Implementing the Bricolage: Investigating with Varied Methods

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Abstract:-Bricolage is an emerging concept of research methodology which applies all appropriate techniques of investigation into a research. This eclectic method is intended to have a unified and comprehensive research result. This paper discusses my experience in implementing the bricolage principle in the research that I conducted on workplace English in Indonesia. The case study with four sub-cases in my research has undoubtedly been achieved with satisfying result thanks to the use of bricolage. All the steps taken in conducting the research is described and a number of research methods used together with their underlying principles is also expounded. This article will be useful for those who are undertaking research especially in the methodology part. Further idea on the functional Inductive Data Reduction (IDR) is also discussed.

Keywords: *Bricolage, Eclectic Method, IDR Analysis, Comprehensive Research*

I. INTRODUCTION

The Oxford dictionary describes bricolage as 'construction or creation from a diverse range of available things'. It is initially from a French word which existed in mid-twentieth century. As a French word, bricolage comes from bricoleur which means someone who 'does odd jobs and who undertakes repair' (Oxford Dict, 2013). This is established by the English-French translator (Linguistics 2013) which explains 'bricoleur' as to mean: (in house) to do odd jobs, potter about; (with cars) tinker about; to knock up (infml), and to cobble together. For my study, I take the definition of bricolage as 'put together what is available and around to produce a unified research result'.

A. Bricolage as a Method of Inquiry

The research definitely applies the principle of bricolage in the collecting and processing of data. Steinberg (2012) asserts principle of bricolage as an eclectic method by which an educational researcher conducts a study – attributing, in particular, the earlier work of disciplines and traditions. Steinberg (2012, p. 184) affirms that the eclectic method as such as being:

* pragmatic and strategic, demanding self-consciousness and awareness of the context from the researcher.

Furthermore, Verjans (2005) sees bricolage as a way of life, while Tshabangu (2009) views the use of bricolage as of a

challenge to researchers which is not bound by rigid, orthodox methods developed outside the inquiry demands. In another instance, Kincheloe (2004) states that bricolage sees research methods actively rather than passively. This means that we actively construct our research methods from the tools at hand rather than passively receiving the 'correct' universally applicable methodologies.

Hence, through use of bricolage, Kincheloe (2004) seeks to comprehend the research context by using earlier experience and research methods that are suitable to that context.

According to Denzin & Lincoln (2011) the researcher conducting qualitative research may be seen as a 'bricoleur'. They designate that there are many kinds of bricoleurs: interpretive, narrative, theoretical, and political. Furthermore, they affirm that the qualitative researcher who uses montage is similar to a quilt maker or a jazz improviser: the quilter stitches, edits, and puts slices or reality together.

My study employs semi-structured interviews – part of an ethnographic method as the main inquiry – together with multi-research methods: textual analysis, inductive data reduction (IDR), survey research, hermeneutics, phenomenology and auto-ethnography. Thus, an elective method – bricolage and being a 'bricoleur' – has been implemented in order to obtain the best possible outcome for the study.

B. Mixed Methods

There is now a trend to incorporate the two methods - quantitative and qualitative - in the so called 'mixed methods', but the mixed methods approach to research is an extension rather than a replacement for the quantitative and qualitative approaches to research. The two research approaches will carry on to be useful and important. It is based on the principle that both methodologies share the same intention of assisting in finding the answers to a set of research questions. Williams (2007) asserts that the goal for researchers incorporating the mixed methods approach is to draw from the strengths and to minimise the weaknesses.

Williams (2007) argues that the quantitative method offers an objective measure of reality, while the qualitative method allocates the researcher to explore and better understand the complexity of a phenomenon. Additionally, Denzin & Lincoln (2011) advises that qualitative researchers study things in their natural settings.

In addition, Denzin & Lincoln (2011) put forwards that all qualitative researchers are philosophers, in a universal sense: they are guided by highly abstract principles which merge beliefs about *ontology*– What kind of being is a human being? What is the nature of reality?; *epistemology* – What is the relationship between inquirer and the known?; and *methodology* – How do we know the world or gain its knowledge?

II.   IMPACT OF CONSTRUCTIVISM ON THE STUDY

The psychological theory behind my research is constructivism. The concept of 'constructivism', as established by Piaget, is based on the belief that every human being is furnished with a knowledge-building capacity. It is, as described by Schunk (2008) 'formed inside people and learning happens through interactions'. This is reinforced by Glasersfeld (1990) who points out that the human knower can obtain some knowledge of a truly existing world and can implement this knowledge to modify it.

