

www.jostrans.org · ISSN: 1740-367X

Wu, D. & Wei, L. (2021). Online teaching as the new normal: Understanding translator trainers' self-efficacy beliefs. *The Journal of Specialised Translation, 36*, 301-326. https://doi.org/10.26034/cm.jostrans.2021.046

This article is publish under a *Creative Commons Attribution 4.0 International* (CC BY): https://creativecommons.org/licenses/by/4.0



© Di Wu, Lan Wei, 2021

Online teaching as the new normal: Understanding translator trainers' self-efficacy beliefs Di Wu, Guangdong University of Foreign Studies Lan Wei, The University of Auckland

ABSTRACT

The coronavirus disease (COVID-19) has turned most translator trainers around the world into online trainers, whether they were ready or not. With translator trainers gaining considerable first-hand experience from their remote teaching activities during COVID-19, this study set out to understand translator trainers' self-efficacy beliefs (e.g. trainers' judgement about their own abilities) regarding online teaching in the Australasian context. A total of 49 Australian and New Zealand translator trainers contributed to this study by completing an online survey, from which data about their demographic information, online teaching related experiences, and self-efficacy beliefs about online teaching were collected. Analyses of the data showed that the trainers did not have many opportunities to teach online before COVID-19. Similarly, they lacked experiences in professional training and self-study regarding online teaching. The trainers were generally not very confident in their abilities to teach translation online. The analyses also found that the trainers' self-efficacy beliefs about online teaching were more strongly correlated with some of their experiences (e.g. professional training, self-study, student feedback and student gain) than with other experiences (e.g. pre-pandemic online teaching, university support, and collegial help).

KEYWORDS

Self-efficacy beliefs, online teaching, translator trainers, survey, Australia, New Zealand, COVID-19.

1. Introduction

The outbreak of the coronavirus disease (COVID-19) and the uncertainty as regards when it will be under control have, to a large extent, led to the adoption of online teaching as the new normal for many educators around the world, including translator trainers. In fact, teaching translation online has been discussed and practised by translator trainers in some institutions for over a decade (e.g. Bartrina 2008, Duranton and Mason 2012, Kiraly et al. 2019, Schmit 2006). However, it seems that before COVID-19, online teaching had not been widely employed, as traditional face-to-face teaching was still prevalent around the world. Many translator trainers would probably not choose to teach online if they were at liberty to decide, because, for example, they may not have a developed understanding of online teaching, they may find online teaching technology daunting, or they may have established effective face-to-face teaching routines and they are reluctant to make changes. Indeed, making changes means putting extra effort into adapting and modifying existing pedagogical approaches, which could be demanding for some trainers. However, the sudden emergence of COVID-19 in late 2019 has forced translator trainers in many countries to move their teaching activities online regardless of their readiness or willingness to do so.

The shift from a traditional classroom-based teaching context to a virtual environment would inevitably bring about many challenges to translator trainers, especially those who had little or no experience in teaching remotely before COVID-19. Central to the adaptation to an online environment is the need to revisit one's underlying pedagogical assumptions, taking into account the distinct features of a virtual classroom. In a sense, online teaching redefines teachers' boundaries and assumes a different set of roles, such as being a tutor who offers online lectures and direct instructions, a mentor who encourages students and leads them to reflect on their online learning, and a facilitator who ensures students' active participation and knowledge co-construction in this new context (Ally 2019, Gambier 2012). As a result, online teaching requires a new pedagogical approach, which is arguably different to face-to-face pedagogical approaches. The adoption of this new approach entails that teachers would think and teach differently in the online environment (McFarlane 2011: 15, Scheq 2014: 140). For translator trainers, it would be unworkable to indiscriminately duplicate what they have used or planned for face-to-face teaching in the online environment. Instead, they need to take the spatial and temporal parameters of the virtual environment into consideration. This could be a trial-and-error process, and with many months of practice since the start of the COVID-19 pandemic, translator trainers would have established their own beliefs about online teaching.

Translator training is provided by many Australian and New Zealand universities. Based on our investigation, 20 of the 43 Australian universities and seven of the eight New Zealand universities offer translation programmes or courses. Before COVID-19, translator trainers in most of these universities were delivering courses face-to-face. The outbreak of the pandemic has brought the translator trainers into a situation that is no different to many other parts of the world. The first cases of COVID-19 were confirmed in these two countries in January and March 2020, respectively (Australian Government Department of Health 2020, New Zealand Ministry of Health 2020). Then with the confirmation of community transmission, the increase of positive cases, and the second waves of the pandemic, the two countries entered a nationwide or partial lockdown. This disruption has thrust their universities into a rapid transition to remote teaching and learning as the only way to remain functioning. As a result, most of the translator trainers, akin to other tertiary educators, have been teaching online for a number of months.

Considering the reality that online teaching may still be a necessary option for translator trainers in many countries for some time, and the likelihood that this teaching approach becomes a method that they may consider continuing to use in the post-pandemic context, it becomes important to gain some scholarly knowledge and understanding of translator trainers' teaching experiences and thoughts during the pandemic. By doing this, it could enable us to identify the initiatives that have successfully supported the online teaching practice of translator trainers, establish effective online translation pedagogies in the future, and bring about implications for the professional development of translator trainers.

2. Online teaching and teachers' self-efficacy beliefs

2.1 Challenges of online teaching

Teachers who can teach effectively in a traditional classroom, that is, an on-campus classroom where lectures are delivered face-to-face, may not automatically and immediately become effective online teachers (Boettcher and Conrad 2016). This is because the characteristics of an online teaching environment change not only the way teachers teach, but also the way students learn. To understand the unique nature of online teaching, it is important to identify some of the key features of online teaching and learning, as well as the challenges they bring to teachers.

