Chapter 2
Studies on Translator and Interpreter Training: A Data-Driven Review of Journal Articles 2000–12

2.1 Introduction

Translator and interpreter training has developed considerably during the last century (see Pym 2009). One of the greatest changes is the rapid increase in translation and interpreting (T&I) institutions in response to increasing demand for the systematic training of practitioners in the field. According to Kelly and Martin (2009), 380 translator- or interpreter-training programmes were offered by universities in 63 countries by April 2006 compared with only 49 such programmes in 1960 (Caminade and Pym 2001). As observed by Yan et al. (2010), for instance, interpreter- and translator-training programmes are provided by most if not all universities in Hong Kong.

The institutionalisation of translator and interpreter training brought by recent educational reforms has provided great impetus for researchers in the field of pedagogy to address translation and interpretation. The establishment in the 1930s of the first university-level training programmes dedicated to T&I also contributed to the burgeoning interest in and development of research on translator and interpreter training (see Caminade and Pym 2001; Kelly and Way 2007). St Jerome Publishing launched a refereed journal, The Interpreter and Translator Trainer, in 2007, dedicated to the establishment and advancement of the sub-field of translator and interpreter training (Kelly and Way 2007). As stated by Kelly and Way (ibid.: 2), “it is extremely rare to find a TS (Translation Studies) or IS (Interpreting Studies) scholar who is not involved in training in some way”.

Given the rapid expansion and institutionalisation of the field of T&I training, it is necessary to reflect on its progress to guide future work in this area (Yan et al. Originally published in The Interpreter and Translator Trainer (www.tandfonline.com). Yan, Jackie Xiu, Jun Pan, and Honghua Wang. 2015. Studies on translator and interpreter training: A data–driven review of journal articles 2000–12. The Interpreter and Translator Trainer 9(3): 263–286. Permission of reproduction has been obtained from the journal.

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As stated by Williams (2013: 113), “research and theorizing about translation teaching” are “relatively new”. Recently, review studies have proven very useful for researchers, practitioners and trainers to gain a historical overview of a certain field and to identify the paradigm shifts in that field (see Pöchhacker 1995a, b; Gile 2000, 2005, 2009; Yan et al. 2013). Such studies may review the theoretical and/or methodological development of a research field.

Despite the importance of T&I training and the exponentially increasing number of studies dedicated to this sub-field, there remain very few reviews of this applied branch of T&I research. Only four (5%) of the 235 journal articles in the IS database constructed by Yan et al. (2013) are review studies, and none addresses interpreter training. Gile’s (2005) citation analysis generated fascinating results on the distribution and features of citations in the field of T&I training, but addresses only the citations, not the publication entries. Not only does the considerable increase in T&I training programmes worldwide demand a comprehensive review of the latest developments in the field, but the notable lack of reviews of T&I training research, especially data-driven reviews, provides an important impetus for this study.

The current study is therefore designed with the aim of reviewing articles on T&I training from 10 translation and interpreting journals (2000–12). This summative analysis will unveil the status quo of T&I training, identify the problems and challenges that currently face T&I trainers and point out future directions in this field.

2.2 The Study

2.2.1 Database Construction

A bibliographic database was constructed using Microsoft Office Access 2010, regarded as a suitable tool for database construction (Yan et al. 2013). Each data entry includes information about the particular publication, such as title, publication source, year, keywords, abstract and author information (number of authors, institutions, countries, etc.; see Appendix 1 for a sample data entry in the Access file).

To map the field of T&I training research in the new millennium, the database collected entries from major T&I journals in English published between 2000 and 2012. The choice of this was due partly to the emphasis on institutionalised T&I training in the new millennium (see Kelly and Way 2007; cf. Pym 1998). It was also designed to provide T&I scholars, practitioners and trainers with useful insights into the changes in this burgeoning field (cf. Pöchhacker 1995a, b; Gile 2000).

The decision to restrict the current research to include only T&I journal articles published in English is in line with the procedure implemented by Yan et al. (2013).
In the field of T&I training, journal publication has undergone the most vigorous development in recent years (cf. Pöchhacker 1995a, b; Gile 2005, 2006), and the quality of publication has usually been confirmed by a peer-reviewed system (Gile 2005; Gao and Chai 2009). In addition, as indicated by Gile (2005), the most frequently cited works of T&I training research are in English. As an academic lingua franca, English is felt to make these publications more accessible to a wider audience; they have thus become the most representative in the field (Pöchhacker and Shlesinger 2002; Yan et al. 2013). Ensuring the accessibility and consistency of database composition was also a major consideration when choosing sources.

Using a method similar to that of Yan et al. (2013), the authors determined the choice of major T&I journals based on four major criteria: theoretical importance, relevance to T&I training, geographical coverage and size of readership. A combination of computer searches and manual double-checking was used to ensure the objectivity and comprehensiveness of the data collection process (cf. Grbić and Pöllabauer 2008; Gao and Chai 2009).

### 2.2.2 Data Analysis

The analysis of the database was conducted using a combination of scientometric methods, thematic analysis and corpus analysis tools. The purpose of this triangulation of research methods is to provide a multidimensional and multifaceted representation of T&I journal publications over the last decade.

After the database was constructed, information drawn from the data entries (publication source, year and author information) was computed. The bibliometric features of the database were thereby calculated to show the ongoing distribution and social-biographic features of T&I training research in the new millennium. Similar to Yan et al. (2013), whole counting\(^1\) was applied for the computation of the authors and the geographic distributions of the articles.

