# Conducting a Grounded Theory Study in a Language Other Than English: Procedures for Ensuring the Integrity of Translation

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*SAGE Open* 2014 4:
DOI: 10.1177/2158244014528920

SAGE Open
January-March 2014: 1–10

DOI: 10.1177/2158244014528920
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# Conducting a Grounded Theory Study in a Language Other Than English: Procedures for Ensuring the Integrity of Translation

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**Abstract**

Translation can be a problem area for researchers conducting qualitative studies in languages other than English who intend to publish the results in an English-language journal. Analyzing the data is also complex when the research team consists of people from different language backgrounds. Translation must be considered as an issue in its own right to maintain the integrity of the research, especially in a grounded theory study. In this article, we offer guidelines for the process of translation for data analysis in a grounded theory study in which the research was conducted in a language other than English (Indonesian). We make recommendations about procedures to choose when, who, and how to translate data. The translation procedure is divided into four steps which are as follows: translation in the process of coding, translation in the process of team discussion, translation in the process of advanced coding, and ensuring the accuracy of translation.

**Keywords**

grounded theory, language/linguistics, qualitative analysis, translation

Translation can become an area of concern in qualitative or quantitative research. Translation may be required in qualitative research if study participants and researchers speak different languages or if the target language for publication is different from the source of data. Translation processes may also be required to validate the research instrument in quantitative research. In both qualitative and quantitative research, the most important factor in achieving a valid translation is ensuring equivalence of meaning (Brislin, 1970; Sechrest, Fay, & Zaidi, 1972). Conceptual equivalence is a term used to describe an accurate translation—both technically and conceptually. In addition, lingual and cultural aspects need to be considered in achieving equivalence of meaning because literal equivalence in the target language does not always express clearly the essential meaning of the source language (Su & Parham, 2002). The translation process used in qualitative research becomes vitally important for researchers seeking to ensure conceptual equivalence (Chen & Boore, 2009).

The aim of this article is to describe the process of data analysis in grounded theory when translation is required. In particular, the authors provide guidelines to address the issue of maintaining conceptual equivalence of data when the data must be translated for analysis by a multilingual research team. A worked example is used to illustrate the process of translation in a grounded theory study. A worked example is a practical illustration of how a process unfolds (Birks & Mills, 2011). The study was approved by the Human Research Ethic Committees of an Australian University (Number H4194) and each participant provided signed informed consent.

The worked example will be used to answer the following questions:

- When should data be translated for analysis?
- Who should translate data?
- Which translation procedure should be used?
- How should this process be implemented?

## The Translation Process

The methods for achieving equivalence of meaning vary slightly between qualitative and quantitative research; all methods will ideally involve the use of forward and backward translation. Forward translation is the process of translating data from the source language to the target language. A forward-only method is insufficient to establish semantic

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equivalence in translation. Thus, backward translation is used as a further method to verify the adequacy of translation (Maneesriwongul & Dixon, 2004).

Back translation is the process of translating back from the target language to the source language (Chen & Boore, 2009; Maneesriwongul & Dixon, 2004). Back translation is a significant step in ensuring the validity of a translation (Maneesriwongul & Dixon, 2004) but is sometimes criticized because it is considered to be focused on closeness of fit rather than on accuracy or truth. In addition, the use of a back translation method does not reduce problems related to linguistic or cultural differences (Su & Parham, 2002). One benefit of back translation is that it can provide insight into the process of decentering (Brislin, 1970; Brislin, Lonner, & Thorndike, 1973; Sechrest et al., 1972; Werner & Campbell, 1970). Decentering in translation is a collaborative process between experts in the two cultures or languages and is used to minimize cultural and linguistic biases (Su & Parham, 2002). The source and target versions are open to revision in the process of decentering, thereby generating a valid translation (Su & Parham, 2002). A third method of translation involves both forward and backward translation.

The forward–backward technique is an intellectually rigorous translation process, but engaging in this process is not a guarantee of achieving conceptual equivalence. This relatively exhaustive translation process still might not convey attitude (Croot, Lees, & Grant, 2011; Larkin, de Casterlé, & Schotsmans, 2007). For example, " . . . some terms may be translated accurately in their literal sense but a literal translation may fail to convey the ideas or attitudes inherent in the original choice of words" (Croot et al., 2011, p. 1003). Furthermore, translation and back translation of all the data collected in, for example, a grounded theory study might be considered to be excessively expensive and time-consuming (Chen & Boore, 2009) and, as a result, will not always be practical.

Qualitative research, in which researchers are working with words rather than statistical data, is characterized by interpretation of the meaning of participants' words (Fenna, Tineke, Hans, & Dorly, 2010). The meaning of these words (data) must be interpreted correctly or the results of the study will be adversely affected. The results of a qualitative study are considered rigorous if the interpretation of participants' meaning is as close as possible to the participants' experience (Polkinghorne, 2005). The issue of rigor in data analysis becomes a greater concern when the results of the study are published in a language other than the one used to obtain the data. Issues related to the translation process need to be addressed prior to data collection and analysis because there is potential for the meaning and intent of the research to be lost if the process of translation is not appropriate (Fenna et al., 2010). In addition, the quality of data translation can influence the equivalence and accuracy of findings (Frederickson, Acuna, & Whetsell, 2005; Schultz, 2004; Temple, 2002).