First and foremost is the predominant presence of technology in online teaching and learning spaces. This does not only mean the conversion of hardcopy course materials into electronic forms, but also the virtualisation of teaching and learning activities (Arthur-Nyarko et al. 2020: 2989). Accordingly, interactions become diversified and more flexible in some respects (Wanstreet 2006). In a traditional classroom, the main channel of interaction for teachers and students is real-time verbal communications. Additionally, nonverbal expressions and actions, such as eye contact, facial expressions and body language also facilitate communication. In an online classroom, however, opportunities for both verbal and non-verbal communications would be less available, particularly in cases where no live streaming is involved. These constraints may be alleviated to some extent by alternative online interaction channels, such as emails and discussion forums, which provide opportunities for students to revisit what was covered in lectures. Moreover, student empowerment takes on new meaning in online learning, particularly when asynchronous teaching is involved. In such a teaching mode, learning needs to be conducted mainly independently with a higher level of learner autonomy, and also with more flexibility in terms of when and where students engage with the course content (Ribbe and Bezanilla 2013: 103). This allows for "learner independence and freedom, the development of personal responsibility, and better preparation for tests due to learner timing" (Lim 2016: 317); at the same time, the teachers are able to "serve students with varying levels of prerequisite knowledge or students who learn at different rates" (Lim 2016: 317). Used well, technology can therefore enhance several aspects of the teaching and learning experience, but it comes with a number of challenges.

Teachers need to re-evaluate and change the teaching approaches that they have been using in traditional classrooms and develop specific abilities so that they can teach effectively in an online environment. First, teachers need to tailor their materials and activities to fit the teaching mode, adopt practical methods for assessing students' progress and achievement online, and provide useful feedback to students through virtual channels (Espasa and Meneses 2010, Pezzino 2018). Second, some adjustment to teachers' social role is required. They need to use appropriate platforms and techniques to establish rapport with students, leverage the motivation and engagement of students who find online learning challenging, and so on (Wright (ed.) 2015, Hahn and Lester 2012). Moreover, teachers are faced with new questions in terms of virtual classroom management, how to maximise interactions and collaborations synchronously and asynchronously, etc. (Vonderwell et al. 2007: 309). Their technological literacy may also become an issue when they teach online. Teachers need to effectively use digital tools to prepare course materials, be familiar with online teaching platforms, and also solve technical problems that they or their students have. This complex set of circumstances has the potential to impact on teachers' confidence and self-perceptions.

2.2 Teachers' self-efficacy beliefs

Teachers' self-efficacy beliefs refer to the perceptions of the knowledge, skills and competences that teachers have to fulfil the duties of a teacher (Bolaños-Medina 2014; Haro-Soler 2019; Tschannen-Moran et al. 1998; Wu et al. 2019). It has been found that teachers with high levels of self-efficacy beliefs tend to be more committed to and enthusiastic about teaching and be more understanding of students' mistakes or misconducts; moreover, under educational reforms, these teachers are more willing to try pioneering methods and accept innovative ideas (Berg and Smith 2016, Lee et al. 2013, Lemon and Garvis 2016). These high levels of self-efficacy beliefs may also lead to better learning experiences in students, such as higher achievement, motivation, and engagement in learning (Caprara et al. 2006, Tschannen-Moran and Johnson 2011, Zee and Koomen 2016). In contrast, low levels of self-efficacy beliefs in teachers are believed to have a negative impact on their teaching behaviour and psychological well-being, as well as students' learning (Wyatt 2010). In short, high levels of self-efficacy beliefs could benefit both teachers themselves and their students. Since the wellbeing and professional development of teachers and the success of students are of paramount importance to every educational system, teachers' selfefficacy beliefs continue to be one of the major areas that educational researchers intend to explore.

Teachers' self-efficacy beliefs are believed to be developed from the following four main sources: enactive mastery experience, verbal persuasion, vicarious experience, and physiological and affective states (Bandura 1997: 79-115). Among the four sources, enactive mastery experience, that is, first-hand experience from performing a task, is the most concrete way for individuals to evaluate their self-efficacy as it is a direct indicator of their capabilities (Bandura 1997: 80). Individuals' self-efficacy beliefs about an area may be raised when they perform a relevant task successfully, and such beliefs could be reinforced when they experience this type of success repeatedly; conversely, failures in a task may lower

self-efficacy beliefs (Schunk and DiBenedetto 2014: 117). For example, teachers may develop a strong sense of belief about their abilities when their online teaching is a success, but they may have low levels of self-efficacy beliefs if their online teaching does not unfold according to their expectations. Verbal persuasion, mainly positive feedback while performing a task, can also make a person believe that they are capable of succeeding. In addition, the observations of others who are similar to oneself completing a task, and the positive interpretation of emotional and physical reactions in a task, can act as vicarious experience and physiological and affective states to boost self-efficacy beliefs (Bandura 1997: 86-115).

Teachers' self-efficacy beliefs are domain and context-specific (Bandura 2006: 310). Self-efficacy beliefs are not a general disposition void of context, but a person's self-judgment that is specifically related to the activity domain. As such, high levels of self-efficacy beliefs in one domain do not guarantee the same levels of self-efficacy beliefs in another (Artino 2012: 79). For example, a teacher may display high levels of self-efficacy beliefs about face-to-face teaching, but they may not necessarily feel efficacious about online teaching. Therefore, teachers' self-efficacy beliefs should be measured in relation to particular areas (e.g. self-efficacy beliefs about classroom management and instructional strategies) rather than general issues (e.g. self-efficacy beliefs about teaching more widely).

2.3 Teachers' self-efficacy beliefs about online teaching

Teachers' self-efficacy beliefs about online teaching have been underexplored in comparison with their self-efficacy beliefs in face-to-face teaching contexts. Existing studies have focused on the influence of selfefficacy beliefs on teachers' intention to teach online, the changes in teachers' self-efficacy beliefs after receiving professional training, and the association between teachers' self-efficacy beliefs and their demographics and experience (see for instance the review by Corry and Stella 2018).

There are only a few studies that examine the association between teachers' self-efficacy beliefs about online teaching and their demographics and experience, and the findings are mixed. On the one hand, studies present contradictory findings. For example, Horvitz *et al.* (2015) found that female teachers tend to have higher levels of self-efficacy beliefs about online student engagement, while Robinia and Anderson's study (2010) did not show any significant gender differences when examining the online teaching efficacy of nurse educators. On the other hand, a number of studies found similar results worth investigating further. For example, there is evidence that teachers' online self-efficacy beliefs are correlated with their online teaching experience, that is, teachers with more online teaching experience tend to have higher levels of relevant beliefs (Robinia and Anderson 2010, Horvitz *et al.* 2015, Lee and Tsai 2010). The mixed findings in the area of self-efficacy research could be a result of the small number of studies

conducted to date. Patterns across studies cannot yet be identified based on such limited evidence.

