Exploring Transformative Learning in Vocational Online and Distance Education

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Abstract

Perspective transformation (the enduring development of a person's understanding, the reformulation of their experience, and new ways of acting in the world) is widely understood to be an important outcome of adult education. Various studies performed over the last 30 or so years since Mezirow's theory was first proposed have confirmed its presence and importance in higher education. However, the question remains as to whether transformative learning takes place in vocational distance and online education—particularly if it's not explicitly promoted.

This paper investigates the extent of transformative learning taking place in adult learners studying at a distance, online. Drawing on King's Learning Activities Survey (LAS), Open Polytechnic students (n=499) across seven qualifications (six discipline areas) responded to a survey asking about their experience of perspective transformation. The instrument also sought insight as to how vocational providers of vocational online and distance education might promote transformative learning outcomes in learners.

Survey results show evidence of perspective transformation in students to varying degrees that are mainly determined by the qualification being studied. The results also reveal which instructional design approaches and teaching activities might contribute to transformation.

Keywords: transformational learning; perspective transformation; online education; distance education; vocational education

Introduction

Transformative learning theory holds that perspective transformation—the enduring development of a person's understanding, the reformulation of their experience, and new ways of acting in the world—is a central objective for adult education (Mezirow, 1991, 2000, 2009, 2018). The theory recognises that "critical dimension of learning in adulthood that enables us to recognise and reassess the structure of assumptions and expectations which frame our thinking, feeling and acting" (Mezirow, 2009, p. 90). It describes that element of education that transcends the addition of knowledge and skill to the broadening of reasoning, perspective, practice, and outlook. Self-reflection, critical discourse, and problem-solving are some of the learning strategies that encourage transformative learning.

Mezirow proposes 10 stages of transformative learning:

> *Stage 1:* A disorienting dilemma.
>
> *Stage 2:* Self-examination with feelings of guilt and shame.
>
> *Stage 3:* A critical assessment of epistemic, socio-cultural or psychic assumptions.
>
> *Stage 4:* Recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change.
>
> *Stage 5:* Exploration of options for new roles, relationships, and actions.
>
> *Stage 6:* Planning of a course of action.
>
> *Stage 7:* Acquisition of knowledge and skills for implementing one's plans.
>
> *Stage 8:* Provisional trying of new roles.
>
> *Stage 9:* Building of competence and self-confidence in new roles and relationships.
>
> *Stage 10:* A reintegration into one's life on the basis of conditions dictated by one's new perspective. (King, 2009, p. 5)

Many studies demonstrate the validity and importance of Mezirow's stages; however, the theory does not appear to have been researched from the perspective of vocational, online, and distance education.

Open Polytechnic is Australasia's largest dedicated provider of online and distance education. It specialises in providing flexible, distance, and online learning for vocational qualifications. Most of the qualifications offered by the polytechnic are taught solely online, except for some that have a blended learning approach. Qualifications on offer range across a multitude of subject areas—from certificate to diploma and degree level, giving students opportunities in some subject areas to staircase from Level 1 to Level 7 on the New Zealand Qualifications Framework.

Literature review

The concept of transformative learning is related to Brookfield's ideological critique and Freire's critical pedagogy (Mezirow, 2018), in that the objective of transformative learning is to not only inform students as learners, but to have them deepen as people. Kegan (2018) helpfully defines *transformative* learning as an alternative to *informational* learning; the difference being between "how" things are known and "what" is known. Although both forms of knowing are valuable and have their place, it is the latter that develops epistemological ("way of knowing") maturity.

The effects of transformative learning can be encountered at the level of an individual course as well as across a qualification (Boyer et al., 2006; Hodge, 2011; Hyland-Russell & Syrnyk, 2015; King, 2009) It's also likely that the dynamics of transformation differ across subject areas (Hyland-Russell & Syrnyk, 2015). Student context is also an important factor (Greenhill et al., 2017). Mezirow (2000) highlights that transformative learning involves an analysis of adult learning and how adults are transformed through reflection, rational discourse, and emancipatory action. The theory continues to be developed, for example in the directions of threshold concepts (Hodge, 2019), mindfulness, and spirituality.