A particular feature of this study is that it not only provided bibliometric and bibliographical computations of the whole database, but included an innovative representation of the themes reflected by the database entries and the bibliometric and bibliographical distributions within each theme (cf. Yan et al. 2013). In addition, the study provided useful information about the research methods used in studies on T&I training since the year 2000.

To minimise subjectivity, a combination of top-down and bottom-up procedures was used in the thematic analysis of the database, and a multilayer thematic classification system was developed to represent the different dimensions of the field (cf. Yan et al. 2013).

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\(^1\)According to Grbić and Pöllabauer (2008: 314), whole counting means ‘every author of a publication receives a credit for it’.
In the top-down approach, the authors took into consideration the current classification schemes in the fields of TS & IS. A review of the literature related to T&I training shows that there is no existing scheme suitable for the current analysis, because most schemes were about TS or IS at large or too outmoded to represent current research in the field (cf. Pöchhacker 1995a; Gile 2000; Williams and Chesterman 2002; Xu 2005; Gao and Chai 2009; Gambier 2010; Nord 2012; Aixelá 2013; Liu and Mu 2013; Williams 2013). Yet a comparison of existing schemes could provide some basic ideas for the thematic classification in the present study. For example, in their mapping of research in TS, Williams and Chesterman (2002) proposed four main areas of research on translator training: curriculum design, implementation, typical problem areas and professional dimension. Relevant studies related to these issues were reviewed. Xu (2005), in a description of translator training in China, used the themes related to levels of training (training at school or at work), training materials, training methods and translator accreditation tests. Vandepitte (2008: 585), redeveloping a map of TS, employed tags such as translation training, translation didactics, language teaching studies, curriculum design, curriculum implementation, translation assessment, translator-training institution and place of technology in translator training under the term “studies of translation teaching”. Gambier (2010), in a study of the underlying rationale of over 70 T&I programmes in Europe, used the tags process-centred activities, situational approach, text-based approach, e-learning, learning progression, specialisation and evaluation/assessment. Liu and Mu (2013), in their scientometric study of T&I training in Chinese journals, used the thematic categories of testing and evaluation, translation competence and translator competence, teaching models and methods, curriculum design and textbook development, interpreter training, training of the trainers, and training by specialisation and levels. However, these classification systems were usually monolayer and had overlapping categories. Given the shared methodological features between the present study and Yan et al. (2013), the second and third thematic layers of the latter under the category “(B) Studies on Interpreter Training and Assessment” were incorporated into the present study. The results of thematic tags used in each of the categories, subcategories and subtypes at the three levels are summarised in Appendix 2.

In the bottom-up approach, each entry was first labelled with a keyword. Keywords that fell into the same category were grouped together (Yan et al. 2013). If necessary, higher-ranked themes were used to summarise similar categories. The resulting outline of categories and themes was then compared and synthesised with the themes already identified for T&I training. When one data entry fell into more than one theme or category, the major theme or category (the main research focus of the article) was used (ibid.). The keywords (Category—Level 3), categories (Category—Level 2) and themes (Category—Level 1) used to organise the database

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2The original keywords of the articles were not used in the corpus analysis because keywords vary considerably from journal to journal. In addition, not every journal requires the provision of keywords.
were later incorporated into the database (see Appendices 2.1 and 2.2). A thematic analysis was conducted individually by each member of the research team and results were then compared. Disagreements in classification were resolved by discussion and consensus.

Moreover, to help identify the research themes, WordSmith 5.0 (Scott 2008), a corpus analysis tool, was used for the analysis of article titles (cf. Grbić and Pöllabauer 2008). The high-frequency content words were computed to reflect objectively the research themes of the database. As already mentioned, the original keywords assigned by authors to the articles were not used for this purpose. Rather, to ensure that each data entry was equally represented, the corpus of paper titles was used instead.

Similarly, paper entries in the database were tagged according to their research methodologies. Following a review of existing schemes used for research methods related to T&I training, a multilayer system based on the scheme of empirical versus non-empirical research methods of Gile (2000) was developed, with the aim of reflecting the variety and vigour of methodological development in the field of T&I pedagogical research (cf. Gao and Chai 2009; Yan et al. 2013).

After the database had been classified, descriptive statistics were calculated for each category, and combined with the results of the analysis of publication types and author information within each category, to present the data from several dimensions. Classifying the database in this way will make it easy for future researchers to manage and expand it.

Results of authorship, theme and methodology distributions drawn from the database were compared with the findings of previous studies in similar or larger fields, to provide an outline of recent developments and trends in the field.

2.3 Results

2.3.1 Basic Statistics

In this study, 323 articles on T&I training were identified from 2274 entries in 10 major T&I journals. Table 2.1 shows the sources and composition of the database.

When analysed by year, a general ascending trend of publications on training in the 10 major T&I journals can be identified (see Fig. 2.1). In particular, the years 2005, 2007, 2009 and 2011 saw sharp increases in articles on training. The inflation of numbers in 2005 could be explained by an expanded issue of Meta (Vol. 50, No. 4) that included 75 articles (compared to an average of fewer than 20 entries per issue), so there were more articles on T&I training in that year (33 compared to an average of five per issue). The upsurge in 2007, however, is attributable to the introduction of The Interpreter and Translator Trainer, a major T&I training journal. In addition, a special issue on “Training for Doctoral Research” by The Interpreter and Translator Trainer (Vol. 3, No. 1, resulting in 13 entries in the
Table 2.1 Sources and composition of the database in this study