Cross-language research is defined as studies in which a language barrier is present between researchers and their respondents (Larson, 1988; Temple, 2002). In cross-language research, the translation process will differ from one qualitative methodology to another. For example, the translation approach used in ethnography will be different from that employed in a grounded theory study (Twinn, 1998). In phenomenology studies, researchers simply cannot undertake studies in languages other than their native tongue because the language used by the participant will be changed too significantly, even with a rigorous translation process (Squires, 2008). Analysis in phenomenology must be conducted entirely in the language of respondents, with translation becoming an option only in the final reporting and publication stages (Squires, 2008). Cross-language qualitative researchers who use other methodologies also argue that preliminary data should not be translated, only final papers just before publication (Larkin et al., 2007; Temple, 2002). The process of analysis for each qualitative methodology is different and, as such, the place and timing of translation in the research process also differ. Several researchers make recommendations about the processes of translation to be used in qualitative research as a whole (Chen & Boore, 2009; Fenna et al., 2010; Smith, Chen, & Liu, 2008; Suh, Kagan, & Strumpf, 2009), but there are no clear guidelines about dealing with translation issues encountered specifically in a grounded theory analysis.

## Translation in a Grounded Theory Study

A grounded theory study requires the use of complex data analysis methods (Strauss & Corbin, 1990), including three levels of analysis: initial, intermediate, and advanced coding (Birks & Mills, 2011). Coding is a process whereby researchers draw from the substantive area of investigation, personal knowledge and knowledge of extant theory (Birks & Mills, 2011) to create meaningful labels for sections of data. The standard technique of coding in grounded theory includes the preferred use of gerunds (Charmaz, 2006; Glaser, 1978), which are nouns formed from verbs. Grammar and syntax vary enormously across languages and, therefore, pose problems in translation (Su & Parham, 2002). For example, there is no equivalent of "gerund" in Indonesian. Therefore, researchers who want to adhere strictly to grounded theory methodology using gerunds in coding (Charmaz, 2006) must conduct analysis in English.

Throughout all levels of grounded theory analysis, researchers engage in constant comparison of data and use of theoretical sampling, usually recording the outcomes of these methods as memos (Birks & Mills, 2011; Strauss & Corbin, 1990). This active and systematic process is guided by questions posed by the researcher. These questions may be about preconceptions, feelings (both negative and positive), prior thoughts or knowledge, and reactions to situations which arise during interviews, all of which influence

the researcher's level of theoretical sensitivity to the data (Birks & Mills, 2011).

The first phase of analysis in a grounded theory study, initial coding, is conducted to fracture the data (Glaser & Strauss, 1967). Fracturing the data means that "the data is broken down into discrete parts which are closely examined, compared for similarities and differences then questions are asked about the phenomena, as reflected in the data" (Strauss & Corbin, 1990, p. 62). In this first stage of coding, researchers conduct a line-by-line analysis of data recorded during initial interviews. Data are coded and compared with each other. This process is called constant comparative analysis and uses inductive and abductive logic (Birks & Mills, 2011). Inductive thought is defined as "a type of reasoning that begins with the study of a range of individual cases and extrapolates patterns from them to form a conceptual category" (Bryant & Charmaz, 2007, p. 608). Abduction is defined as a

> type of reasoning that begins by examining data and, after scrutiny of this data, entertains all possible explanations for the observed data. Hypotheses are used to confirm or disconfirm these explanations until the researcher arrives at the most plausible interpretation of the observed data. (Bryant & Charmaz, 2007, p. 603)

Intermediate coding is the next phase of analysis in a grounded theory study. Strauss and Corbin (1990) use the term *axial coding* to describe intermediate coding. They define this term as "a set of procedures whereby data are put back together in new ways after open coding, by making connections between (and within) categories" (p. 96). During intermediate coding, the researcher organizes the categories and subcategories which have been retrieved from initial coding. Categories and subcategories are compared with each other, and the researcher establishes links and relationships between the concepts. Explanatory and conceptual patterns are identified. It is also considered good practice to develop relational statements to deepen analysis (Mills, Birks, & Hoare, 2014 ). Researchers may choose to write a storyline at this stage to explain the relationships between concepts that will make up the theory. The storyline is "the conceptualization of the story. This is the core category." (Strauss & Corbin, 1990, p. 116). Story line is defined as "a strategy for facilitating integration, construction, formulation and presentation of research findings through the production of a coherent grounded theory" (Birks & Mills, 2011, p. 176). The researcher uses grounded theory principles to begin writing a storyline, which is described and guided by the acronym TALES; that is, "Theory takes precedence, Allows for variation, Limits gaps, Evidence is grounded, [and] Style is appropriate" (Birks & Mills, 2011, p. 119).

Advanced coding is the last level of analysis in grounded theory methodology. The result of advanced coding will be theoretical integration. This is the point at which the theory is consolidated. Activities are started in this phase by sorting memos and field notes to "aid the integrative process through the identification of relationship and unifying concepts not previously evident" (Birks & Mills, 2011, p. 116). The grounded theory storyline is developed further. Advanced coding uses the storyline technique and, later on, theoretical coding (Birks & Mills, 2011).