Transformative learning theory has been examined in multiple contexts, including vocational education (Becker, 2017; Choy, 2009; Roessger, 2014; Wilhelmson et al., 2015). While the concept of transformation is a feature of some vocational education literature, the term is not

usually applied in the technical sense (Angus et al., 2013; Colley et al., 2007). Few studies address how transformative learning theory might be applied to vocational settings (Becker, 2017; Greenhill et al., 2017; Hodge, 2010; Roessger, 2014; Wilhelmson et al., 2015). Those that do address this context tend to have limited sample sizes and highlight the variety of level, context, and discipline that vocational education is concerned with. Some technical studies investigating vocational learning do confirm transformative learning (Duveskog et al., 2011; Hodge, 2010, 2011), and emphasise the role of the trainer in enhancing these outcomes.

Online education is demonstrated in early studies to be transformative in post-graduate study (Boyer et al., 2006; Ziegler et al., 2006) and, conceptually, to online education in general when reflective activities are emphasised (Meyers, 2008). Whether online and distance learning is transformative in the sense proposed by Mezirow is yet to be investigated and is portrayed as an open question (Hoskins, 2013).

Online and distance education is underpinned by instructionally designed materials provided to learners (Lockwood, 1994, 1998; Shearer & Park, 2019; Simonson et al., 2009; Vai & Sosulski, 2016). Such materials serve as a learner's primary means of instruction. Instructional design typically starts with translating the graduate profile of a qualification into a series of learning outcomes that serve as the basis of assessment and learning activities.

The part-time, distributed student base and asynchronous nature of online and distance education make it difficult to employ the usual means of perspective transformation across adult students, particularly interpersonal discussion related to power dynamics (Brookfield & Preskill, 2005; Freire, 1972). In the case of vocational education, task-oriented outcomes often reduce the need for critical reflection, which is another primary means of promoting transformation (Mezirow, 2018).

There is a literature gap in the exploration of transformative outcomes in sub-degree, undergraduate, and vocational online and distance education. It's also clear from literature that determining whether transformative learning has taken place is not enough; the transformative process is also of interest (Mälkki & Green, 2014; Snyder, 2008). Perhaps the dearth of comprehensive studies has its root in the fact that, as is probably the case globally, New Zealand vocational qualifications tend to explicitly promote graduate performance (that is, what can be done) rather than perspective transformation (how a student's view of the world and themselves might change). Despite this, it's difficult to consider students ready for work or further study if they have not, to some extent, further developed their assumptions about themselves, and the world they are part of, as an outcome of their education.

Methodology

In 2016 an online version of King's (2009) Learning Activities Survey (LAS) was sent to recent Open Polytechnic graduates (from 2 years earlier) and current students who had completed 50% of their Open Polytechnic programme, across the disciplines of Arts, Business, Teaching (Early Childhood Education [ECE]), Information and Library Science, Legal Executive studies, and Psychology. The breadth of qualifications was selected to provide a potential contrast by subject area. The population size across the qualifications selected was 4,109. A total of 499 survey responses were received; however, only 405 survey responses across seven qualifications (including both a Bachelor and Diploma in Business) provided sufficient information for analysis.

The LAS (King, 2009) was used to obtain data on the respondents' transformative learning experiences. The LAS measures whether a learner experienced a change in perspective during their educational activity and, if so, what factors contributed to it. The instrument was used to

answer some key research questions related to transformation perspective change in distance, online, vocational education:

1. To what extent are expressions of online and distance education transformative, in the technical sense of Mezirow (2009)?
2. What elements of the vocational online and distance education experience are considered transformative by students?
3. What, if any, are the differences in perspective transformation experienced by students across different subject areas?

The LAS instrument has four major parts.

1. Part 1 is based on Mezirow's original 10 stages of perspective transformation, and so relates to research question 1. To determine the extent to which transformation occurred, respondents were asked to check which of 13 statements they experienced as they studied.
2. Part 2 explores which experiences may have contributed to the perspective transformation, to measure those elements of the online and distance education experience that are considered transformative by students. Part 2 of the LAS assists with the answer to research question 2.
3. Part 3, available only to those respondents who reported transformation, includes further questions that identify which learning activities were influential (relevant for research question 2).
4. Part 4 collects demographic information, including the qualification studied by the respondent (required for addressing research question 3).

Descriptive statistics and Pearson's chi-square analysis were applied to the respondent data; for the third research question the hypothesis tested was H0: There will be no differences in the transformative learning experiences identified across subject areas.

Findings and analysis

The population size across the qualifications selected was 4,109. Of the 499 survey responses received (return rate of 12%) only 405 provided sufficient demographic data (including qualification identifier) for the purposes of analysis (Table 1).