Problem-solving is often confronted by employees in their workplaces and Billett (1996) spreads the view that 'a constructivist view of learning emphasises problem-solving as a means to construct, organise, index and extend knowledge'. Similarly, Kerka (2011) asserts that constructivism, as contrasting to behaviourism, should trigger the theory of English for Academic Purposes; the latter simply advocates knowledge for behavioural control and task completion by students. Constructivism is in accordance with qualitative research which emphasizes on the participants in the regular everyday world (natural settings) (Croker 2009).

A. Ethnograph

Ethnography is defined by Pole and Morrison (2003, p. 16) as an approach to social research based on the first-hand experience of social action within a discrete location, in which the objective is to collect data which will convey the subjective reality of the lived experience of those who inhabit that location.

Another definition by Silverman (1997) suggests that ethnography is defined as hybrid approach featured by two demands on researchers: one observing a setting and gathering data; the other directly concerned in the setting under study, comprising the researchers, as themselves objects of inquiry. These two definitions are akin to that of Donan (1997), who advises that ethnographic research is a type of study which is based on observation of human action, discourse, and self-perception, and is anticipated as an proper form of research when experimental research is unfitting, and when exactitude is not required.

B. Auto-Ethnography

Auto-ethnography is a research method that takes advantage of the researcher's own experiences as ethnographic data (Maréchal 2010; Southerton 2011). Furthermore, Ellis and Bochner (2011) propose that auto-ethnography is a process that derived from the 'crisis of confidence' stimulated by postmodernism in the 1980s: it merges the characteristics of autobiography and ethnography. Ellis and Bochner (2011) also state that in writing ethnography, the author describes about past experiences. The author is also permitted to reflect on their own experience, to unite this with interviews as well as supported with descriptions such as photographs, journals and recordings to help with recall.

In my study I used my personal experience as an employee in some organisations where I could have access data resourced from observation, interview, materials and other sources. My experience which helps reinforce the analysis for my thesis embracing my work with the Save the Children foundation as and with the Australian-based Sagric and other Indonesian local companies.

C. Naturalism

Observation of first-hand experience is the key factor normally found in the definition above. This is because ethnography is placed within the approach of naturalism (Angrosino 2007; Kusenbach 2003; Pole & Morrison, 2003; Sangasubana, 2011; Williams, 2007) and naturalism is dealt with the setting and location within which social action is formed and experienced.

Concerning the time taken to caarry out research with naturalism approach, Sangasubana (2011) proposes that the observation and the extent of the researcher's participation with the subjects under investigation may require a relatively long period of time. Johnson (2009), for example, expended three years of data collection to research a language policy - associating micro-level educational practices with macro-level language policies and discourse. Troman and Jeffrey (2007) spent three years carrying out a collaborative ethnographic study of how occupants in five urban neighbourhoods in Hollywood perceive local problems, and how their daily activities and social exchanges relate to those understandings. Quinlan (2008) spent several months conducting an institutional ethnography study using 'shadowing', i.e., being present with subjects for lengthy periods of time on a fixed basis, as the main method of observation for data collection.

Another characteristics which is commonly proposed by some scholars regarding ethnography is in the application of various methods of data collection as well as observation which comprises interview, site documents and other backup sources especially meant for triangulation (Angrosino 2007; Freebody 2003; Pole & Morrison 2003; Sangasubana 2011; Williams 2007).

D. Triangulation

Triangulation is the usage of more than one approach in one study for the sake of enhancing confidence in the findings. Denzin (1989) further expounds four types of triangulation, namely data triangulation, investigator triangulation, theoretical triangulation and methodological triangulation.

For the purposes of triangulation, quantitative methods containing statistical calculation from a survey tool, for example, are also allowed in ethnography as is advocated by Pole and Morrison (20030

A further example provided by Stake (2006) who suggests that triangulation can be used to gain assurance from a diversity of sources. In a multi-case study, or a case study consisting of many sub-cases, the researcher is confronted to see what is shared across the cases; triangulation will help in making meaning across these cases.

In addition to interviews as the main source, I used observation, document analysis and survey. Survey is used especially to substantiate the findings in the interview. Both the interviews and survey allowed me to see how knowledge and experience were observed by the subjects under investigation. In this sense, this research also involved a phenomenological approach.