The activities of analysis in a grounded theory study are complicated if the data are collected in a language other than English. Further complications occur if members of the research team are multilingual (and have different first languages). Although all members of a multilingual research team will be involved in the data analysis, data need to be collected in the local language of participants. A research team member who is fluent in the local language is the most appropriate person to interview participants. Such a decision will minimize the risk of misinterpretation and prevent the loss of participants' intended meanings when they use phrases and concepts which are securely embedded in the study's context (Smith et al., 2008). It is necessary to translate data into other languages for analysis by all researchers when the team is multilingual. Researchers must recognize, however, that this process can be time-consuming, expensive and has the potential to compromise the validity of the data because meaning can be lost easily in translation (Smith et al., 2008). Researchers need to minimize the risk of compromising data by setting out operational guidelines in the research proposal about translation. These guidelines must address the following three issues: when the data will be translated, who will undertake this translation, and what translation procedure will be used. The following worked example explains the procedures developed by researchers in this study to address these questions.

## Procedures for Translation in a Grounded Theory Study: A Worked Example

The analysis and translation process in grounded theory described here is based on research conducted in Indonesia. The title of this grounded theory study is *Connecting Care for Individuals Living with a Mental Health Issue in Indonesia.* The research team consisted of one Indonesian researcher, who is a PhD candidate, and three Australian supervisors (including one supervisor who joined the team at a later phase of data analysis). Data analysis was conducted mostly by the Indonesian researcher and the principal supervisor. The principal supervisor is a grounded theorist and was involved in the data collection process when she visited the research site. The principal supervisor also worked closely with the Indonesian researcher because, during analysis, the researcher was learning how to apply grounded theory methods.

The Indonesian researcher collected data in the local language in three stages: The first stage in August 2011 involved interviews with five nurses. The second stage of data collection between December 2011 and January 2012 involved theoretical sampling of general practitioners, psychiatrists, nurses, psychologists, cadres (a term used in Indonesia which refers to non-health professional volunteers), community leaders, relatives of individuals living with a mental health issue, and individuals living with a mental health issue. Thirty-nine interviews were conducted and transcribed. The third stage of data collection in May 2012 involved further theoretical sampling of social workers, social department staff, and staff from public and private mental health shelters. The primary researcher wrote memos during data collection and analysis. Memo-writing was particularly frequent during the transcribing of interviews; the process of initial, intermediate, and advanced coding; and in the preparation of the manuscript for publication. Memos were also written as required to account for the researcher's thoughts and decision making about the study more generally.

## *When Do Researchers Need to Translate Data?*

Language differences may occur in the initial phases of qualitative research during data collection or, later, in the process of analysis and publication (Fenna et al., 2010). Data may be translated at three distinct points in the research process: before analysis, during analysis, or after analysis when the manuscript is ready for publication (Suh et al., 2009). Suh et al. (2009) recommend that translation takes place during analysis because they believe that this will ensure the authenticity of the findings if the study is to be published in a different language. If data are translated before analysis, there is the possibility that meaning will be lost from the participant's implicit expression (Larkin et al., 2007). The researcher who waits until after analysis to translate the data may find translation difficult because sometimes there is no precise English word or phrase to express the participant's experience (Choi in Suh et al., 2009).

The composition of the research team must be considered when deciding the point at which translation should take place. Translation before analysis can be an appropriate option if the entire research team does not speak the participant's language. This type of research can be categorized as cross-language research. Translation after analysis, however, may be the best option if all members of the research team speak the same language as the participants. Quality of analysis will be poor if some members of the research team are forced to analyze data presented to them in a language other than their own. It is important to consider the characteristics of the research team members when considering the timing of translation. For example, translation during analysis may be the best fit if one member of the research team speaks a different language from other members. In the grounded theory study, "Connecting Care for Individuals Living With a Mental Health Issue in Indonesia," the translation-during-analysis approach was applied. This was considered to be the best choice because all members of the research team could then be involved in analysis. The next consideration was choosing a person to translate the data.

## *Who Should Translate Data?*

A translator is defined as a person who transforms the research data from one language to another (Josephine & Maurice, 2010). Researchers need to consider the theoretical or philosophical approach applied in the study to answer the question of who should translate the data (Adamson & Donovan, 2002; Esposito, 2001; Temple, 2002; Temple & Young, 2004; Twinn, 1997). For research conducted from a positivistic perspective in which knowledge is to be discovered, not constructed, translation is considered to be a simple process and language is easily reassigned from one language into another language (Squires, 2008). A technically precise translation is considered to be sufficient using this view (Temple, 2002), and a professional translator would be the best choice. Ideally, professional translators should possess certification from a professional translator's association as a proof of their language competency (American Translators Association [ATA], 2008; Edwards, 1998). A person who meets the standards described by the translator's association is the next best option if it is impossible or too difficult to employ a certified translator (Squires, 2009). To summarize, the use of a professional translator is suitable only for research within an epistemology of objectiveness where truth exists to be uncovered, rather than a constructivist or interpretive epistemology in which truth is constructed (Temple & Young, 2004).