<table>
<thead>
<tr>
<th>Name of the journal</th>
<th>Range</th>
<th>Number of articles on T&amp;I training&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Number of entries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Across languages and cultures</td>
<td>2000–12 (2 each year)</td>
<td>27</td>
<td>176</td>
</tr>
<tr>
<td>Babel</td>
<td>2000–12 (4 each year)</td>
<td>34</td>
<td>270</td>
</tr>
<tr>
<td>Interpreting</td>
<td>2000–12 (2 each year)</td>
<td>22</td>
<td>111</td>
</tr>
<tr>
<td>Meta</td>
<td>2000–12 (4 each year)</td>
<td>93</td>
<td>838</td>
</tr>
<tr>
<td>Perspectives: studies in Translatology</td>
<td>2000–12 (4 each year)</td>
<td>35</td>
<td>259</td>
</tr>
<tr>
<td>Target</td>
<td>2000–12 (2 each year)</td>
<td>9</td>
<td>185</td>
</tr>
<tr>
<td>The interpreter and translator Trainer</td>
<td>2007–12 (2 each year)</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>The translator</td>
<td>2000–12 (2 each year)</td>
<td>6</td>
<td>186</td>
</tr>
<tr>
<td>Translation and interpreting Studies</td>
<td>2006–12 (2 each year)</td>
<td>6</td>
<td>87</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>323</td>
<td>2274</td>
</tr>
</tbody>
</table>

<sup>a</sup>Note Book reviews, interviews or bibliographic information were excluded for consistency of database composition

Fig. 2.1 Number of articles in the database by year

database) and another on “Aptitude for Interpreting” by *Interpreting* (Vol. 13, No. 1, resulting in eight entries in the database compared to an average of two) could explain the other two peaks in 2009 and 2011 respectively.
2.3 Results

Of the 323 entries, 199 (61.61%) were on translator training, 86 (26.63%) on interpreter training, and the remaining 38 (11.76%) on T&I training.

2.3.2 Distribution of Research Themes and Research Methods

2.3.2.1 Research Themes in the Database

A total of three general themes were identified through the thematic analysis using both the top-down and bottom-up procedures: teaching (Category A), learning (Category B) and assessment (Category C).

In order to add an objective perspective to the question of what defines T&I training, a word frequency list of the corpus of the article titles was generated by WordSmith 5.0. Figure 2.2 shows the results of the most frequently used content words in the titles (up to 20% of the word list). In addition to high-frequency content words such as “translation (translating)”, “translator(s)”, “interpreter(s)” and “(simultaneous) interpretation”, high-frequency content words (over 14 frequencies) included “training”, “teaching”, “study”, “approach”, “language”, “learning”, “research”, “students”, “studies”, “competence” and “education”, indicating that these words may define journal research on T&I training since the new millennium.

Likewise, the most frequently used content words were computed for the three categories of T&I: teaching (Category A), learning (Category B) and assessment (Category C). The resulting picture can be seen in Fig. 2.3.

The distribution of articles in each category at Level 1 is depicted in Fig. 2.4. The lion’s share of the database was accounted for by articles on teaching (72%). Only 18% of the entries were from the perspective of learning, and about 10% were on assessment (cf. Yan et al. 2013).

![Fig. 2.2 Top frequency content words of paper titles in the database](image-url)
Figure 2.5 shows the proportion of articles of each subcategory under “(A) Teaching”. Almost half (44%) were about “(a) training philosophies”, mostly relating to the question of “what to teach” (Kelly and Way 2007: 2) and teaching guidelines. Within this subcategory, writings on “(a) theoretical concerns/framework”, which examined training from a theoretical perspective, took up 45%, echoing the high frequency of the word “research” (17) in this category, depicted in Fig. 2.3. This subtype of articles usually employs a specific theoretical framework or discusses theory in general in T&I training. Typical examples are Kiraly’s (2006) “Beyond Social Constructivism: Complexity Theory and Translator Education”, concerning the employment of the newly emerging complexity theory, and Lederer’s (2007) “Can Theory Help Translator and Interpreter Trainers and Trainees?”, which involved the discussion of the application of theory in general. Common theoretical perspectives discussed in this subtype included communication theory (Viaggio 2005), sociology (Valero Garcés 2012) and discourse theory (Boyd and Monacelli 2010). The subtype “(b) disciplinary typology” includes articles about the teaching of T&I sub-disciplines, such as those on legal translation (Gómez González-Jover 2011), technical translation (Kingscott 2002) and community interpreting (Salaets 2012). The third subtype, “(c) training elements”, is about what to include in the teaching of T&I in particular, addressing teaching components such as ethics (Donovan 2011), text types (Chen 2010) and terminology (Maia 2005).

The second largest subcategory, “(b) training methods & models” (18% of Category A), includes writings on “how to teach” (see Kelly and Way 2007: 2) in particular. Almost half (48%) the articles belonged to the subtype “(a) institutional
training models” and slightly more than half (52%) to “(b) classroom training approaches”. Training models adopted by institutions in Germany (Nord 2005) and China (Xu 2005), and famous training programmes such as the European Master in Translation (EMT; Schjoldager et al. 2008) were introduced. Commonly discussed classroom training approaches included the task/project-based approach (Kiraly 2005), corpus-based activities (Laursen and Arinas Pellón 2012), problem-based learning (Inoue 2005), etc.