Generally, researchers tend to use Likert scales to measure teachers' selfefficacy beliefs. In such scales, teachers are asked to rate their confidence in various areas, such as online student engagement, online instructional strategies, online classroom management, and the use of computers (Robinia and Anderson 2010). However, previous scales were either designed for face-to-face contexts (e.g. Dellinger *et al.* 2008, Tschannen-Moran and Hoy 2001) or for discipline-specific online teaching, for example, The Michigan Nurse Educators Sense of Efficacy for Online Teaching (Robinia 2008). In addition, existing scales were mostly developed over a decade ago, and considering the rapid development of technology, these scales may not accurately reflect current online teaching contexts.

In sum, due to the scarcity of research in this area, there is a need for studies on translator trainers' beliefs about online teaching in particular. In addition, because existing scales may not be adequate to assess translator trainers' self-efficacy beliefs about online teaching, it is necessary to develop instruments specifically for translator trainers.

3. Methodology

3.1 Research questions

The study reported here was guided by the following questions:

- 1. What experiences of online teaching do the translator trainers in this study have?
- 2. What levels of self-efficacy beliefs about online teaching do the translator trainers in this study exhibit?
- 3. Are there any associations between the self-efficacy beliefs about online teaching and the experiences of online teaching of the translator trainers in this study?

3.2 Instrument

This exploratory study¹ adopted a quantitative approach to collect data using a self-efficacy beliefs scale (See Appendix 1). The scale includes the following three sections:

Section One – Demographic information: contains seven items, including gender, age group, academic rank, and highest degree, among other items.

Section Two — **Experiences of online teaching:** contains seven items, addressing: pre-pandemic online teaching, university support, professional training, collegial help, self-study, student feedback and student gain.

Section Three – Beliefs about online teaching: contains a multi-item scale that includes 18 items about self-efficacy beliefs in relation to the following four dimensions:

- Pedagogical: course design, assessment, feedback and translation tasks (items 3.1, 3.5, 3.9, 3.13, 3.17).
- Social: leveraging trainee's motivation and engagement, and communication (items 3.2, 3.6, 3.10, 3.14).
- Managerial: teaching routine, discussion, collaboration, and student responsibilities (items 3.3, 3.7, 3.11, 3.15).
- Technical: solving technological problems, using digital tools and platforms (items 3.4, 3.8, 3.12, 3.16, 3.18).

Guided by Dörnyei and Taguchi (2010), the following five steps were taken to develop the scale.

1)Sections One and Two of the scale were developed first. The authors generated the questions based on the foci of the sections, namely trainers' demographics for Section One, and trainers' online teaching related experiences before and during COVID-19 for Section Two.

In terms of the development of Section Three, the following procedures were adopted.

- 2) An item pool was created by the authors. It included items from relevant scales (i.e. Gosselin 2009, Robinia 2008), totalling 78 items. Given the large number of items in the pool, the authors selected the items that were most appropriate for this study based on the following criteria: (a) the items reflected any of the four skill dimensions for online translation teaching: pedagogical, social, managerial, and technical; and (b) the skills were essential for effective online teaching, as suggested in the literature (see Section 2.1). A total of 24 items were selected at this stage.
- 3) The selected items were then modified by the authors to ensure they were (a) suitable for the specific research context, namely online translation teaching; and (b) aligned with the way questions were asked in this study, that is, "*How confident are you that* ...". For example, one of the original items, "*In the context of online courses, I can encourage my students to ask questions*", was modified as "*How confident are you that you can encourage students to ask questions in an online translation course?*"
- 4) Two external experts were invited to a group discussion with the authors to check the face validity and content validity of the scale. They scrutinised the rationale for the four dimensions, and checked the items one by one to determine whether they matched the dimensions that the section was intended to measure and whether the items were

representative of the dimensions. This led to the elimination of six items.

The three sections of the scale were then transferred to a google form, with a general introduction to the scale at the beginning.

5) Then, a pilot study was conducted with four translator trainers. They were asked to complete the online scale and note any items that they felt were unreadable or unclear due to, for example, double-barrelled terms or vague phrasing. They were also asked to comment on the format and any other aspects of the scale that they thought should be improved. The issues raised by the pilot group were then solved by the authors and the scale was finalised.

Because Section Three is a multi-item scale, the reliability of this section was also checked by examining the internal consistency (Cronbach's a) of the items after the data were collected. The analysis showed acceptable levels of internal consistency as both the alpha statistic of the section (a = .85) and those of the four dimensions (a ranged from .61 to .69) were above .60 (Dörnyei and Taguchi 2010: 95).

3.3 Data collection

The survey targeted translator trainers in Australian and New Zealand universities, and the data were collected in September 2020. The following steps were taken for data collection. First, potential respondents and their email addresses were identified. The authors used two government websites (i.e. Australian Trade and Investment Commission 2020, Education New Zealand 2020) to identify the universities and their official websites. Then, they used the search function and staff directory on the websites, or went directly to the homepages of relevant schools, to identify translator trainers based on the available information of staff's publicly visible profiles, biographies, areas of expertise, teaching courses, research interests, and publications. In the end, a total of 143 potential respondents were identified, including 116 from Australia and 27 from New Zealand. Then, an invitation email with a link to the online survey - a google form - was sent to each of the translator trainers. Through the link, potential participants could find the Participant Information Sheet, and the scale. Those who were interested completed the survey voluntarily. One week after the initial contact, another follow-up email was sent to the same group of translator trainers² to invite those who had not responded to complete the survey.