The employment of a professional translator will not be acceptable in many grounded theory studies if the research is being done from a social constructionist, non-positivist, or interpretive approach. These frameworks assert that the social world influences the perspective of the translator and colors the way the translator interprets and translates the data (Temple, 2002; Temple & Young, 2004). This perspective integrates the cultural interpretation of a participant's statements into the data analysis process. The translator, therefore, becomes a producer of research data who shapes the analysis through their identity and experiences (Adamson & Donovan, 2002; Squires, 2008, 2009; Temple, 2002; Temple & Young, 2004). From this perspective, the decision to employ a professional translator may be considered inappropriate because translation is not considered to be a neutral technique to change words from one language into another. A technically accurate translation does not necessarily convey the precision or subtle nuances of the original intent described in the text (Bradby, 2002). Translation involves interpreting and conveying the meaning of two languages and is influenced and guided by power relations and social context (Buhler, 2002). Temple (2002) also makes the point that

interpretation in the broader sense of the word is the essence of translation. Therefore, "technical" translation may not be an appropriate course to follow except, possibly, when translation is to be employed just prior to publication. Translation in a social constructionist, non-positivist, or interpretive study might be conducted effectively by a translator-moderator from within the research team. The researcher will be better-placed than a professional translator to acknowledge and affirm the nature of the research work, including the contextualization of data in its transformation from one language to another.

In the example grounded theory study, the researchers applied social constructionist, non-positivist, and interpretive approaches and chose to use both a translator-moderator and professional translators. This combination of translators is recommended by Fenna et al. (2010), who suggest that the researcher who has conducted the interviews in their first language can operate as a translation moderator in cooperation with a professional translator. The twin processes of data collection and analysis are conducted together in a grounded theory study. Thus, it was decided that both translator-moderator and professional translator would be employed in the example study, but they had different roles and purposes. The translator-moderator was pivotal to the process of concurrent data collection and analysis, whereas the professional translator was employed in the process of finalizing the findings for publication.

The next issue to resolve is choosing the best person to be the translator-moderator. Smith et al., (2008) recommends that members of the research team who are fluent in the original language undertake the identification of categories. Thus, the best candidate for translator-moderator is the person who is fluent in both the source language and the target language (Birbili, 2000; Chen & Boore, 2009; Croot et al., 2011; Squires, 2008; Temple, 1997). Someone who is truly bilingual is even better (Hunt & Bhopal, 2004; Svetlana, 2007). Therefore, it is best practice to nominate a translator-moderator who is truly bilingual and who is sufficiently educated to be familiar with the concepts and with the formal and specialized language used in the data (Chen & Boore, 2009). The benefit of having a bilingual researcher in the team is that she or he will be able to construct meaning, analyze and reflect on this construction, as well as transferring the data into the English language (Edwards, 1998; Temple, 2005).

The bilingual translator-moderator is entrusted with many responsibilities, which can create potential for a power imbalance within the team. Svetlana (2007) says that the power of a translator-moderator is greater than that of research team members, particularly those researchers who do not speak the language of participants because the translator-moderator has an apparent monopoly on interpreting the research findings. Situations of mistrust can arise from this power imbalance and can lead to misunderstanding within the team (Tsai et al., 2004). Open communication and negotiation between all team members are therefore vital to prevent misunderstanding and to equitably share power and ownership of the research findings (Svetlana, 2007). Another characteristic the translator-moderator needs to possess is an understanding of the people participating in the study and a familiarity with both cultures because translation is a complex social and cognitive process that can affect the outcomes of the study (Svetlana, 2007).

In this study, the translator-moderator, a member of the research team, could speak both Indonesian and English. Even though English was a second language and she was not truly bilingual, this researcher was the person who interviewed participants and wrote memos throughout the research process. She had easy access to the memos she wrote and was able to incorporate these memos into the process of analysis. In this worked example, only one translator-moderator was used with the intent of ensuring the consistency and conceptual congruency of both the oral and written translation processes (Larkin et al., 2007; Twinn, 1997). A professional translator was employed only to back translate the evidence selected to support the analysis before the findings were ready to be published in an English-language journal.

## The Translation Procedure

The next section will use a worked example to explain how to translate the data, including translation in the process of coding, translation in the process of team discussion, translation in the process of advanced coding, and ensuring the accuracy of translation.

*Translation in the process of coding.* In Phase 1, the translator-moderator (who is the Indonesian researcher) translated five interviews into English. The translation was checked by a colleague—an Indonesian who has an International English Language Testing System (IELTS) score of 6.5, a rating described as competent to good command of English (British Council, n.d). The translated interviews were coded in English by the primary researcher. The principal supervisor checked the coding for intellectual rigor, discussed the results of initial coding, and guided the translator-moderator about how to move forward with both theoretical sampling and intermediate coding.