Corresponding to the high-frequency content word “competence” (15) in the database (see Fig. 2.2), “(c) competence development” was listed as a subcategory and made up 12% of the composition of Category A. Given its close link to T&I pedagogy development (see Kiraly 1995; Williams 2013), it was included in the category “teaching”. Because studies on competence usually discuss the differences between translator/interpreter competence and translation/interpretation competence (Biel 2011), the present study divided this subcategory into two subtypes, (b) and (c), plus a subtype “(a) general”, to cover articles discussing both types of competence. According to Biel (2011: 164), “translation competence is the ability to translate to the required standard” and “translator competence covers skills required to function as a professional on the market”. Correspondingly, articles in “(c) translation/interpretation competence” included the investigations of specific sub-competences core to translation/interpretation activities, such as extralinguistic knowledge (Kim 2006) and textual/discourse competence (Garzone 2000), whereas those in “(b) translator/interpreter competence” covered sub-competences in a more generic sense, such as decision-making (PACTE 2009) or information literacy (Massey and Ehrensberger-Dow 2011). Interestingly, of the 27 entries in this subcategory, only three were related to interpreting: one in subtype (a), one in (b) and one in (c). The remaining 24 were about translation/translator competence. In addition, the majority (70%) of studies on “competence” were about translation/interpretation competence, reflecting a general interest in the study of competence.

Fig. 2.4 Distribution of articles by thematic categories
related to translation/interpreting skills development rather than translator/interpreter development.

The remaining entries in Category A can be covered by subcategories “(d) needs analysis” (5%), “(e) technology and training” (13%), “(f) training of research skills” (5%) and “(g) translation & language teaching” (3%). Of these, the significant share of “(e) technology and training” is worth noting. Frequently discussed areas in this subcategory were e-learning technology (Moser-Mercer et al. 2005), the use of online resources (Xu and Wang 2011), and computer-aided tools (e.g. Sandrelli and Jerez 2007). In addition, the subcategory “(f) training of research skills” was mostly from a special issue of The Interpreter and Translator Trainer, “Training for Doctoral Research” (Vol. 3, No. 1), indicating the importance of researcher training in the T&I field.

Figure 2.6 gives the proportions of the second largest category of the database, “(B) Learning”. The article entries were almost evenly distributed between the two subcategories, “(a) learner performance” (42%) and “(b) learner factors” (58%). The subtype “(b) errors/difficulties” (the mistakes learners made and/or difficulties they encountered in learning) took up the greatest share (46%) in “(a) learner performance”, immediately followed by “(c) expertise development” (skill development and knowledge accumulation; 42%), with “(a) features” (referring to the general performance features of the learners such as that of grades [Malkiel 2008])
being the least touched on (12%). For “(b) learner factors”, “(e) strategies” took up the greatest share (43%). Most studies in this category applied the Think-Aloud-Protocol (TAP) method (Atari and Radwan 2009) or the aid of computer programmes such as Translog (Antunović and Pavlović 2011). The other two single learner factors, “(c) anxiety and stress” and “(b) personality”, accounted for 15 and 9% respectively. What merits our attention is the considerably large proportion (30%) of studies on learner factors in general or several factors, indicating the complexity of the real scenario in T&I learning, which cannot be accounted for by any single factor but rather the interplay among different components (see Yan et al. 2010).

Though smaller in number, the category “(C) Assessment” was another crucial component of T&I training (see Fig. 2.7). About three-quarters of this category belonged to the subcategory “(a) classroom assessment” and one-quarter to the subcategory “(b) professional accreditations and certifications”. In particular, “(a) classroom assessment” was evenly split into two subtypes, “(a) theoretical framework” and “(b) models and methods”. Typical theoretical frameworks included rating scales (Lee 2008) and scoring rubrics (Clifford 2007). Likewise, the subtype “(b) professional accreditations and certifications” included one-half contributing to “(a) theoretical framework” and the rest evenly split into “(b) models and methods” and a new subtype, “(c) market needs”.

Fig. 2.6 Proportions of the articles by thematic subcategories and types under Category B

Fig. 2.7 Proportions of the articles by thematic subcategories and types under Category C
2.3.2.2 Research Methods in the Database

Case-for-case manual tagging was applied for the research method used in each article entry in the database. Informed by classification schemes used in previous studies (see Gile 2000; Williams and Chesterman 2002; Liu 2011; Liu and Mu 2013; Saldanha and O’Brien 2013; Yan et al. 2013.), the present study divided the article entries into two major categories of empirical and non-empirical studies (cf. conceptual research in Williams and Chesterman 2002). The major criterion applied to differentiate between the two was that empirical research “seeks new data, new information derived from the observation of data and from experimental work” and “seeks evidence which supports or disconfirms hypotheses, or generates new ones” (Williams and Chesterman 2002: 58; see also Gile 1998). Major subcategories of empirical studies identified from entries in the database included observational and experimental ones (see Gile 1998). Being naturalistic and having no manipulation of variables, observational research in the present study was further tagged by five subtypes: case study, corpus research, survey research, correlational research and action research (see Neubert 2004; Liu 2011; Bevilacqua 2012; Liu and Mu 2013). In the category of non-empirical studies, subcategories of descriptive and theoretical research were identified. The former is usually a description of a fact, phenomenon or even anecdote (“pro-non-empirical research” in Yan et al. 2013), and the latter, corresponding to conceptual research in Williams and Chesterman (2002: 58), “aims to define and clarify concepts, interpret or reinterpret ideas, to relate concepts into larger systems, to introduce new concepts or metaphors or frameworks that allow a better understanding of the object of research” (“pure-non-empirical” in Yan et al. 2013).

Figure 2.8 shows the proportions of the methodological subcategories of the database. Descriptive studies accounted for the greatest share (35%), followed by observational studies (32%). Experimental studies and theoretical studies represented 22% and 11% respectively. In general, there were 54% empirical studies and 46% non-empirical in the database.