3.4 Respondents

A total of 49 translator trainers completed the survey. The response rate was 34.27%. Considering that online surveys typically have a response rate of around 30% (Gillham 2008), and that this exploratory study was not

~/

		No.	%		
Gender	Female	31	63.3		
	Male	18	36.7		
Age group	20-29	1	2.0		
	30-39	6	12.2		
	40-49	24	49.0		
	50-59	7	14.3		
	≥ 60	11	22.4		
Academic rank	Lecturer/Research Fellow	24	49.0		
	Senior Lecturer/Senior Research Fellow	14	28.6		
	Associate Professor/Reader	5	10.2		
	Professor	5	10.2		
	Other	1	2.0		
Highest	Bachelor	1	2.0		
degree	Master	6	12.2		
	Doctoral	42	85.7		
Course level	Undergraduate	17	34.7		
taught	Postgraduate	22	44.9		
-	Both	10	20.4		
Years of	≤ 5	17	34.7		
translation	6-10	11	22.4		
teaching	11-15	8	16.3		
experience	16-20	6	12.2		
	≥ 21	7	14.3		
University	Australia	35	71.4		
location	New Zealand	14	28.6		
Table 1. Demographic information of the respondents $(n = 49)$					

intended to generalise the results, the response rate was considered satisfactory. Table 1 shows the demographic information of respondents.

Table 1. Demographic information of the respondents (*n* = 49)

3.5 Data analysis

The data for the self-efficacy beliefs scale were analysed using SPSS (Windows version 23.0.0.0). Descriptive statistics, including arithmetic means (M) and standard deviations (SD), were calculated to answer the study's research questions 1 and 2. Correlation analyses were conducted to answer question 3.

4. Results

4.1 Translator trainers' experiences of online teaching

A range of questions about the experiences of online teaching was asked of the respondents, and descriptive statistics for responses to these questions are shown in Table 2. It can be seen that, at a group level, the trainers generally had very little online teaching experience before COVID-19 (M =

2.25). In terms of their other online teaching related experiences, the trainers had received very little professional training in relation to online teaching (M = 2.59) and conducted limited self-study on it (M = 2.86). However, they reported that they had received some collegial help (M = 3.08), as well as some support from their universities (M = 3.45). The trainers also reported that they had heard some positive feedback from their students (M = 3.57), and they generally believed that their students learned a lot from their online courses (M = 3.92).

Experiences	М	SD	
Pre-pandemic online teaching	2.25	1.15	
University support	3.45	.89	
Professional training	2.59	.81	
Collegial help	3.08	1.00	
Self-study	2.86	1.19	
Student feedback	3.57	1.08	
Student gain	3.92	.67	

Table 2. Descriptive statistics of respondents' experiences (n = 49)

4.2 Translator trainers' self-efficacy beliefs about online teaching

A set of questions was used to elicit responses regarding trainers' selfefficacy beliefs about online teaching. The results are presented in Table 3. The data show that the trainers were moderately confident about online teaching in general (M = 3.22). However, they exhibited different levels of self-efficacy beliefs in terms of the four dimensions of online teaching. Pedagogical self-efficacy beliefs (M = 3.57) appeared to be rated the highest, followed by managerial (M = 3.21) and social (M = 3.18) selfefficacy beliefs. Compared to these three dimensions, technical self-efficacy beliefs (M = 2.93) were at a lower level. These results showed that the trainers were generally more confident about their abilities to deliver the course content, manage an online classroom and build interpersonal relationships, but were less confident about dealing with the technical issues involved in online teaching.

Self-efficacy beliefs	М	SD
Pedagogical	3.57	.64
Social	3.18	.65
Managerial	3.21	.70
Technical	2.93	.68
Total	3.22	.52

Table 3. Descriptive statistics of respondents' self-efficacy beliefs (n = 49)

To be more specific, with regard to pedagogical self-efficacy beliefs, the trainers gave the highest ratings to the items relating to providing feedback to students (M = 3.98) and preparing course materials (M = 3.61); this was followed by items relating to setting appropriate tasks for online courses (M = 3.55) and assessing students' performance at the end of the course (M = 3.55)

3.49). In comparison, they demonstrated the lowest level of self-efficacy beliefs about assessing students' achievement throughout the course (M = 3.20).

In terms of social self-efficacy beliefs, the trainers had a higher level of selfefficacy beliefs about maintaining effective communication with students (M = 3.65) and encouraging students to ask questions (M = 3.25); but they were relatively less confident in promoting the engagement of students who showed low interest in online translation learning (M = 2.98) and motivating those who found online translation learning challenging (M = 2.86).

In terms of their managerial self-efficacy beliefs, the trainers were somewhat equally moderately confident in performing the tasks related to management. Indeed, similar middling ratings were given to establishing course routines (M = 3.37), ensuring quality discussions (M = 3.27), creating collaboration opportunities (M = 3.12) and requiring students to take responsibility for their learning (M = 3.10).

In comparison, the trainers showed some variation in terms of their technical self-efficacy beliefs. They gave higher ratings to using online platforms (M = 3.43), using proper technological representations to deliver course content (M = 3.33), and fixing technical issues when preparing course materials (M = 3.08); but gave lower ratings to fixing real-time technical issues for themselves (M = 2.53) and their students (M = 2.29).

4.3 Translator trainers' self-efficacy beliefs and experiences

The correlations between the translator trainers' self-efficacy beliefs and their experiences were also investigated. A visual inspection of the data was conducted first to examine the relationships between the translator trainers' self-efficacy beliefs and their experiences and it was concluded that all pairs of association showed evidence of a monotonic relationship. An examination of data distribution showed that the data relating to the trainers' seven aspects of experiences, and the data relating to the managerial dimension and the overall self-efficacy beliefs were not normally distributed, as indicated by the statistically significant p values in the Shapiro-Wilk test. The data of the pedagogical, social, and technical dimensions were normally distributed. Based on this information, it was determined that the data met the assumptions for the non-parametric Spearman's correlation analysis. Therefore, Spearman's correlation coefficients between the trainers' experiences and their self-efficacy beliefs were calculated. The results are shown in Table 4.

Of the range of experiences being asked of the trainers, some were identified to have stronger correlations with the trainers' overall self-efficacy beliefs. The strongest correlations were $r_s = .53$, .51 for professional training and student gain, followed by $r_s = .37$, .31 for student feedback, and self-study. The other experiences, including pre-pandemic

online teaching, university support and collegial help, were found to have relatively weak correlations ($r_s < .20$) with the trainers' overall self-efficacy beliefs. In terms of the correlations between the trainers' experiences and the four dimensions of their self-efficacy beliefs, the results were similar. The correlations between professional training and the four dimensions were higher than .30 ($r_s = .51$, .48, .36 and .35, for pedagogical, social, managerial and technical, respectively). The correlations between student gain and the four dimensions were also above .30 ($r_s = .40$, .52, .44 and .31 for pedagogical, social, managerial and technical, managerial and technical, respectively). Another aspect that was found to have higher than .30 correlations was student feedback ($r_s = .57$ for pedagogical and $r_s = .34$ for social). The other experiences, such as the amount of support the trainers received from universities and colleagues, and their pre-pandemic online teaching experience, all show a correlation coefficient of less than .30.