Table 1 Frequency distribution of respondents by qualification

Qualification	n	%
Bachelor of Arts	25	6
Bachelor of Business	110	27
Bachelor of Teaching (ECE)	45	11
Diplomas in Information and Library Science	47	12
Diplomas in Psychology	57	14
Legal Executive Diploma	58	14
New Zealand Diploma in Business	63	16
	405	*100*

Research question 1 was concerned with the extent to which expressions of online and distance education were transformative. Recall that Mezirow proposes 10 stages of transformative learning:

1. A disorienting dilemma.

2. Self-examination with feelings of guilt and shame.

3. A critical assessment of epistemic, socio-cultural or psychic assumptions.

4. Recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change.

5. Exploration of options for new roles, relationships, and actions.

6. Planning of a course of action.

7. Acquisition of knowledge and skills for implementing one's plans.

8. Provisional trying of new roles.

9. Building of competence and self-confidence in new roles and relationships.

10. A reintegration into one's life on the basis of conditions dictated by one's new perspective. (King, 2009, p. 5)

Note that the LAS does not specifically apply the terms "guilt" and "shame", preferring instead to measure whether the respondent continued to agree with their former beliefs. Participants were asked to select statements in the LAS that applied to them as a result of their Open Polytechnic study experience. The statements selected revealed that stages 1 to 3 were most prominent and revealed a great deal of variance in transformative experience across qualifications. This is shown in Table 2.

Table 2 Frequency distribution of respondents to 10 stages of transformation

Qualification	Stage (showing % of respondents)									
	1	2	3	4	5	6	7	8	9	10
Bachelor of Arts	24	12	8	4	0	0	0	0	0	0
Bachelor of Business	26	4	4	1	1	0	0	0	0	0
Bachelor of Teaching (ECE)	76	58	36	18	13	11	7	7	7	7
Diplomas in Information and Library Science	38	23	4	0	0	0	0	0	0	0
Diplomas in Psychology	67	53	21	12	11	7	5	4	4	4
Legal Executive Diploma	16	9	5	2	2	2	2	0	0	0
New Zealand Diploma in Business	24	16	0	0	0	0	0	0	0	0

Of the stages proposed by Mezirow, most experienced the "disorienting dilemma". "Self-examination" was next—this was most common in Bachelor of Teaching (ECE) and the Diplomas of Psychology, where it might be anticipated.

There is clear variance of transformation across qualifications, most notably in the Bachelor of Teaching (ECE) and Diplomas in Psychology (most transformative), and the Legal Executive Diploma (least transformative). Of all the qualifications, only the Bachelor of Teaching (ECE) and Diplomas in Psychology had students who reported experiencing all 10 stages of transformation.

Table 3 shows the frequency distribution of respondents who did not identify with any stage of Mezirow's framework.

Table 3 Frequency distribution of respondents who couldn't identify with any stage

Qualification	No stage (%)
Bachelor of Arts	44
Bachelor of Business	41
Bachelor of Teaching (ECE)	9
Diplomas in Information and Library Science	36
Diplomas in Psychology	9
Legal Executive Diploma	71
New Zealand Diploma in Business	41

Research question 2 was concerned with which experiences may have contributed to perspective transformation. Of the survey respondents (n=405), some 49% (n=198) reported that they experienced a perspective transformation during their Open Polytechnic study. Of this number, 81% indicated that their transformation experience took place because of their course.

The LAS instrument provides respondents with a list of possible contributors to their transformative experience. Of the n=65 respondents who indicated a person influenced their transformation, most (22%) indicated their lecturer's support was definitive (see Table 4; note that multiple selections were possible). Lecturer support was particularly influential in the Teaching (ECE) and Psychology disciplines.

Table 4 Percentage contribution of people to self-reported student transformation

Influencer of transformation	
Another student's support	5%
A challenge from your lecturer	14%
Your classmates' support	5%
Your lecturer's support	22%
Another Open Polytechnic staff member's support	4%

Note that Open Polytechnic courses are designed for independent study; that is, students are seldom purposefully directed to contact their lecturer or other students. Of the n=179 respondents who indicated assignment work (i.e., study tasks) influenced their transformation, most (58%) indicated "personal reflection" was responsible. However, 52% also indicated "assigned readings" (Table 5).