During the second field trip, the primary researcher conducted 41 interviews. The team encountered problems managing this quantity of transcribed data using the original process of translation and checking, which was very time-consuming. The time involved in this lengthy process made it difficult to check and translate the data before the third phase began in May 2012. During a 38-day period from the end of January to March 8, 2012, the primary researcher could only finish 19 transcripts and translate those 19 transcripts into English. Time restraints meant that these translations could not be checked by a colleague before the

**Table 1.** The Result of Initial Coding Using English and Indonesian for the First Data Collection.

| The result of initial coding using English translation | The result of coding using original language |
|---|---|
| Connection | *Keluarga* (family) |
| Community setting = service for patient in community | *Perawat* (nurse) |
| Community setting = family expectation | *Pasien* (patient) |
| Community setting = goal patient after discharge | *Hubungan rumah sakit dan komunitas* (connection between hospital and community) |
| Community setting = patient problem in community | *Komunitas* (community) |
| Hospital setting = activity before patient is discharge | *Rumah sakit* (hospital) |
| Hospital setting = daily activity in hospital | |
| Hospital setting = patient admitted to hospital | |
| Patient movement | |
| Medicine is important | |
| Uncategorized—patient's health insurance | |
| Uncategorized | |
| Uncategorized—relapse | |

translator-moderator started the initial coding. The results of the initial coding of these 19 transcripts were used as the basis for research team discussions (in English) regarding the analysis. It was important to have the initial coding done because, in grounded theory methodology, conclusions cannot be drawn if the coded data cannot be properly compared, and to make sure no new categories have emerged.

The members of the research team discussed ways to solve this problem of slow translation, checking, and coding. It was decided that the translator-moderator needed to go back to the original data for those 19 transcripts and do the coding again in the original language—Indonesian. The result of this coding process was compared with the results of coding the 19 transcripts in English to examine whether the coding outcomes had been affected by translation. To further test this point, the translator-moderator recoded the first five transcripts from the initial data collection phase in the original language and compared the results with the previous coding in English. It was considered important that the same process was followed during the first two phases.

These activities provided useful information to the research team about how to code effectively across languages. Coding in the original language was easier, quicker, and tidier than coding done in the translated form. For example, when coding the translated English-language version, there were codes that were considered to be too difficult to categorize. Using Indonesian, all codes could be categorized and there were no "loose ends" (see Table 1).

The results of coding differed slightly between languages. This was true in the first stage, using 5 transcripts, and in the second stage, using 19 transcripts. This finding is contrary to that of Chen and Boore (2009) who conducted coded analysis using English and Chinese and obtained a similar result in both languages. The different characteristics of each language—Chinese and Indonesian—may have influenced this result.

Coding in the original language was faster and more accurate than coding the translated data. Fenna et al. (2010) advocate the use of the original language for as long as possible to avoid the potential of limiting the quality of the analysis. The researcher found during this experience that the abstract thinking, required as part of the abductive logic applied in grounded theory data analysis, is less complicated in the original language. A researcher trying to engage in complex, abstract thinking in a language other than their first language may be distracted from important findings in the data because they are trying to understand the finer points of language. The research team decided that the translator-moderator would use her original language for initial, intermediate, and advanced coding in the process of analyzing all data after considering the results from both forms of coding.

*Translation in the process of team discussion.* The results of initial and intermediate coding guided research team discussions. The aim of this discussion was to develop a grounded theory. The principal supervisor visited research sites in community and hospital settings resulting in an enhanced theoretical sensitivity for cultural differences. This understanding of cultural aspects of mental health service delivery in Indonesia led to a higher level of conceptual analysis.

During team discussions, different analytical methods were utilized. These methods included diagraming, choosing the most appropriate code, using a dictionary, and using a thesaurus. Word choices made by researchers who were not fluent in the participant's language were discussed with the translator-moderator to find the closest meaning in English. This process allowed researchers to share meaning making about high level conceptual analysis and also to share understanding of two different cultures. The translator-moderator provided the necessary translation and explained each category in-depth as it was constructed. The translator-moderator also checked memos related to data analysis and included these memos in discussion. Memo translation was conducted orally.

The translator-moderator (who was also the primary researcher) discussed the developing analysis on a weekly basis with the principal advisor. Each discussion was based on the oral translations. In this process, the primary researcher used fluid descriptions of meanings, drawing on various English formulations while checking these against the original transcriptions of interview data to ensure accuracy (Fenna et al., 2010). This approach was supported by Temple (2002) who emphasized that the focus of translation should not be wholly concentrated on "precise" word choice because translation, in this sense, is about recreating meaning rather than

revealing it (Croot et al., 2011; Temple & Young, 2004). Discussion can be used as a procedural tool for achieving conceptual equivalence because these oral translations aid understanding. Furthermore, discussion can be considered to be a process of decentering, especially when it is found that some phrases cannot be translated accurately into the target language because of differences in culture and language (Su & Parham, 2002).

An outcome of these early discussions was the identification of a possible core category, which was then tested and verified during subsequent field trips. During intermediate coding, the research team identified a gap in the data, so theoretical sampling was directed based on this process of analysis. The research team decided that it was not necessary to employ a professional translator during the process of developing the conceptual complexity and abstraction of both the intermediate and advanced coding phases of the study.

The activities in advanced coding were started by sorting memos and field notes. Memos were written in English, Indonesian, or a mix of both. The primary researcher worked on this activity. Memos help identify relationships and unifying concepts not previously evident (Corbin & Strauss, 2008). Memo sorting was carried out in conjunction with the discussion process. Research team members regularly drew diagrams to illustrate possible models of the theory to examine how the established categories might fit together. In this study, some 31 diagrams were drawn during research team discussions between August 2012 and March 2013.