	Pedagogical	Social	Managerial	Technica	l Total
Pre-pandemic online teaching	.21	.17	.06	15	.11
University support	15	.10	.09	.12	.01
Professional training	.51	.48	.36	.35	.53
Collegial help	.10	.12	.26	.10	.18
Self-study	.15	.18	.29	.11	.31
Student feedback	.57	.34	.23	.06	.37
Student gain	.40	.52	.44	.31	.51

Table 4. The correlations between experiences and self-efficacy beliefs (n = 49)

5. Discussion

This study first set out to describe the sampled Australian and New Zealand translator trainers' online teaching experiences. The findings showed that they had not gained much online teaching experience before COVID-19. This is probably because in the Australian and New Zealand tertiary context, translation courses were generally offered on campus before COVID-19, and therefore, the trainers may have had few opportunities to teach online. Similarly, they had neither received much in the way of professional training nor done much independent study on the topic of online teaching. One possible reason could be that they were not motivated to do these activities before the pandemic, as the major form of teaching was face-to-face. Another potential reason for their lack of readiness could be that the unpredictability of COVID-19 brought many unexpected challenges to the trainers that they could not have prepared for. Many regions in Australia and New Zealand went into lockdown multiple times in 2020. By the time of the present study, ensuring a smooth transition to online teaching was still the main focus of translator trainers, and their past or present professional training and self-study for online teaching may not have been at the forefront of their minds.

The findings also indicated that the translator trainers had a moderate level of self-efficacy beliefs about online teaching in general (M = 3.22, 3 being

equivalent to "somewhat confident"). In other words, after a few months of online teaching practice, the trainers were still not very confident in delivering translation courses online. This is not surprising as related experience plays an important role in developing individuals' self-efficacy beliefs (Bandura 1997). For the trainers in this study, a few months of online teaching may not have been sufficient for developing a high level of selfconfidence in relation to online teaching.

When looking more specifically at the four dimensions of their self-efficacy beliefs, it was found that the trainers were most confident in their pedagogical abilities, as shown by the highest mean of 3.57 (i.e. close to 4, which is equivalent to "quite confident"). This seems reasonable because most of the trainers (n = 32, 65%) had more than five years of translation teaching experience (see Table 1). Trainers with some years of teaching experience would normally have gained adequate pedagogical knowledge and feel confident in their pedagogical abilities (Horvitz et al. 2015). In terms of the five aspects of their pedagogical beliefs, the trainers were almost certain that they could provide detailed feedback to students (M =3.98). This is probably because their abilities to provide feedback were less prone to the influence of the online environment because they would be essentially using their existing knowledge to perform this task. Interestingly, while these trainers were more confident in assessing students at the end of the course (M = 3.49), they were less confident about their abilities to conduct ongoing assessment throughout the course (M =3.20). Presumably, continuous assessment in online teaching could be based on students' synchronous and asynchronous discussions, or their collaborative or individual course assignments. Therefore, more evidence is warranted to understand why the trainers believed continuous assessment was more of a challenge for them.

The trainers were somewhat optimistic about their social and managerial skills for online teaching, as indicated by the higher than three mean ratings of 3.18 and 3.21, respectively. Amongst the social aspects, the trainers were less confident in their abilities to promote students' engagement and leverage students' motivation (M = 2.98 and 2.86). This is in line with findings from previous studies, which also showed that teachers tended to have relatively low self-efficacy beliefs in these aspects (Horvitz et al. 2015, Robinia and Anderson 2010). In a traditional classroom, one way for teachers to improve students' motivation and engagement is by building rapport through actively listening to students, offering verbal persuasion, and providing direct assistance (Guay et al. 2003, Zimmerman 2000). In comparison, in an online environment, the absence of face-to-face communication in asynchronous teaching may make it almost unrealistic for the trainers to pick up nonverbal signals that indicate trainees' disengagement, unenthusiasm or frustration, and this in turn may lead to less successful rapport building. Similarly, in synchronous teaching, although picking up students' nonverbal signals becomes possible through cameras, it could be less effective than in face-to-face interactions. In other words, the online environment might hinder the trainers from performing their facilitator role and prevent them from being as sociable and attentive to the trainees as might otherwise be the case. An additional barrier could be that, in asynchronous teaching, communication often takes the form of emails and discussion boards/forums, and consequently the trainers may find it difficult to express enthusiasm, encouragement or concern in an effective way. This highlights the necessity of professional training and development for the trainers, from which they could learn key strategies for promoting students' engagement and leveraging students' motivation remotely, for instance with well thought-through activity-based discussion exercises (Mooney *et al.* 2014).

The trainers were least confident in their technical abilities in general, as evidenced by the low overall mean rating (M = 2.93). There was also some variation among the five technical aspects identified. As expected, the trainers somewhat believed in their abilities to use technological representation (M = 3.33) and online teaching platforms (M = 3.43). The reason could be that learning management systems (LMS), such as Canvas, Moodle and Blackboard, have been implemented by many Australian and New Zealand universities for some years. It has generally become compulsory for lecturers to use LMS to create, distribute, and manage course content, although lectures had been taking place in a face-to-face classroom. When teaching online, their familiarity with the technologies and platforms at least ensured that they had a moderate level of self-efficacy beliefs about these aspects.

An interesting finding was that the trainers in the present study were more comfortable with fixing technical issues when preparing course materials (M = 3.08) than when they were teaching (M = 2.53). The trainers were also less confident about helping students with their technical issues (M = 2.29). This could be because, when preparing course materials, teachers were able to seek support from others, such as their universities and colleagues (see Table 2). However, asking for external assistance is more complicated when teaching, and the trainers have to solve the technical problems independently on site. It therefore makes sense that they believed themselves less capable of dealing with these issues.