Table 5 Percentage contribution of study task to self-reported student transformation

Assignment (study task)	
Class / group projects	15%
Verbally discussing your concerns	12%
Writing about your concerns	14%
An essay	37%
Personal journal	12%
Self-evaluation	42%
The non-traditional structure of a course	5%
Activity or exercise	26%
Internship or placement	6%
Lab experiences	2%
Deep, concentrated thought	29%
Personal reflection	58%
Personal learning assignment	21%
Assigned readings	52%
Other (stated)	11%

The "other" responses from Table 5 included "further personal research" and "the noho marae experience".

Some important caveats are required with reference to Tables 4 and 5. Firstly, the results apply to those students who self-reported that they experienced perspective transformation as a result of their studies. The LAS indicated that only 11 respondents progressed through all 10 stages proposed by Mezirow (Table 2), hence participants considered themselves to have experienced transformation despite not having done so on Mezirow's terms (although all had experienced at least one stage). Secondly, with respect to Table 5, it could be that the term "assignment" misled respondents into thinking that it referred to actual assignments, rather than all learning activities. This could have reduced the number of responses. Finally, not all Open Polytechnic courses use the same interventions. For example, "lab experiences" were indicated by only 3 of the 57 psychology student respondents. "Internship or placement" is an intervention used only for the Teaching (ECE) qualification. "An essay", "personal reflection", and "assigned readings" (study tasks that have the highest association with transformation), were much more evenly spread across qualifications. To this extent, the data reflect the use of these interventions across all qualifications, rather than indicating the relative importance of one approach over another. It is clear, though, that all approaches might be encountered by students studying vocational qualifications in online distance settings.

Research question 3 was concerned with the question of what, if any, differences in transformative learning dynamics exist across different subject areas. Demonstrating that there are differences by subject area is straightforward enough. The LAS checks which, if any, of Mezirow's 10 stages were experienced by a respondent (Table 2). In a follow-up question the LAS queries whether respondents believe they had experienced a time when they realised their values, beliefs, opinions, or expectations had changed—a question that has respondents self-report their overall impression of perspective transformation. Those respondents who reported no overall impression of perspective transformation are shown in Table 6.

Table 6 Frequency distribution of respondents reporting no stages of transformation

Qualification	No transformation (%)
Bachelor of Arts	44
Bachelor of Business	55.4
Bachelor of Teaching (ECE)	17.8
Diplomas in Information and Library Science	46.8
Diplomas in Psychology	31.6
Legal Executive Diploma	81.0
New Zealand Diploma in Business	63.5

The pattern of self-reported overall perspective transformation taking place reinforces that the Bachelor of Teaching (ECE) and Diplomas in Psychology are the most transformative, and the Legal Executive Diploma least transformative.

The hypothesis tested for research question 3 was H0: There will be no differences in the transformative learning experiences identified across different subject areas. The basis selected for testing H0 was self-reported perspective transformation. The effect of discipline can be seen in Table 7; Pearson chi-square tests indicated that transformative learning experiences do vary across disciplines (Table 8).

Table 7 Count of self-reported transformation by students across discipline areas

Subject area	No transformation		Transformation	
	n	%	n	%
Arts	11	44%	14	56%
Bachelor of Business	61	55%	49	42%
Information and Library Studies	22	47%	25	53%
Legal Executive	47	81%	11	19%
Psychology	18	32%	39	68%
Teaching (ECE)	8	18%	37	82%
New Zealand Diploma in Business	40	64%	23	
	207	*51%*	*198*	*49%*

Table 7 shows that disciplines such as Teaching (ECE) and Psychology, which emphasise self-reflection and self-awareness, tend to promote perspective transformation whereas Legal Executive studies, which tend to focus more on subject knowledge, do not. Of those Legal Executive students self-identifying as transformed, the highest attribution (n=4) was to assigned readings.

Table 8 Chi-square tests of self-reported transformation by discipline area

	Value	df	Asymptotic significance (2-sided)
Pearson chi-square	55.046	6	0.000
Likelihood ratio	58.555	6	0.000
Linear-by-linear association	14.399	1	0.000
Number of valid cases	405		

Table 8 shows a statistically significant relationship across discipline and self-reported transformation, so we reject the null hypothesis; there are differences in the experiences of perspective transformation across subject areas. While this finding is clearly supported by the data, it should be remembered that disciplines use different instructional design activities for very different graduate profiles. The nature of the qualification outcomes are likely to promote or preclude perspective transformation, in addition to the actual subject area being studied.