*Translation in the process of advanced coding.* The next activity in advanced coding was writing a storyline. The primary researcher provided the storyline in English, so that the other team members could read it. There are several ways one might approach writing the storyline. The storyline is considered to be a form of "free writing" (Birks & Mills, 2011). Data are not put in at this stage as this helps ensure the flow of writing. Free writing can be understood as a writing process in which the writer does not need to worry about grammar or rules or "good writing." This process, however, can be difficult for researchers who endeavor to write the storyline in a language other than their own. In this study, the translator-moderator had two alternatives from which to choose: write the storyline in her own language and translate later or write the storyline in English without worrying too much about language conventions. The important priority was for the researcher-moderator to write freely without any problem finding the words to express the story.

In this study, the translator-moderator wrote the storyline in English—her second language—but could write the storyline easily because of her familiarity with the raw data. The original storyline was not written in grammatically correct English. The researcher-moderator distributed this "free-flowing" storyline to the research team who worked with her to develop and refine the grounded theory. The principal advisor (who had visited the research site and participated in all stages of the analysis) was very familiar with the data and, therefore, understood the storyline in this raw format. The researcher-moderator used memos to develop her reflexivity in the process of writing the storyline. Writing memos is an important grounded theory tool that provides a written record of reflexivity. Reflexivity is considered to be an active process in developing insight. The researcher writes about her actions, feelings, influences, and thinking and incorporates these factors into analysis by considering their impact on the data and the theory (Birks & Mills, 2011). Another of the translator-moderator's responsibilities was to check whether the storyline was grounded in the data or not. Evidencing the storyline is a very important step in validating a grounded theory. All researchers discussed the storyline weekly for several months. From September 8, 2012, to February 8, 2013, there were 46 versions of the storyline discussed before all members of the research team agreed on the final grounded theory.

Two versions of translated data were used to evidence the storyline during the process described above. The first version was a partial translation of data fragments translated by the translator-moderator in response to the developing storyline. These partial translations were discussed with the research team to ensure evidence matched the theory. During this process, several examples of evidence were replaced with alternatives because the research team as a whole considered the alternative examples to more strongly support the theory. During the process of translating these data fragments, the translator-moderator again listened to the tapes to check the accuracy of the original transcription in Indonesian before translating the comments into English. The translator-moderator inserted the chosen evidence into the storyline after the last version of the storyline was agreed upon.

*Ensuring the accuracy of translation.* Forward and backward translation is conducted to ensure the accuracy of the translation process. In this study, the translator-moderator's version was subjected to a comparative second translation of the final data fragments. An Indonesian English teacher conducted this comparative translation. The translator-moderator and other team members then compared the first and second versions of translated evidence to check accuracy and meaning. The translator-moderator modified her version of translated evidence to improve clarity and understanding. This modification was called the third version of evidence.

At this point, a professional translator back translated the third version of evidence into Indonesian. The back translator did not have access to the original source version before conducting the back translation in accordance with the recommendations by Su and Parham (2002). The principal researcher compared the end result of the back translation with the original translator-moderator transcription to ensure an accurate representation of participants' meaning in the evidenced grounded theory. Comparison between original and back translated versions is necessary (Maneesriwongul

