Development*, 45, 85-115. doi:10.1007/BF02299526
- Thorndike, E. L. (1898). Animal intelligence: An experimental study of the associative processes in animals. *The Psychological Review: Monograph Supplements*, 2(4), i-109. doi:10.1037/h0092987
- Tough, A. M. (1967). *Learning without a teacher: A study of tasks and assistance during adult self-teaching projects*. Retrieved from <http://allentough.com/books/lwt.htm>
- Tough, A. M. (1971). *The adults' learning projects: A fresh approach to theory and practice in adult education*. Retrieved from <http://ieti.org/tough/books/alp.htm>
- Tough, A. (2002). The iceberg of informal adult learning. *New Approaches to Lifelong Learning (NALL) working Paper*, 49-2002. Retrieved from <https://nall.oise.utoronto.ca/res/49AllenTough.pdf>

- Tuckett, A., & Field, J. (2016). *Factors and motivations affecting attitudes towards and propensity to learn through the life course*. Government Office for Science. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/598461/Skills\\_and\\_lifelong\\_learning\\_-\\_attitudes\\_to\\_learning.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/598461/Skills_and_lifelong_learning_-_attitudes_to_learning.pdf)
- UK Parliament. (2016). *Participation in education and training: 16–18 year olds in England: social indicators page*. Retrieved from <http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN02628>
- UNESCO (United Nations Educational, Scientific and Cultural Organization). (2012). *International standard classification of education ISCED 2011*. UNESCO Institute for Statistics. Retrieved from <http://uis.unesco.org/en/topic/international-standard-classification-educationisced>
- Von Glasersfeld, E. (1982). An interpretation of Piaget's constructivism. *Revue Internationale de Philosophie*, 36(4) 612-635. Retrieved from <https://www.jstor.org/journal/revuintephil>
- Von Glasersfeld, E. (1995) A constructivist approach to teaching. In: Steffe L. P. & Gale J. (Eds.) *Constructivism in education* (pp. 3-15). Erlbaum, Hillsdale.
- Wainwright, M., Bingham, S., & Sicwebu, N. (2017). Photovoice and photodocumentary for enhancing community partner engagement and

- student learning in a public health field school in cape town. *Journal of Experiential Education*, 40, 409-424. doi:10.1177/1053825917731868
- Ward, P., Gore, J., Hutton, R., Conway, G. E., & Hoffman, R. R. (2018). Adaptive skill as the conditio sine qua non of expertise. *Journal of Applied Research in Memory and Cognition*, 7, 35-50. doi:10.1016/j.jarmac.2018.01.009
- Watson, J. (1913). Psychology as the behaviorist views it. *Psychological Review*, 101, 248-253. doi:10.1037/0033-295X.101.2.248
- Whittington, A., Garst, B. A., Gagnon, R. J., & Baughman, S. (2017). Living without boys: A retrospective analysis of the benefits and skills gained at all-female camps. *Journal of Experiential Education*, 40, 97-113. doi:10.1177/1053825916689266
- Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, 25, 3-17. doi:10.1207/s15326985ep2501\_2

## **Author biography**

*Thomas Howard Morris, MSc, PGCE, is a research scientist and lecturer specializing in adult and vocational education at Technische Universität Kaiserslautern, Germany. His research interest is in understanding the didactic process of facilitating self-directed learning. Until 2015, he was a lecturer and course leader at a Further Education college in London.*

### **ORCID iD:**

Thomas Howard Morris <https://orcid.org/0000-0002-0100-6434>