Discussion and conclusion

The findings clearly demonstrate that online and distance vocational study *can* be transformative. It is apparent that the nature of the subject itself influences the potential for transformation. Subject areas such as psychology, which often challenge students to see themselves and those around them in new ways, are inherently more transformative than subjects associated with legal executive education. It is possible that graduate profile requirements promoting self-reflection and critical thinking also promote perspective transformation.

The selection of qualifications for this study was intentional and supports the following additional conclusions.

First, diploma qualifications can be as transformative as degree qualifications. This is apparent from comparing the Diplomas in Psychology with the results from all degree qualifications, and the New Zealand Diploma in Business with the Bachelor of Business.

Second, though not immediately apparent from Tables 2 and 3, students are as likely to experience transformation in the first half of their programme as they are across the whole. There is evidence that beginning, committing to, and successfully completing at least one year's full-time equivalent tertiary study at a distance has the potential to be transformative.

Third, instructional designers and teaching staff in vocational online and distance education can, and ought to, encourage transformational outcomes alongside their obligations to achieve qualification graduate profiles, even where those profiles might not specify transformative outcomes. Deliberate efforts to encourage perspective transformation can be made in both course materials and direct teaching interventions.

Fourth, instructional designers have considerable influence over the level of transformation experienced by learners. Encouraging personal reflection and selecting perspective-challenging readings are two effective ways to encourage students to enhance transformation. It is clear from the findings that self-reported transformation of students in vocational online and distance education are influenced both by instructional choices and the discipline being studied. It should be noted that instructional choices and disciplines are, in fact, related; discipline areas such as teaching (ECE) and psychology lend themselves to self-evaluation and personal-reflection activities. The importance of assigned readings and essays—both of which can encourage reflection and require a student to rethink their perspectives—are clearly important mechanisms for vocational educators to use in transforming students' perspectives.

A final comment needs to be made in relation to how perspective transformation is measured. Only 11 of the 405 respondents used in the analysis recorded experiencing all 10 of Mezirow's stages of perspective transformation, although almost half (49%) indicated there was a point at which they realised their values, beliefs, opinions, or expectations had changed. This discrepancy indicates that a progression through Mezirow's stages might represent a guide to educational practice, rather than an essential series of steps. It could also indicate a discrepancy between understanding perspective transformation in the technical sense used by educational theorists, and a more popular sense.

Implications

Vocational online and distance education can be transformative; however, what is studied plays a more important part than does mode of study.

Lecturer support is an important factor in transformational student outcomes. Having a variety of instructional design and teaching activities also promotes transformative learning in vocational online and distance education. Although discipline areas tend to promote certain instructional design activities, it's possible for any student to experience transformation and, while there are very useful instructional approaches, none is guaranteed.

Finally, and perhaps controversially and paradoxically, vocational education providers need not be overly concerned with the rate of transformation their students experience. The role of vocational providers is to ensure their students meet the graduate profiles of the qualifications on offer. Vocational education is successful as long as the qualification requirements are achieved. Graduate profiles need to be explicit if transformed graduates are required. The findings of this paper confirm that, should perspective transformation be required in graduates, online distance education can facilitate it.

References

Angus, L., Golding, B., Foley, A., & Lavender, P. (2013). Promoting "learner voice" in VET: Developing democratic, transformative possibilities or further entrenching the status quo? *Journal of Vocational Education & Training*, *65*(4), 560–574. https://doi.org/10.1080/13636820.2013.855648

Becker, A. L. (2017). Personal transformation in RNs who recently graduated from an RN to BSN program. *Journal of Transformative Education*, *15*(4), 315–333. https://doi.org/10.1177/1541344617696971

Boyer, N. R., Maher, P. A., & Kirkman, S. (2006). Transformative learning in online settings: The use of self-direction, metacognition, and collaborative learning. *Journal of Transformative Education*, *4*(4), 335–361. https://doi.org/10.1177/1541344606295318

Brookfield, S. D., & Preskill, S. (2005). *Discussion as a way of teaching: Tools and techniques for democratic classrooms* (2nd ed.). Jossey-Bass.

Choy, S. (2009). Transformational learning in the workplace. *Journal of Transformative Education*, *7*(1), 65–84. https://doi.org/10.1177/1541344609334720

Colley, H., James, D., Tedder, M., & Diment, K. (2007). Learning as becoming in vocational education and training: Class, gender and the role of vocational habitus. *Journal of Vocational Education and Training*, *55*(4), 471–497. https://doi.org/10.1080/13636820300200240

Duveskog, D., Friis-Hansen, E., & Taylor, E. (2011). Farmer field schools in rural Kenya: A transformative learning experience. *Journal of Development Studies*, *47*(10), 1529–1544. https://doi.org/10.1080/00220388.2011.561328

Freire, P. (1972). *Pedagogy of the oppressed*. Penguin Education.