Looking now at the proportions of the subtypes of observational studies in the database, case study was the major research method applied (47%), followed by survey research (25%) and correlational research (14%). Action research (8%) and corpus research (6%), though comparatively small, represented two rich veins of research methods applied in the database.

Figure 2.9 further shows the proportions of the articles by methodological subcategories in the sub-databases of “Teaching”, “Learning” and “Assessment”.

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2.3.3 Authorship and Geographic Distribution of the Articles

Statistics related to the authors and geographic distribution of the articles were computed. Table 2.2 shows the basic statistics by authors, institutions and countries in the database and according to thematic and methodological categories. To sum up, 358 authors in 195 institutions and 45 countries contributed to the database. Authorship and geographic distributions varied in each subcategory.

Figure 2.10 indicates the distribution of co-authorship in the database and in each thematic and methodological category. Most of the articles in the database were written by single authors (71%), co-authorship accounting for 29%. The category in which co-authorship was the most active was “(B) Learning”, 46%. Co-authorship occurred more often in empirical studies (37%) than in non-empirical ones (19%).
To find the most active authors, faculties, institutions and countries in the production of articles in the database, a frequency word list of each sub-corpus was generated by WordSmith 5.0. Table 2.3 shows the 24 authors who produced more than three articles in the database, over 18% of the author frequencies.

The rest of the database included 47 authors who produced two entries, and 287 authors (80%) who wrote one article (cf. “one-timers” in Grbić and Pöllabauer 2008: 327).

A word list generated by Wordsmith 5.0 provides a list of the high-frequency content words of the authors’ departments or schools to which they belong, covering nearly half (47%) the word list (Fig. 2.11). The figure gives a general idea of the background of the research specialties of the authors. Of the most frequent words, “translation” had a frequency of over 170, indicating that most authors specialised in translation studies. “Language” (35) and “languages” (84), with a combined frequency of 119, were the most active faculty that produced articles. Other words indicating the major specialities of the authors were “linguistics” (58), “English” (47), “communication” (28), “arts” (25), “modern” (25), “foreign” (22), “applied” (20), “interpretation” (20), “sciences” (15), “humanities” (14), “cultures” (13), “interpreters” (13), “translators” (13) and “social” (11).

Table 2.2 The distribution of articles by authors, institutions and countries

<table>
<thead>
<tr>
<th></th>
<th>No. of articles</th>
<th>No. of authors</th>
<th>No. of institutions</th>
<th>No. of countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>323</td>
<td>358</td>
<td>195</td>
<td>45</td>
</tr>
<tr>
<td>Category A</td>
<td>232</td>
<td>261</td>
<td>156</td>
<td>42</td>
</tr>
<tr>
<td>Category B</td>
<td>57</td>
<td>81</td>
<td>48</td>
<td>22</td>
</tr>
<tr>
<td>Category C</td>
<td>34</td>
<td>38</td>
<td>31</td>
<td>13</td>
</tr>
<tr>
<td>Empirical</td>
<td>173</td>
<td>213</td>
<td>113</td>
<td>29</td>
</tr>
<tr>
<td>Non-empirical</td>
<td>150</td>
<td>167</td>
<td>111</td>
<td>36</td>
</tr>
</tbody>
</table>

Note: Two articles by PACTE were treated as produced by several authors

Fig. 2.10 The distribution of co-authorship occurrences in the database
Table 2.4 shows the most productive institutions in the database, which accounted for 26% of the database. The Autonomous University of Barcelona and the University of Granada headed the list, accounting for more than 8% of the whole database.

Table 2.5 reports the 10 most productive countries/regions in the database, which accounted for up to 70% of the entries. Spain was the most active producer (65 entries), followed by the Greater China Area (41 entries). The rest were mostly in Europe, North America or Oceania (Australia).

Table 2.6 describes the most productive countries/regions in each thematic and methodological category. Spain took the lead in both empirical and non-empirical studies, as well as studies on “Teaching”. The Greater China Area, second in the
sub-databases of “Teaching”, ranked first in the production of articles on both “Learning” and “Assessment”. This area also played a significant role on the leader board of both empirical and non-empirical studies. Most of the active countries in the thematic and methodological sub-databases were in Europe, North American or Oceania (Australia), with the exception of Category B, in which countries such as Israel and United Arab Emirates were in the top 10.
Table 2.5  Top 10 most productive countries/regions in the database

<table>
<thead>
<tr>
<th>Countries</th>
<th>No. of papers</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>65</td>
<td>18.36</td>
</tr>
<tr>
<td>The Greater China Area</td>
<td>41</td>
<td>11.58</td>
</tr>
<tr>
<td>The United Kingdom</td>
<td>27</td>
<td>7.63</td>
</tr>
<tr>
<td>Australia</td>
<td>25</td>
<td>7.06</td>
</tr>
<tr>
<td>The United States</td>
<td>21</td>
<td>5.93</td>
</tr>
<tr>
<td>Italy</td>
<td>16</td>
<td>4.52</td>
</tr>
<tr>
<td>Canada</td>
<td>14</td>
<td>3.95</td>
</tr>
<tr>
<td>Austria</td>
<td>13</td>
<td>3.67</td>
</tr>
<tr>
<td>Denmark</td>
<td>12</td>
<td>3.39</td>
</tr>
<tr>
<td>Germany</td>
<td>12</td>
<td>3.39</td>
</tr>
</tbody>
</table>