The findings also indicated that the trainers' self-efficacy beliefs about online teaching were associated with some of their past and current online teaching experiences, including professional training, self-study, student feedback and student gain. The results seemed to indicate that the trainers with more professional training, or with more self-study, tended to have a relatively higher level of self-efficacy beliefs about online teaching. Likewise, those who received more positive feedback from their students, or those who had a stronger sense that their students gained a lot from their online teaching, were more likely to show a higher level of self-efficacy beliefs about online teaching. However, due to the exploratory nature of the current study, the results cannot determine whether or not these experiences had a direct impact on the trainers' self-efficacy beliefs. Future studies aiming to identify causal relationships between translator trainers' experiences and self-efficacy beliefs about online teaching could consider these potential factors.

6. Limitations and Conclusion

As one of the first attempts to explore translator trainers' self-efficacy beliefs about online teaching, this study inevitably has some limitations. First, the findings of the study can be further strengthened if the construct validity of the scale could be established. To establish construct validity, factor analysis would need to be conducted to examine whether or not the 19 items in Section Three of the scale were in fact measuring the four underlying dimensions. This kind of analysis generally requires a large sample size³, larger than the target population of this study (there were approximately 150 translator trainers in Australian and New Zealand universities, according to our investigation). The second limitation is that due to the exploratory nature of this study, the findings may not be generalised to a larger population. Another limitation is the potential respondent bias in the data which is caused by the tendency of respondents not to respond passively to stimuli in self-reported surveys (Creswell 2010: 391). Some other types of data, such as data from interviews and qualitative questionnaires, could also potentially be used to triangulate the findings of the current study.

These limitations aside, the present study provides interesting and relevant information regarding the self-efficacy beliefs about online translation teaching of a sample of Australian and New Zealand translator trainers. The findings showed that the translator trainers lacked pre-pandemic online teaching experience, and that their professional training and self-study for online teaching were also limited. The findings also showed that, at a group level, the translator trainers were somewhat confident in their abilities to teach online. These trainers believed that they were more capable of performing pedagogical duties, communicating with students, and managing an online classroom, but were less able to deal with the technical issues involved in online teaching. In this study, the trainers' self-efficacy beliefs were significantly correlated with their professional training experiences, their self-evaluation of student gain, the amount of positive feedback they received from students, and their self-study on the topic of online teaching.

Acknowledgements

This study is supported by the Centre for Translation Studies of Guangdong University of Foreign Studies (Fund No. CTSZB201905) and the Fund of Key Research Projects of Humanities and Social Sciences in Colleges and Universities of Guangdong Province (2018WZDXM010). We would like to thank all the translator trainers who completed the survey.

References

- Ally, Mohamed (2019). "Competency Profile of the Digital and Online Teacher in Future Education." International Review of Research in Open and Distributed Learning 20(2), 302-318.
- Arthur-Nyarko, Emmanuel, Douglas Darko Agyei and Justice Kofi Armah (2020). "Digitising distance learning materials: Measuring students' readiness and intended challenges." *Education and Information Technologies* 25, 2987-3002.
- Artino, Anthony R. (2012). "Academic self-efficacy: From educational theory to instructional practice." *Perspectives on Medical Education* 1, 76-85.
- **Bandura, Albert** (1997). *Self-efficacy: The Exercise of Control.* New York, NY: Freeman.
- **Bandura, Albert** (2006). "Guide for constructing self-efficacy scales." Frank Pajares and Timothy C. Urdan (eds) (2006). *Self-efficacy Beliefs of Adolescents*. Greenwich: Information Age Publishing, 307-337.
- **Bartrina, Francesca** (2008). "Teaching subtitling in a virtual environment." Jorge Díaz-Cintas and Gunilla Anderman (eds) (2008). *Audiovisual Translation: Language Transfer on Screen*. Basingstoke: Palgrave Macmillan, 229-239.
- Berg, David A. G. and Lisa F. Smith (2016). "Preservice teacher self-efficacy beliefs." Susanne Garvis and Donna Pendergast (eds) (2016). *Asia-Pacific Perspectives on Teacher Self-efficacy*. Rotterdam: Sense Publishers, 1-17.
- **Boettcher, Judith V. and Rita-Maria Conrad** (2016). *The Online Teaching Survival Guide: Simple and Practical Pedagogical Tips (2nd Edition).* San Francisco, CA: Jossey-Bass.
- **Bolaños-Medina, Alicia** (2014). "Self-efficacy in translation." *Translation and Interpreting Studies* 9(2), 197-218.
- **Caprara, Gian Vittorio** *et al.* (2006). "Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level." *Journal of School Psychology* 44, 473-490.
- **Corry, Michael and Julie Stella** (2018). "Teacher self-efficacy in online education: A review of the literature." *Research in Learning Technology* 26, 1-12.
- **Creswell, John W.** (2010). *Educational Research: Planning, Conducting and Evaluating Quantitative and Qualitative Research.* 4th Ed. Boston, MA: Pearson.
- **Dellinger, Amy B.** *et al.* (2008) "Measuring teachers' self-efficacy beliefs: development and use of the TEBS-Self." *Teaching and Teacher Education* 24(3), 751–766.
- Dörnyei, Zoltán and Tatsuya Taguchi (2010). *Questionnaires in Second Language Research: Construction, Administration, and Processing*. New York, NY: Routledge.
- **Duranton, Hélène and Adrienne Mason** (2012). "The loneliness of the long distance learner: Social networking and student support. A case study of the distance-learning MA in translation at Bristol University." *Open Learning: The Journal of Open, Distance and e-Learning* 27(1), 81-87.