E. Phenomenology

Katz and Csordas (2003) describe phonomenology as an approach that pursues to reveal the foundation of a culture. This definition overlooks reference to experience and knowledge, which Lester (1999) advises is a basic foundation of phenomenology. He declares that phenomenology is dealt with the study of experience from the individual standpoint, 'bracketing' taken-for-granted conventions and usual ways of identifying. In addition, he advocates that the drive of the phenomenological approach is to brighten the specific, to recognize phenomena by way in which they are observed by the actors in a situation. Moreover, he states that epistemologically, phenomenological approaches are grounded on a paradigm of personal knowledge and subjectivity that underline the importance of individual perspective and interpretation.

F. Phenomenography

At this juncture, I need to differentiate between phenomenology and phenomenography. The latter is an empirical research tradition that was intended to answer questions about thinking and learning, especially for educational research. Ornek (2008) proposes that phenomenography is the empirical study of the diverse ways in which people think of the world, whereas phenomenology is 'the study of phenomena' associated with individual perspectives.

Ornek (2008) argues that phenomenology and phenomenography are comparable in that they are both fields of knowledge that is attained by having experience as the subject of the study, but fails to intricate further the differences between the two approaches.

From the research of Barnard, et al (1999) I have observed the comparison of phenomenography and phenomenology.The most interesting difference between the two methods is that while phenomenography puts emphasis on collective meaning, phenomenology focuses on individual experience. On this basis, I categorise my research as being a phenomenological study that pursues the knowledge of individuals concerning their use of English in the workplaces.

In terms of theory building based about lived experiences, Goulding (2005) advocates that phenomenology has its own unique characteristics and philosophy. He contends that this is both a beneficial and a beneficial approach to understanding how people undergo events or phenomena. Based on epistemology which perceives knowledge as a social construction (and not a correspondence with 'truth') and a theory that sees learners as active constructors , Pring (2000) and Hopwood (2004) claim phenomenology presents itself as a proper approach for investigating participants, inspecting them as people who interpret the world and their experiences, and who construct personal understandings of themselves. This suggests that phenomenology has its own unique characteristics and philosophy.

I conclude that a study may be considered as a phenomenology when it examines an individual's experience and knowledge. Consequently, I consider that this study fits precisely with a phenomenological approach.

III. CASE STUDY

From the point of view of the subjects under investigation, the present study can be grouped as a 'Case Study'. A case study, as suggested by Yin (1994) is an empirical study that scrutinizes a contemporary phenomenon within its real-life context, particularly when the limitations between phenomenon and context are not clearly evident'.

Taking an alternative position, Stake (2008) distinguishes three types of case study, namely, 'intrinsic', 'instrumental' and 'collective'. Intrinsic case studies occur when a study is conducted because one requests better understanding of a particular case. Whilst, instrumental case studies occur when a particular case is investigated to provide insight into an issue or refinement of theory. Finally, collective case studies happen when researchers study a number of cases jointly in order to investigate the phenomena, population or general condition.

Whether or not generalisation is probable from a collective case study is a cause for some argument. Stake (1995) asserts that 'grand generalizations' can be drawn from a case study, although he proposes that the real business of case study is 'particularisation', not 'generalisation' Stake (1995).

Yin (2003) emphasizes three aspects of the case study inquiry: coping with the technically distinctive situation, relying on multiple sources of evidence, and benefiting from the prior development of theoretical propositions. All these characteristics are accommodated in this study as I have developed a case study with four sub cases. This, according to Yin (2003) permitted me to yield multiple findings using a 'replication logic' from which I can develop and build a theory through analytical generalisation and comparison of cases.

In conclusion, of the three typologies of case study suggested by Stake (1995) – 'intrinsic', 'instrumental' and 'collective' – I categorize my study as a 'collective case study' because it consists of four sub-cases which are instrumental in learning about the use of English in each of four workplaces. In terms of the sites under investigation, the present study is classified as an 'ethnographically informed cross-case analysis' since four different sites, namely national private, national public, multinational and foreign companies were observed and compared.

A. Instrument Development

In this ethnographic study, a range of instruments was used for both the alumni workers and their supervisors. The main instrument was in the form of questions that I used in the semi-structured interview sessions. I obtained other supporting data obtained from observations, a survey, journal records and personal notes of informal interviews that I preserved for the period of the four visits. A questionnaire was made and distributed, either in their workplaces or online, to 200 randomly chosen polytechnic graduates.