*aNote Countries with the same number of productions are listed alphabetically

Table 2.6  Most productive countries/regions in each category

<table>
<thead>
<tr>
<th>Category A*</th>
<th>No. of papers</th>
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<th>No. of papers</th>
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<tr>
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<td>The United States</td>
<td>7</td>
</tr>
<tr>
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<td>23</td>
<td>Israel</td>
<td>6</td>
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<td>19</td>
<td>Spain</td>
<td>5</td>
</tr>
<tr>
<td>Italy</td>
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<td>Austria</td>
<td>4</td>
</tr>
<tr>
<td>Germany</td>
<td>10</td>
<td>The United Kingdom</td>
<td>4</td>
</tr>
<tr>
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<td>Australia</td>
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</tr>
<tr>
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<td>9</td>
<td>Denmark</td>
<td>3</td>
</tr>
<tr>
<td>Austria</td>
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<td>Finland</td>
<td>3</td>
</tr>
<tr>
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<td>8</td>
<td>United Arab Emirates</td>
<td>3</td>
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Category C*  

<table>
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<td>Canada</td>
</tr>
<tr>
<td>Spain</td>
</tr>
<tr>
<td>The United States</td>
</tr>
<tr>
<td>Australia</td>
</tr>
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</table>

Empirical*  

<table>
<thead>
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<th>No. of papers</th>
<th>Non-empirical*</th>
<th>No. of papers</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Spain</td>
</tr>
<tr>
<td>The Greater China Area</td>
<td>24</td>
<td>The Greater China Area</td>
</tr>
<tr>
<td>Australia</td>
<td>18</td>
<td>The United Kingdom</td>
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<tr>
<td>The United Kingdom</td>
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<td>The United States</td>
</tr>
<tr>
<td>The United States</td>
<td>10</td>
<td>Germany</td>
</tr>
<tr>
<td>Switzerland</td>
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<tr>
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</tr>
<tr>
<td>Italy</td>
<td>6</td>
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</tr>
</tbody>
</table>

*aNote Countries with the same number of productions are listed alphabetically
2.4 Discussion: Current Trends and Future Directions

The present study, a combination of corpus-based research, scientometric study and thematic analysis, provides a multidimensional and multifaceted overview of research on T&I training over a decade, based on a database of articles chosen from 10 major T&I journals. The study shows some trends in research on T&I training in the last 13 years and offers significant insights into the future directions of the field.

Results of the study indicate that research on T&I training has been increasing since the new millennium, the majority of the database entries contributing to translation training other than interpretation training. Such a trend reflects the rapid increase of training programmes worldwide (see Kelly and Martin 2009) and the composition of relevant training programmes, in which the training of translation is usually more common than the training of interpreting (ibid.). Another underlying reason may be the increasing importance of journal publication in academia, now usually related to university rankings and personal promotion. It is believed that, as a result of an additional number of newly trained T&I trainers and researchers (see subcategory “(f) training of research skills”) and the significance of publication in higher education institutions, the quantity and quality of research in this field will continue to increase (cf. Kelly and Way 2007).

In this study, words that may help describe the field are “translation”, “training”, “translator(s)”, “interpreting”, “teaching”, “study”, “approach”, “language”, “research”, “learning” and “students”. The database was divided into three general categories, “teaching”, “learning” and “assessment”, with “teaching” taking up the lion’s share. Studies on “learning” and “assessment” seem to be comparatively under-represented. Compared with the weightings of “learning” and “assessment” in the database of interpretation training in Yan et al. (2013), the weightings of “learning” and “assessment” in the present database were significantly lower. Despite the growing attention paid to learner-centredness and to the development of descriptive pedagogy informed by translation progress research and competence research (Kiraly 1995; Kelly and Way 2007; Williams 2013), effort is still needed in the investigation of training from the learning perspective, especially in the field of translation training.

Most articles in the category “teaching” were about training philosophies, indicating continued efforts devoted to the guidelines on and substance of teaching. The relationship between theory and training (Lederer 2007) and the development of specific theories in training as informed by studies in communication, sociology, information processing, etc., indicate the interdisciplinary feature of T&I research (see Bassnett 2012; Yan et al. 2013). Teaching elements in T&I training seem to grow along with the development of T&I programmes. This can be linked to research into sub-competences in translation and interpreting (PACTE 2005, 2009). In addition, studies on disciplinary typology indicate a growing research interest in specialised translation training (e.g. technical translation, legal translation, literature translation) and the teaching of community interpreting since 2000. This may reflect
the increasing need for research related to curricular designs of many T&I training programmes.

Another significant contributor to studies on “teaching” was training methods and models introduced by different institutions and from various countries, especially those in traditional training centres of Europe (Van Doorslaer and Flynn 2013) and the emerging new hub in the Greater China Area (Xu 2005; Yan et al. 2010; Tao 2012).

The fifth subcategory of “technology and training” in “teaching” has been noted. Williams and Chesterman (2002: 26) mentioned that “research needs to be carried out on the role of Translation Technology in translator-training programmes as well as on the content of Translation Technology modules”. The discussion of various topics related to e-learning, the use of online resources, computer-aided tools and even translation corpus or translation memory in the database are evidence that this research topic is receiving attention (Moser-Mercer et al. 2005; Sandrelli and Jerez 2007; Xu and Wang 2011). Although descriptive, observational and experimental methods were employed, the theoretical research method was the only one not applied in articles of this subcategory. Due to the growing application of technology to T&I training, it is envisaged that publications in this subcategory will increase over the coming years, and that more theoretical approaches to the application of technology in T&I training or the construction of training modules on T&I technologies will appear in the field. Moreover, the combination of technology and training cannot be underestimated. As more well-established T&I institutions and training centres use online teaching (Moser-Mercer et al. 2005), T&I training can reach a larger audience. In addition, tapping into web resources or computer tools will bring into the field of T&I training more opportunities and challenges. Teaching materials may be featured by increased variety and newness; computers will be essential in T&I training classrooms. Traditional teaching content and method will change accordingly. These changes will ultimately affect every aspect of T&I teaching, learning and assessment. Ergo, the concepts related to T&I training in a rapidly changing technology world may eventually need a redefinition.