- Espasa, Anna and Julio Meneses (2010). "Analysing feedback processes in an online teaching and learning environment: An exploratory study." *Higher Education* 59, 277–292.
- **Gambier, Yves** (2012). "Teaching translation/training translators." Yves Gambier and Luk van Doorslaer (eds) (2012). *Handbook of Translation Studies: Volume 3*. Amsterdam/Philadelphia: John Benjamins, 163-171.
- Gillham, Bill (2008). Developing a Questionnaire. 2nd Ed. London: Continuum.
- **Gosselin, Kevin P.** (2009). *Development and Psychometric Exploration of the Online Teaching Self-efficacy Inventory*. PhD thesis. Texas Tech University.
- **Guay, Frédéric, Herbert W. Marsh and Michel Boivin** (2003). "Academic selfconcept and academic achievement: Developmental perspectives on their causal ordering." *Journal of Educational Psychology* 95, 124-136.
- Hahn, Trudi Bellardo and June Lester (2012). "Faculty needs and preferences for professional development." *Journal of Education for Library and Information Science* 53(2), 82–97.
- **Haro-Soler, Maria del Mar** (2019). "Vicarious learning in the translation classroom: how can it influence students' self-efficacy beliefs?" *English Studies at NBU* 5(1), 92-113.
- Horvitz, Brian S. et al. (2015). "Examination of faculty self-efficacy related to online teaching." Innovative Higher Education 40, 305–316.
- **Kiraly, Don** *et al.* (2019). "Enhancing translation course design and didactic interventions with e-learning: Moodle and beyond." Donald Kiraly and Gary Massey (eds) (2019). *Towards Authentic Experiential Learning in Translator Education.* 2nd Ed. Cambridge: Cambridge Scholar Publishing, 103-130.
- Kline, Rex B. (2016). *Principles and Practice of Structural Equation Modeling.* 4th Ed. New York: Guilford Press.
- Lee, Min-Hsien and Chin-Chung Tsai (2010). "Exploring teachers' perceived selfefficacy and technological pedagogical content knowledge with respect to educational use of the World Wide Web." *Instructional Science* 38, 1–21.
- Lee, Bridget, Stephanie Cawthon and Kahryn Dawson (2013). "Elementary and secondary teacher self-efficacy for teaching and pedagogical conceptual change in a drama-based professional development program." *Teaching and Teacher Education* 30, 84-98.
- Lemon, Narelle and Susanne Garvis (2016). "Pre-service teacher self-efficacy in digital technology." *Teachers and Teaching* 22(3), 387-408.
- Lim, Janine M. (2016). "Predicting successful completion using student delay indicators in undergraduate self-paced online courses." *Distance Education* 37(3), 317-332.
- **McFarlane, Donovan A.** (2011). "A Comparison of Organizational Structure and Pedagogical Approach: Online versus Face-to-Face." *The Journal of Educators Online* 8(1), 1-43.

- **Mooney, Mara, Sheryne Southard and Christie H. Burton** (2014). "Shifting from obligatory discourse to rich dialogue: Promoting student interaction in asynchronous threaded discussion postings." *Online Journal of Distance Learning Administration* 17(1). <u>https://www.learntechlib.org/p/155628/</u> (consulted 17.03.2021)
- **Pezzino, Mario** (2018). "Online assessment, adaptive feedback and the importance of visual learning for students. The advantages, with a few caveats, of using MapleTA." *International Review of Economics Education* 28, 11-28.
- **Ribbe, Elisa and María-José Bezanilla** (2013). "Scaffolding learner autonomy in online university courses." *Digital Education Review* 24, 98-113.
- **Robinia, Kristi A.** (2008). *Online Teaching Self-Efficacy of Nurse Faculty Teaching in Public, Accredited Nursing Programs in The State of Michigan*. PhD thesis. Western Michigan University.
- Robinia, Kristi A. and Mary L. Anderson (2010). "Online teaching efficacy of nurse faculty." *Journal of Professional Nursing* 26(3), 168–175.
- Scheg, Abigail G. (2014). *Reforming Teacher Education for Online Pedagogy Development*. Hershey, PA: Information Science Reference.
- Schmit, Christine (2006). "Distance and online courses for translators." *Translation Journal* 10(2). <u>https://translationjournal.net/journal/36distance.htm</u> (consulted 17.04.2021).
- Schunk, Dale H. and Maria K. DiBenedetto (2014). "Academic self-efficacy." Michael J. Furlong, Rich Gilman and E. Scott Huebner (eds). *Handbook of Positive Psychology in Schools*. New York, NY: Routledge, 115-130.
- Tschannen-Moran, Megan and Anita Woolfolk Hoy (2001). "Teacher efficacy: Capturing an elusive construct." *Teaching and Teacher Education* 17(7), 783–805.
- Tschannen-Moran, Megan, Anita Woolfolk Hoy and Wayne K. Hoy (1998). "Teacher efficacy: Its meaning and measure." *Review of Educational Research* 68(2), 202–248.
- Tschannen-Moran, Megan and Denise Johnson (2011). "Exploring literacy teachers' self-efficacy beliefs: Potential sources at play." *Teaching and Teacher Education* 27(4), 751-761.
- Vonderwell, Selma, Xin Liang and Kay Alderman (2007). "Asynchronous discussions and assessment in online learning." *Journal of Research on Technology in Education* 39(3), 309-328.
- Wanstreet, Constance E. (2006). "Interaction in online learning environments: A review of the literature." *The Quarterly Review of Distance Education* 7(4), 339-411.
- Wright, Robert D. (ed.) (2015). *Student-teacher Interaction in Online Learning Environments*. Hershey, PA: Information Science Reference.
- Wu, Di, Lan Wei and Aiping Mo (2019). "Training translation teachers in an initial teacher education programme: A self-efficacy beliefs perspective." *Perspectives* 27(1), 74-90.
- Wyatt, Mark (2010). "An English teacher's developing self-efficacy beliefs in using groupwork." System 38(4), 603-613.

- Zee, Marjolein and Helma M. Y. Koomen (2016). "Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research." *Review of Educational Research* 86(4), 981–1015.
- Zimmerman, Barry J. (2000). "Self efficacy: An essential motive to learn." Contemporary Educational Psychology 25, 82-91.

Websites

- Australian Government Department of Health. https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-healthalert/coronavirus-covid-19-current-situation-and-case-numbers#at-a-glance (consulted 15.10.2020).
- Australian Trade and Investment Commission. https://www.studyinaustralia.gov.au/English/Australian-Education/Universities-Higher-Education/list-of-australian-universities (consulted 20.9.2020).
- Education New Zealand. <u>https://www.studyinnewzealand.govt.nz/study-options/universities/</u> (consulted 20.9.2020).
- New Zealand Ministry of Health. <u>https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus</u> (consulted 15.10.2020).