B. Semi-Structured Interviews

Interviews are used to gather data because they can provide insights into people's experiences, beliefs, perceptions, and motivations at depth that is not probable with questionnaires (Richards, 2009). Semi-structured interviews are used because the interviewer has a clear picture of the topics that need to be covered but is prepared to allow the interviewer to develop unexpected directions. This view is supported by Nunan (1993) who states that in a semi-structured interview, topics and issues rather than questions determine the course of the interview. Open response questionnaire items, as 'one of the techniques used to collect qualitative data' (Croker, 2009) are used as they can produce a wide range of rich and often surprising responses (Browns, 2009).

Questions for the semi-structured interviews were made in a form of open but guided questions that followed the principles outlined above. The questions included issues and items specifically geared towards answering the research questions.

I conducted some limited piloting of the questions. This piloting focused on the clarity of the language and instructions for the semi-structured interviews.

Because the nature of semi-structured interview is open to modification, I can direct 'spontaneous questions' to participants particularly when I required clarification of, or further information about the matters concerned. I undertook a literal transcription of each of the 11 recordings.

IV. OBSERVATION

The visits and observations that I made for my research have given me abundant knowledge on how English is used. There were some diverse conditions in each company; however, I noted significant similarities in the atmosphere and culture of the companies. Similarities were found in the security level necessary in both the multinational and foreign public companies. In each, I found that these companies have their own system of security. For each, the outcome is the same: it is intended to protect the company and its employees from outside intruders. The security in the multinational company was very tight. It was less tight in the foreign national company. By comparison, security in the state-owned and private companies was not obvious at all.

The corporate culture in each company was distinctive. The culture components that engaged me comprised the following: the relationship and interaction among workers; the physical condition of the buildings with their maintenance; and the worker's performance. None of elements has a direct influence with the area of this study; indirectly, it may have an influence in the use of English language in the workplace.

A. Questionnaires Administered to Alumni Workers

I circulated questionnaires to the polytechnic alumni in the four companies when I visited. I also asked some other alumni to fill out the questionnaires online via the social network. The total number of returns was 36 – a small but sufficient number for descriptive data analysis.

The content of the questionnaires was similar to the questions in the interview - it was meant to strengthen the findings of the qualitative analysis. Additional questions were added concerning the types of language skills required and the perceptions of importance of the language skills in their workplaces.

The questionnaires and semi-structured interview questions were pre-tested by similar respondents. In particular, the pre-test emphasized on ensuring that the items in the questionnaire were obviously understood and to determine the estimated time taken to complete it.

B. Collection of Data from the Company's Documents and Records

I have told the high level of security at Minyak MNC and Alatbesar FPC. In particular, the prohibition on the taking of photographs in the offices of these companies meant that I was ot able to obtain copies of any instructions written in English. One of the workers interviewed clearly signed that the

documents made by the company cannot be shown to anybody as they are confidential.

I was suggested by the contact person at Alatbesar FPC that I should access their website, all of which is written in English – a general type of English which is intended for information – to find out how English is used in the company. I chose not to follow this suggestion because the English used in a website is unrelated to the English that would be used in a workplace.

However, I was able to collect some documents written in English as a result of my email correspondence with the company. I could make a judgment of English capability from the questionnaire responses, for some comments in the questionnaire responses were written in English. As I care only about the contents of the comments, I did not see the relation between the quality of English they produced and the self assessement.

V. DATA ANALYSIS

Regarding the areas of applied linguistics, Crocker (2009) states two which are significant for my research: language analysis and contexts, and experiences of language use.

As the former is usually dealt with second language acquisition (SLA), this research falls in the second area – contexts and experiences. As Croker (2009) points out, the nature of qualitative analysis entails collecting textual data and they are examined using interpretative analysis

A. Inductive Data Reduction (IDR) Analysis
I applied a qualitative method of inductive data reduction (abbreviated as IDR) to analyse the data that I gathered as a result of my field work in Indonesia. The data were collected from 11 semi-structured interviews: four interviews with individual managers and seven polytechnic alumni working within the four companies under study.
One of the strengths of qualitative methodology is the rich data it possesses (Denzin, & Lincoln, 2011) and it has been confirmed in this research. The data are specially related to my research topic. I did not include expressions of opinion, questions or statements from any conversation in the analysis of data.

B. Procedure of Inductive Data Reduction Analysis
In this section, I carry out a complete description of the approach that I took to the IDR approach. The steps undertaken (see Ling, 2012) were as follows:

➢ *Transcription*
The nature of spoken language is often full of unfinished sentences, ungrammatical statements, interjections and intonation. This can be an indicator that the statement is important, surprises or other expressions, the researcher should be able to interpret whether a particular set of words spoken is an independent statement which should be treated as a single sentence. I also considered both minor (short expressions) and major sentence (complete sentences with a subject and predicate) types of sentences to be 'single sentences' (Crystal, 2010).