In addition, the subcategory “translation and language teaching”, though small, indicates the close relationship between language and translation (Yan et al. 2010; Angelelli 2012), also reflected by the high-frequency word “language” in the database, and echoes the finding that a predominant number of authors were from a faculty with “language(s)”, “English”, “foreign” or “linguistics” in the name. Results of the very small proportion of studies on translation and language teaching suggest that research in this area may be further developed, but, with the institutionalisation of T&I training, the subcategory may remain marginal. Nevertheless, investigations of T&I learning benefit from the research methods and perspectives provided by language learning (Yan et al. 2010).

Studies of “learner factors” featured slightly more than those of “learner performance” in the category of “learning”, indicating that researchers have started to pay more attention to learners rather than to performance alone in T&I training. The focus on “errors and difficulties” in “learner performance” follows a traditional vein
of research in T&I learning (see Pan and Yan 2012). The heavy distribution of “general/multi-factors” in studies of “learner factors” shows the significance of the interplay between different learner factors in T&I learning (Yan et al. 2010). The focus on the single learner factor of “strategies” in the subcategory “learner factors” is accountable by the rapid progress in process-oriented T&I studies, especially with the development of computer programmes such as Translog or eye-tracking machines (Antunović and Pavlović 2011) as well as research methods such as TAP. As stated in Williams (2013), it is translation process research that influenced theories about translator training such as competence and expertise development. In general, research on “learner factors” has great potential, and many single factors or their interplays await more in-depth investigations.

Though smallest in number, studies on “assessment” consist of an important sub-field in T&I training. Research in this sub-field appears to come predominantly from the study of classroom assessment. Studies of professional accreditations were accounted for by a third subtype called “market needs” in addition to the two subtypes of theoretical framework and models and methods. The 50% representation of theoretical framework investigations in both subtypes of classroom assessment and professional accreditations/certifications and the high-frequency word “validity” in the “assessment” sub-database indicate that assessment in T&I training was at the transition stage from framework development to systematic or institutionalised application (cf. Angelelli 2012: 174, who stated that testing and assessment in T&I received “little discussion on principles of test development”). Concerted efforts between institutions, trainers and practitioners are needed so that theoretical frameworks developed at this stage can be tested and applied with productive outcomes.

The present study also suggests that research methods applied by researchers in T&I training are mostly descriptive, and that overall, empirical methods are applied slightly more often than are non-empirical ones (cf. Liu and Mu 2013, in which most Chinese journal publications were theoretical). This indicates that in T&I training research, descriptive research is better represented than it is in IS research, for which Gile (1998: 11) suggests that “there is a lack of descriptive data obtainable through simple methods, and that this weakens the power of more complex methods”. Experimental studies took up about one-fifth of the database in the current study. Theoretical studies are marginal. This suggests the “applied” nature of T&I training compared to T&I theory research (Holmes 1988). Yet the subtype “theoretical concerns/framework” in “training philosophies” took up 14% in the database of the current study, with a total of 46 article entries, and the subcategory “training of research skills” in the “teaching” category accounted for 4%, with 12 article entries, which indicates the significance of theory in T&I training (Lederer 2007).
Case study was the major subtype of observational research method applied in the database, echoing the high frequency of the word “case” in the titles of the “teaching” category. In fact, as a widespread method in translation studies, case studies will continue to exert a special role in the field of T&I training (Susam-Sarajeva 2009). In each category in the database, studies on “teaching” often applied a descriptive research method. Experiments were the major research tools used in studies on “learning” and observational methods were used most often for “assessment” studies.

The author analysis shows that, although most authors were one-time researchers in T&I training (Grbić and Pöllabauer 2008: 327), some of the most active produced nine articles each. In addition, single authorship was far more dominant than was co-authorship. This dominance of single authorship may lend support to Bassnett’s (2012: 23) argument that T&I teaching research should have more “collaborative projects”.

Likewise, the geographic analysis results suggest that Spain is an active player in the research of T&I training. Three of the top seven most active authors were from Spain. The top three most productive institutions were in Spain. The Spanish hub of T&I training research may be attributed to the prominent role played by research groups such as PACTE in the Autonomous University of Barcelona on translation competence research (PACTE 2005, 2009) and the leading researchers who worked in response to the recent increase in T&I training programmes in the country (Williams 2013). A particular investigation into the features of the articles produced by the Spanish authors in the database would therefore represent an interesting avenue for further research (cf. Rovira-Esteva and Orero 2011).