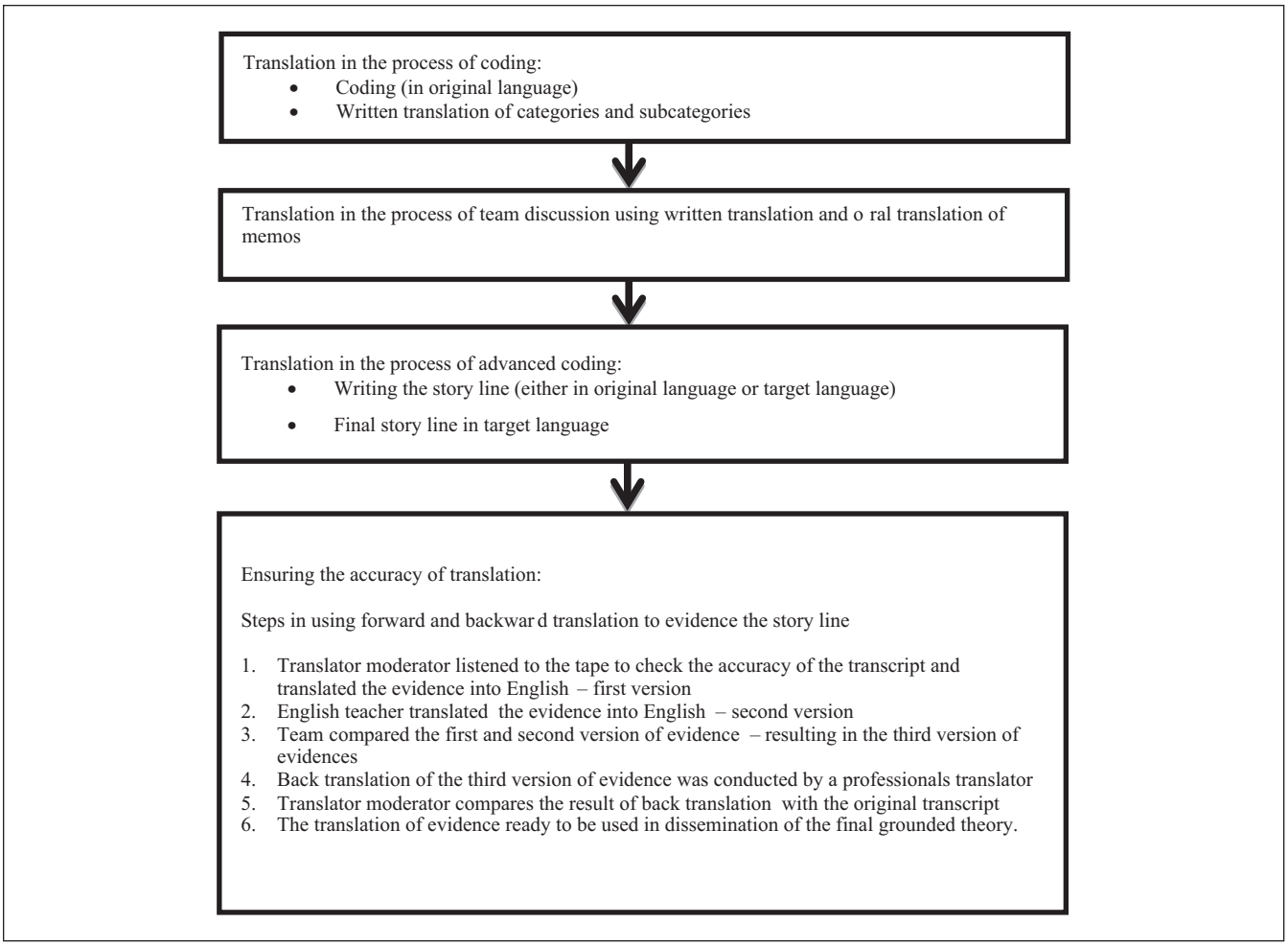


**Figure 1.** Translation procedure.

& Dixon, 2004; Su & Parham, 2002). If the two versions are not identical, the back translation process is repeated iteratively until no discrepancies in meaning are found (Su & Parham, 2002). Back translation can be repeated until the researchers are satisfied with the equivalence between source and target languages (Jones & Kay, 1992). The procedure of translation is illustrated in Figure 1.

## Conclusion

The process of translation can be a problem area for researchers conducting qualitative studies in languages other than English who intend to publish in English-language journals. This article has identified issues experienced during a research project in which the research team consisted of individuals from different language backgrounds—Indonesian and English. The translation procedure outlined in this article was developed from the experience of the research team and includes important advice about when, who, and how to translate data in the process of grounded theory analysis. The procedures will assist researchers who are conducting grounded theory studies to maintain the integrity of their data and their findings during the translation process. The authors recommend that following the translation procedure outlined in this article will ensure the quality of findings.

### Declaration of Conflicting Interests

The author(s) declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) disclosed receipt of the following financial support for the research and/or authorship of this article: The study was supported by an Australian Development Scholarship.

### References

Adamson, J., & Donovan, J. L. (2002). Research in black and white. *Qualitative Health Research*, *12*, 816-825.

American Translators Association. (2008). *Minimum qualifications for translator certification*. Retrieved from http://www.atanet.org/certification/index.php

Birbili, M. (2000). *Translating from one language to another*. Retrieved from http://sru.soc.surrey.ac.uk/SRU31.html

Birks, M., & Mills, J. (2011). *Grounded theory: A practical guide*. London, England: Sage.

Bradby, H. (2002). Translating culture and language: A research note on multilingual settings. *Sociology of Health & Illness*, *24*, 842-855.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, *1*, 185-216.

Brislin, R. W., Lonner, R., & Thorndike, R. (1973). *Cross-cultural research methods*. New York, NY: Wiley.

British Council. (n.d). Understand how to calculate your IELTS scores. Retrieved from http://takeielts.britishcouncil.org/find-out-about-results/understand-your-ielts-scores

Bryant, A., & Charmaz, K. (2007). *The SAGE handbook of grounded theory*. London, England: Sage.

Buhler, A. (2002). Translation as interpretation. In A. Riccardi (Ed.), *Translation studies: Perspectives on an emerging discipline* (pp. 56-74). Cambridge, UK: Cambridge University Press.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London, England: Sage.

Chen, H. Y., & Boore, J. R. P. (2009). Translation and back-translation in qualitative nursing research: Methodological review. *Journal of Clinical Nursing*, *19*, 234-239. doi:10.1111/j.1365-2702.2009.02896.x

Corbin, J. M., & Strauss, A. L. (2008). *Basics of qualitative research: Techniques and procedure for developing grounded theory*. Los Angeles, CA: Sage.

Croot, E. J., Lees, J., & Grant, G. (2011). Evaluating standards in cross-language research: A critique of Squires' criteria. *International Journal of Nursing Studies*, *48*, 1002-1011. doi:10.1016/j.ijnurstu.2011.04.007

Edwards, R. (1998). A critical examination of the use of interpreters in the qualitative research process. *Journal of Ethnic and Migration Studies*, *24*, 197-208.