Transcription also needs adequate knowledge of terminologies or words spoken for the interviewees did not spell out every single word spoken. Failure to do this can result in incomprehensible phrases or words which are meaningless. In the thirteen interviews, I found a few words which were not certain but then were interpreted according to context such as the abbreviation of TSOC which were thought to be 'Toyota Sales Operation'. For the uncertain words as such, I included the question mark besides the uncertain words or terminologies.

I transcribed the original audio-tape recordings of the two semi-structured interview responses, entering them in a column headed 'Comments' in a MS Excel spread-sheet. I recorded the identity of each respondent, using a code, in the adjacent left-hand column.

➢ *Coding*
Coding, which is found in the first column of each table resulting from IDR, is made in such a way that it is easy for me to separate the table when needed or sort the data according to the grouping that I want to analyse.
The first two letters such as FC, SO, MN and PC stand for the types of company. FC is for Foreign Company, SO for State-Owned Company, MN for Multinational and PC for Private Company. They are all written with capital letters. Next to the two capital letters are two small letters that represent the interviewees. These are 'wa' and 'wb' (representing 'workers') and 'mn' (representing the 'manager').

➢ *Translation*
The interviews were conducted in Indonesian so the translation had to be performed. My experience as a freelance translator for an wide period of my life meant that it was easy for me to translate from Indonesian to English. The translation that I performed was not a 'word for word' translation as found in a computer- or Google/Bling-translation. Such translations may result in the loss of meaning of the translated words. My translation was a 'translation of ideas' comingfrom statements expressed in sentences: the sense of the language is retained, thus preserving semantic and stylistic equivalences (Bell 1991).

➢ *Classification and Tabulation of Data*
The first step of tabulation is putting all of the transcribed and translated interviews in a single column; Ling (2012) advocates the use of a spread-sheet for this task, especially when the was only less than 20. I made five columns in my initial table with the headings: code, comments, constructs, concepts, topic areas and organising

themes. As part of this initial tabulation, I entered the comments according to the topics of the interview.

I deconstructed the comments into sentences: these represented individual statements regarding a particular topic. As the first part of the inductive data reduction (IDR), I analysed each individual statement or sentence to produce a 'construct' in the adjacent column; this was my perception, in a reduced form, of the respondent's comment. Subsequently, I used a combined   mental process of evaluation and synthesis to produce a further reduced statement: the 'concept' that I believed was being addressed in the original comment to the construct column. I then sorted the rows alphabetically in accordance with common concepts to create clusters of a 'topic areas'; a second sorting of the topic areas permitted me to produce a set of 'organising themes' – usually four to six in number. The four steps of IDR – each involving the subjective process of induction – led to a progressive reduction of the original comments, by applying increasingly higher order thinking skills (after Bloom (1956) in the sequence analysis, evaluation and synthesis, and creating – ultimately 'creating' a new set of emergent themes (Ling 2012).

VI.   CONCLUSION

The main data for this study derived from 11 individual semi-structured interviews; other methods – observation, surveys and document analysis – were regarded as support methods which was meant to authenticate the findings from the interview data.

This study is also considered as a cross-case analysis of four types of companies: one national private; one national public; one foreign; one multi-national. Observation was integral to this study and the four types of companies contributed their own sub-case studies. Each sub-case was ethnographically informed by informal and formal interviews, observations. Simple questionnaires were completed at each of the four sites. Ethnography was the main research method. IDR, that enabled the creation of emergent themes, was the main method used for data analysis. Overall, the study involved a qualitative methodology, supported by quantitative data that hold up the main qualitative data.

The present research enquiry was directed by a query relating to workplace English in Indonesia. Using a predominantly qualitative methodology, the present study employed ethnography as the main approach; I applied other methods such as phenomenology and naturalism for rationalising the employment of the individual knowledge and experience of correspondents interviewed in the four different venues. This informed the independent but integral sub-cases. I carried out semi-structured interviews in the field in Indonesia. These interviews constituted the main method of data collection. For the reason of triangulation, this data was supported by the following: my own observations and reflections that took an auto-ethnographical approach; an

analysis of documents; responses to a questionnaire. Data from the semi-structured interviews were transcribed, translated and tabulated and finally analysed using an inductive data reduction (IDR) approach which involved analysing, evaluating, synthesising and changing.

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