Greenhill, J., Richards, J. N., Mahoney, S., Campbell, N., & Walters, L. (2017). Transformative learning in medical education: Context matters, a South Australian longitudinal study. *Journal of Transformative Education*, *16*(1), 58–75. https://doi.org/10.1177/1541344617715710

Hodge, S. (2010). Trainers and transformation: Facilitating the "dark side" of vocational learning. *International Journal of Training Research*, *8*(1), 53–62.

Hodge, S. (2011). Learning to manage: Transformative outcomes of competency-based training. *Australian Journal of Adult Learning*, *51*(3), 498.

Hodge, S. (2019). Transformative learning for knowledge: From meaning perspectives to threshold concepts. *Journal of Transformative Education*. https://doi.org/10.1177/1541344618770030

Hoskins, B. J. (2013). Is distance learning transformational? *Journal of Continuing Higher Education*, *61*(1), 62–63. https://doi.org/10.1080/07377363.2013.759488

Hyland-Russell, T., & Syrnyk, C. (2015). Challenging change: Transformative education for economically disadvantaged adult learners. *International Journal of Lifelong Education*, *34*(5), 514–529. https://doi.org/10.1080/02601370.2015.1030349

Kegan, R. (2018). What "form" transforms? In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists . . . in their own words* (2nd ed., pp. 29–45). Routledge.

King, K. P. (2009). *The handbook of the evolving research of transformative learning, based on the learning activities survey*. Information Age.

Lockwood, F. (Ed.). (1994). *Materials production in open and distance learning*. Paul Chapman.

Lockwood, F. (1998). *The design and production of self-instructional materials*. Kogan Page.

Mälkki, K., & Green, L. (2014). Navigational aids: The phenomenology of transformative learning. *Journal of Transformative Education*, *12*(1), 5–24. https://doi.org/10.1177/1541344614541171

Meyers, S. A. (2008). Using transformative pedagogy when teaching online. *College Teaching*, *56*(4), 219.

Mezirow, J. (1990). *Fostering critical reflection in adulthood: A guide to transformative and emancipatory learning*. Jossey-Bass.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. Jossey-Bass.

Mezirow, J. (2000). *Learning as transformation: Critical perspectives on a theory in progress*. Jossey-Bass.

Mezirow, J. (2009). An overview of transformative learning. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists . . . in their own words*. (pp. 90–105). Routledge.

Mezirow, J. (2018). Transformative learning theory. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists . . . in their own words.* (2nd ed., pp. 114–128). Routledge.

Roessger, K. M. (2014). The effects of reflective activities on skill adaptation in a work-related instrumental learning setting. *Adult Education Quarterly: A Journal of Research and Theory*, *64*(4), 323–344. https://doi.org/10.1177/0741713614539992

Shearer, R., & Park, E. (2019). Theory to practice in instructional design. In M. G. Moore & W. C. Diehl (Eds.), *Handbook of distance education* (4th ed.). Routledge.

Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2009). *Teaching and learning at a distance: Foundations of distance education* (4th ed.). Pearson.

Snyder, C. (2008). Grabbing hold of a moving target: Identifying and measuring the transformative learning process. *Journal of Transformative Education*, *6*(3), 159–181. https://doi.org/10.1177/1541344608327813

Vai, M., & Sosulski, K. (2016). *Essentials of online course design: A standards-based guide* (2nd ed.). Routledge.

Wilhelmson, L., Åberg, M. M., Backström, T., & Olsson, B. K. (2015). Enabling transformative learning in the workplace: An educative research intervention. *Journal of Transformative Education*, *13*(3), 219–238. https://doi.org/10.1177/1541344615574599

Ziegler, M. F., Paulus, T. M., & Woodside, M. (2006). This course is helping us all arrive at new viewpoints, isn't it? Making meaning through dialogue in a blended environment. *Journal of Transformative Education, 4*(4), 302–319. https://doi.org/10.1177/1541344606294819

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Nichols, M., Choudhary, N., & Standring, D. (2020). Exploring transformative learning in vocational online and distance education. *Journal of Open, Flexible and Distance Learning, 24*(2), [43–55.].