Appendix 1. The scale used in this study

Dear colleague,

We are researchers from the University of Auckland and we are conducting a study on translation teachers' beliefs about online teaching. We believe that the recent outbreak of COVID-19 has led to the shift to online teaching of translation courses as the new normal, and we are keen to understand the beliefs about online translation teaching that Australian and New Zealand university translation teachers have. Therefore, we kindly invite you to take part in this study and complete this survey. There are three sections, namely demographic information, experience of online teaching, and beliefs about online translation teaching, with a total number of 31 questions. It will take 5-10 minutes to complete the survey.

We would really appreciate your participation in this study and we look forward to receiving your responses. For more information, please see the Participant Information Sheet (PIS). Thank you!

Link to PIS: (link)

Do you agree to participate in the study by completing this survey?

- o I agree
- I do not agree

1. Demographic Information

- 1.1 Gender:
- Female
- Male
- Gender diverse
- 1.2 Age:
- o 19 or less
- o **20-29**
- o **30-39**
- o **40-49**
- o **50-59**
- o 60 or above
- 1.3 Academic title:
- Tutor/Associate Lecturer/Research Associate
- Lecturer/Research Fellow
- Senior Lecturer/Senior Research Fellow
- Associate Professor/Reader
- Professor
- o Other
- 1.4 Highest degree:
- o Bachelor
- o Master
- o Doctoral
- 1.5 The level of the translation course(s) that you are teaching:
- Undergraduate
- Postgraduate
- o Both
- 1.6 Translation teaching experience:
- 5 years or less
- 6-10 years
- o 11-15 years
- o 16-20 years
- 21 years or more
- 1.7 Your university is in:
- Australia
- New Zealand

2. Experiences of Online Teaching

2.1 How much online teaching experience did you have before the COVID-19?

- Nothing at all
- Very little
- o Some
- Quite a bit
- A great deal

2.2 How much support for online teaching have you received from your university (e.g., staff services, IT services)?

- Nothing at all
- Very little
- o Some
- Quite a bit
- A great deal

2.3 How much training for online teaching (e.g., seminars, courses) have you received?

- Nothing at all
- Very little
- o Some
- Quite a bit
- A great deal

2.4 How much help for online teaching have you received from colleagues?

- Nothing at all
- Very little
- o Some
- Quite a bit
- A great deal

2.5 How much self-study on online teaching (e.g., reading related books or articles) have you done?

- Nothing at all
- Very little
- o Some
- Quite a bit
- A great deal

2.6 How much positive feedback about your online teaching have you received from students?

- Nothing at all
- Very little
- o Some
- Quite a bit
- A great deal

2.7 How much do you think your students have learned from your online translation course(s)?

- Nothing at all
- Very little
- o Some
- Quite a bit
- A great deal

3. Beliefs about Online Teaching

3.1 How confident are you that you can prepare materials that are suitable for an online translation course?

- Not at all confident
- Slightly confident

- Somewhat confident
- Quite confident
- Extremely confident

3.2 How confident are you that you can promote students' engagement when they show low interest in online translation learning?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.3 How confident are you that you can get students to follow established routines for an online translation course (e.g., finishing assignments, attending real-time sessions)?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.4 How confident are you that you can fix the technical issues that you have when you are teaching online?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.5 How confident are you that you can use appropriate methods to continuously assess students' performance throughout an online translation course?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.6 How confident are you that you can have effective communication (written and/or oral) with students online?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.7 How confident are you that you can get students to have quality discussions in an online translation course?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.8 How confident are you that you can fix the technical issues that you have when you are preparing course materials?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.9 How confident are you that you can provide students with detailed feedback on their translation assignments?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.10 How confident are you that you can encourage students to ask questions in an online translation course?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.11 How confident are you that you can get students to collaborate effectively in an online translation course?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.12 How confident are you that you can use proper technological representations (e.g., multimedia, visual demonstrations) to demonstrate your online translation course content?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.13 How confident are you that you can use appropriate methods (e.g., tests, coursework) to assess students' achievement at the end of an online translation course?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.14 How confident are you that you can motivate students who find online translation learning challenging?

- Not at all confident
- Slightly confident

- Somewhat confident
- Quite confident
- Extremely confident

3.15 How confident are you that you can get students to take the major responsibilities for their online translation learning?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.16 How confident are you that you can effectively use online teaching platforms?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.17 How confident are you that you can set translation tasks that are appropriate for online learning?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

3.18 How confident are you that you can help students with their technical issues when they are learning online?

- Not at all confident
- Slightly confident
- Somewhat confident
- Quite confident
- Extremely confident

Thank you for your time! Please tick the "submit" below.

Biographies

Di Wu holds an MA in Translation Studies from Guangdong University of Foreign Studies and a PhD in Education from The University of Auckland. His research interests include translator training, translator trainer professional development, translator trainers' and trainees' beliefs. He has published around ten papers in peer-reviewed international and Chinese journals, such as *The Interpreter and Translator Trainer, Perspectives: Studies in Translation Theory and Practice, Revista Española de Lingüística Aplicada*, and *Foreign Languages and Their Teaching*.

E-mail: di.wu@auckland.ac.nz; allenwudi@hotmail.com



Lan Wei, PhD, is Academic Language Adviser for DELNA, The University of Auckland. Her research interests include individual differences in language aptitude, working memory, mechanisms of second language acquisition, and teacher education and development. Her publications appear in *The Interpreter and Translator Trainer*, and *Studies in Translation Theory and Practice*.

Corresponding author

E-mail: lan.wei@auckland.ac.nz; violaweilan@hotmail.com



Notes

1. Ethical approval for the empirical study presented here was obtained from The University of Auckland Human Participants Ethics Committee. Reference Number 2812.

2. We sent the second email to all the translator trainers on our email list because of the anonymous nature of the survey. It was impossible for us to identify those trainers who had not responded to the survey.

3. Confirmatory factor analysis, as one kind of structural equation modelling (SEM) technique, requires a large sample. Kline (2016: 16) reports that the median sample size reported in studies using SEM is 200 cases. See Kline (2016) for a more detailed discussion of sample size requirement for SEM.