In general, there appear to be two major centres for studies on T&I training: the traditional European centre (see Pöchhacker 1995b; Gile 2005; Pym 2009; Van Doorslaer and Flynn 2013) and the newly emerging Asian centre (see Yan et al. 2013). The growing number of training programmes (see Xu 2005; Yan et al. 2010; Tao 2012) and exponential development of relevant research in the Greater China Area (see Xu and Mu 2009; Liu and Mu 2013) make it an increasingly important player of T&I training research. In addition, North America (see Pöchhacker 1995b) and Oceania (Australia; cf. Yan et al. 2013) are important regions for research on T&I training.
2.5 Conclusion

In light of the paucity of and the need for review studies in the field of T&I training, this study aimed at examining the field by constructing a database of publications on this subject in major T&I journals since 2000. It is hoped that the findings of the study and the database on which it is based will be beneficial to researchers, trainers and trainees in T&I training programmes as well as to translation and interpreting practitioners. The study is significant in many ways. First, combining several research methods, it provides a systematic and comprehensive data-driven review of T&I training published in English-language T&I journals for the first time since the new millennium. The findings will, it is hoped, inform T&I teaching and learning as well as the disciplines of TS, IS, and second/foreign language teaching. Secondly, the database constructed in the study presents current information on the scholarship in this field and outlines the key categories. This will help T&I researchers, trainers and practitioners to reflect on the important issues in the field and identify possible directions for future work. The database, and its tagging of themes and research methods, can serve as a synopsis for training researchers in the field, or even provide a basis for the development of an encyclopaedia on T&I training. Last, the database highlights many pedagogical issues currently under debate, from course design to assessment measures and from traditional classrooms to distance learning. It also showcases good practice in T&I training from different countries and provides important teaching guidelines, enabling trainers and educators to draw on each other’s strengths to enrich their teaching repertoires, update their programmes and adapt to local and international social, cultural, economic and political contexts.

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Appendix 1: A Sample Data Entry in the Access File

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<th>Volume</th>
<th>Issue</th>
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<td>521</td>
<td>2010</td>
<td>The Interpreter and Translator Trainer</td>
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<td>2</td>
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</table>

Category-Level 1
B. Learning
Category-Level 2
b. Learner factors
Category-Level 3
a) General / multi-factors

Research Method
A. Empirical; a. Observational; d) Correlational research

Article
Learner factors, self-perceived language ability and interpreting learning: An investigation of Hong Kong tertiary interpreting classes.

Author
Yan, Jackie  
Xiu: Pan,  
Jun: Wang,  
Honghua
Department
Department of Chinese,  
Translation and Linguistics: English  
Department, School of Foreign Languages
Institution
City University of Hong Kong, Jiangsu University
Country
China (Hong Kong): China

Reference

Keywords
individual differences, learner factor, language learning, interpreter training, interpreting achievement

Abstract
Numerous interpreter training programmes have been developed to meet the demands for high quality interpreting. Most, if not all, universities of Hong Kong offer interpreting courses. However, empirical studies on interpreting pedagogy are extremely limited. This paper explores the interplay between learner factors, language ability (self-perceived) and interpreting learning in Hong Kong tertiary classrooms. A learner information cluster was developed by the authors to collect information on individual learner factors. It was found that learner factors such as gender motivation and personal habits, are closely related to students’ language learning and interpreting learning. Female students tend to perform better than male students in interpreting classrooms. Personal habits, for example, the habit of reading English and Chinese-language newspapers, have an impact on students’ self-perceived language abilities (in English and Chinese) and their learning of interpreting. The results also indicate that language abilities and interpreting ability are closely connected. Furthermore, in interpreting between English and Chinese, learners’ self-perceived overall competence in the English language is the most important predictor of their success in interpreting learning, while their self-perceived English writing ability is the second-most important predictor.
## Appendix 2: Thematic Categories, Methodological Categories and Their Numbers of Entries in the Database

<table>
<thead>
<tr>
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<th>No.</th>
<th>Category level 2</th>
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<th>Category level 3</th>
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</table>
<br />### 1. Thematic categories of articles in the database<br />

#### (A) Teaching<br />
232 (a) Training philosophies 101 (a) Theoretical concerns/ framework 46<br />
(b) Disciplinary typology 14<br />
(c) Training elements 41<br />
(b) Training methods & models 42 (a) Institutional training models 20<br />
(b) Classroom training approaches 22<br />
(c) Competence development 27 (a) General 4<br />
(b) Translator/Interpreter competence 4<br />
(c) Translation/Interpretation competence 19<br />
(d) Needs analysis 12<br />
(e) Technology & training 30<br />
(f) Training of research skills 12<br />
(g) Translation & language teaching 8<br />

#### (B) Learning<br />
57 (a) Learner performance 24 (a) Features 3<br />
(b) Errors/difficulties 11<br />
(c) Expertise development 10<br />
(b) Learner factors 33 (a) General/multi-factors 10<br />
(b) Personality 3<br />
(c) Anxiety & stress 5<br />
(d) Learning styles 1<br />
(e) Strategies 14<br />

#### (C) Assessment<br />
34 (a) Classroom assessment 26 (a) Theoretical framework 13<br />
(b) Models & methods 13<br />
(b) Professional accreditations & certifications 8 (a) Theoretical framework 4<br />
(b) Models & methods 2<br />
(c) Market needs 2<br />

### 2. Methodological categories of articles in the database<br />

#### (A) Empirical<br />
173 (a) Observational 103 (a) Case study 48<br />
(b) Corpus research 6<br />
(c) Survey research 26<br />
(d) Correlational research 15<br />
(e) Action research 8<br />
(b) Experimental 70<br />

#### (B) Non-empirical<br />
150 (a) Descriptive 114<br />
(b) Theoretical 36
References


References


Research on Translator and Interpreter Training
A Collective Volume of Bibliometric Reviews and Empirical Studies on Learners
Yan, J.X.; Pan, J.; Wang, H.
2018, XVI, 200 p. 29 illus., 25 illus. in color., Hardcover
ISBN: 978-981-10-6957-4