Esposito, N. (2001). From meaning to meaning: The influence of translation techniques on non-English focus group research. *Qualitative Health Research*, *11*, 568-579.

Fenna, V. N., Tineke, A., Hans, J., & Dorly, D. (2010). Language differences in qualitative research: Is meaning lost in translation? *European Journal of Ageing*, *7*, 313-316.

Frederickson, K., Acuna, V. R., & Whetsell, M. (2005). Cross-cultural analysis for conceptual understanding: English and Spanish perspective. *Nursing Science Quarterly*, *18*, 286-292.

Glaser, B. G. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory*. Mill Valley, CA: Sociology Press.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York, NY: Aldine.

Hunt, S. M., & Bhopal, R. (Cartographer). (2004). *Self report in clinical and epidemiological studies with non-English speakers: The challenge of language and culture*. Retrieved from http://jech.bmjjournals.com/cgi/content/full/58/7/618

Jones, E. G., & Kay, M. (1992). Instrumentation in cross-cultural in cross-cultural research. *Nursing Research*, *41*, 186-188.

Josephine, P. H., & Maurice, K. P. (2010). Bringing translation out of the shadows: Translation as an issue of methodological significance in cross-cultural qualitative research. *Journal of Transcultural Nursing*, *21*, 151-158.

Larkin, P. J., de Casterlé, B. D., & Schotsmans, P. (2007). Multilingual translation issues in qualitative research: Reflections on a metaphorical process. *Qualitative Health Research*, *17*, 468-476.

Larson, M. I. (1988). *Meaning-based translation: A guide to cross-language equivalence*. New York, NY: University Press of America.

Maneesriwongul, W., & Dixon, J. K. (2004). Instrument translation process: A methods review. *Journal of Counseling Psychology*, *48*, 175-186.

Mills, J., Birks, M., & Hoare, K. (2014). Grounded Theory. In Mills, J. & Birks, M. (Eds), *Qualitative Methodology: A practical guide*. London, UK: Sage.

Polkinghorne, D. (2005). Language and meaning: Data collection in qualitative research. *Journal of Counseling Psychology*, *52*, 137-145.

Schultz, A. A. (2004). Role of research in reconstructing global healthcare for the 21st century. *Nursing Administration Quarterly*, *28*, 133-143.

Sechrest, L., Fay, T. L., & Zaidi, S. M. H. (1972). Problems of translation in cross-cultural research. *Journal of Cross-Cultural Psychology*, *3*, 41-56.

Smith, H. J., Chen, J., & Liu, X. (2008). Language and rigour in qualitative research: Problems and principles in analyzing data collected in Mandarin. *BMC Medical Research Methodology, 8*, Article 44.

Squires, A. (2008). Language barriers and qualitative nursing research: Methodological considerations. *International Nursing Review*, *55*, 265-273. doi:10.1111/j.1466-7657.2008.00652.x

Squires, A. (2009). Methodological challenges in cross-language qualitative research: A research review. *International Journal of Nursing Studies*, *46*, 277-287.

Strauss, A. L., & Corbin, J. M. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.

Su, C. T., & Parham, L. D. (2002). Generating a valid questionnaire translation for cross-cultural use. *American Journal of Occupational Therapy*, *56*, 581-585.

Suh, E. E., Kagan, S., & Strumpf, N. (2009). Cultural competence in qualitative interview methods with Asian immigrants. *Journal of Transcultural Nursing*, *20*, 194-201. doi:10.1177/1043659608330059

Svetlana, S. (2007). Double vision uncertainty: The bilingual researcher and the ethics of cross-language research. *Qualitative Health Research*, *17*, 529-538.

Temple, B. (1997). Watch your tongue: Issues in translation and cross cultural research. *Sociology*, *31*, 607-818.

Temple, B. (2002). Crossed wires: Interpreters, translators and bilingual workers in cross-language research. *Qualitative Health Research*, *12*, 844-854.

Temple, B. (2005). Nice and tidy: Translation and interpretation. *Sociological Research*, *10*(2). Retrieved from http://www.socresonline.org.uk/10/2/temple.html

Temple, B., & Young, A. (2004). Qualitative research and translation dilemmas. *Qualitative Research*, *4*, 161-178. doi:10.1177/1468794104044430

Tsai, J. H. C., Choe, J. H., Lim, J. M. C., Acorda, E., Chan, N. L., & Taylor, E. (2004). Developing culturally competent health knowledge: Issues of data analysis of cross-cultural,

cross language qualitative research. *International Journal of Qualitative Methods*, *3*(4), Article 2.

Twinn, S. (1997). An exploratory study examining the influence of translation on the validity and reliability of qualitative data in nursing. *Journal of Advanced Nursing*, *26*, 418-423.

Twinn, S. (1998). An analysis of the effectiveness of focus groups as a method of qualitative data collection with Chinese populations in nursing research. *Journal of Advanced Nursing*, *26*, 418-423.

Werner, O., & Campbell, D. T. (1970). Translation, wording through interpreters, and the problem of decentering. In R. Naroll & R. Cohen (Eds.), *A handbook of method in cultural anthropology* (pp. 398-420). New York, NY: Natural History Press.

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