Undergraduate Novice Researchers' Experiences in Conducting Mini-Research in Education: Kolb Learning Cycle

ADANINGGAR SEPTI SUBEKTI [1]

Abstract

This study investigated eight pre-service English teachers' first experiences in conducting mini-research analyzed using four stages of Kolb Experiential Learning Cycle, consisting of Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualisation (AC), and Active Experimentation (AE) stages. It was conducted to fill the void in studies in the area of research methods instruction in the English as Second Language (ESL) context. The study used qualitative analysis on secondary data in the forms of student reflections. Through Thematic Analysis, this study found five themes. From three themes of experiences, it was found that the participants' experiences were mainly in the first three stages of the cycle, CE, RO, and AC. Only two of the five themes suggested that the participants had achieved, to certain extent, AE stage, characterized with decision-making and problem solving, which may be attributed to the participants' being beginner researchers who still needed more experiences in research.

Keywords
Kolb experiential learning cycle, secondary data, thematic analysis

[1] English Language Education Department, Faculty of Education and Humanities, Universitas Kristen Duta Wacana, Yogyakarta, Indonesia; e-mail: adaninggar@staff.ukdw.ac.id

Introduction

People often hear or say such common saying as "practice makes perfect" to mean that people are getting better in doing something when they keep practicing it. This saying may be stemmed from a long existing scholarly theory proposed by John Dewey in 1938 highlighting the important role of 'trying' to do something to understand problems and find possible solutions, emphasizing that every experience is a force leveling up those who have it (Chrysostomou, 2013). Dewey's idea brought a noteworthy change in the concept of learning in which there had been clear movement from passive to active learning, bringing to the spotlight constructivism, believing learners to be the ones constructing knowledge through reflections (Chrysostomou, 2013; Kolb & Kolb, 2008). The concept of experience and reflection produces learning has since been established in literature in the field of education. John Dewey's seminal work might have set the embryo of the idea of 'experiential learning' recognizing the role of experience and reflection in learning (Mesquita, 2016). Since then, educational field began to pay more attention to the potential role of learners' hand-on experiences in learning. A breakthrough in the recognition of experience for learning might be set through the seminal work of David Kolb introducing Kolb Learning Cycle (Kolb, 1984) possibly taking into account a central principle in Dewey's earlier theory that learning growth based on experiences does not have an end (Mesquita, 2016).

Despite the potential role of continuous hand-on experiences in learning, several courses at the university level seem to overlook it, research methodology courses being one of them. Typically, courses on research methodology are given when students are in the upper semester readying themselves for conducting research for their theses. However, several studies have found that despite the importance of research courses, many students perceived such courses as intimidating and terrifying ones (Crooks et al., 2010; Denham, 1997; Pfeffer & Rogalin, 2012). Denham (1997) even mentioned that research methods could be the most difficult course to teach at undergraduate level. Some authors argued that from the very beginning, students tend to be intimidated by the name of the course, the materials, and even construct formidable psychological barriers that even to teach them fairly simple methodological concepts could be very difficult (Ball & Pelco, 2006; Denham, 1997). Negative perceptions on research courses may partly be attributed to the impressions of such courses (Braguglia & Jackson, 2012). These courses have long been characterized with boring lectures on various methodological concepts and demands to understand those concepts as well as perceived irrelevance of the materials to students' every day's lives (Ball & Pelco, 2006; Breunig, 2010). Despite the afore-mentioned inherent challenges in teaching this course, this course seemed to receive inadequate attention (Crooks et al., 2010).

The same previously mentioned phenomenon might also be typical in the contexts of English Language Education Department (ELED) preparing future English teachers. Despite the previously mentioned issues and the widespread availability of books on research methods (e.g.: Creswell, 2014; Kothari, 2014; Walliman, 2011, to name a few), scientific studies focusing on research method courses for pre-service English teachers were still very rare. In fact, as future teachers, pre-service English teachers might not only need research skills in order to complete their theses but also to conduct continuous educational

research practices in their day-to-day teaching profession in the future (Hine, 2013). Moreover several studies indicated that English teachers or pre-service English teachers generally face difficulties in conducting research (see Cirocki, 2014; Hine, 2013), further giving some kind of support that the issue of instruction in research method courses in ELED might have been under-researched and under-addressed.

In consideration of previous studies in the field of research method teaching favoring learners' hands-on experiences in learning research rather than teacher-centred approach, and a more interesting way to teach about methods (e.g.: Braguglia & Jackson, 2012; Breunig, 2010; Davidson & Palermo, 2015), a research method class named *Data Analysis* was, based on the information in the syllabus, designed to facilitate learners to have hands-on experience on analyzing various data through mini-research data analysis process. This included conducting interviews, observations, and distributing questionnaires and analyzing the obtained data in relation with research questions, which at this stage could be adapted from existing studies in English Language Teaching (ELT). It was expected that on the completion of the course, the pre-service teacher students were able to conduct interviews and analyze interview data using thematic analysis, conduct observation using field notes and report the findings, prepare questionnaires, distribute them, record obtained data in SPSS, execute descriptive statistics and correlation formula on the data, and interpret the findings. The assessments in the class included three progress assessments assessing their overall performances in interviews, observations, and quantitative methods, respectively, and two written reflections on their learning experiences.

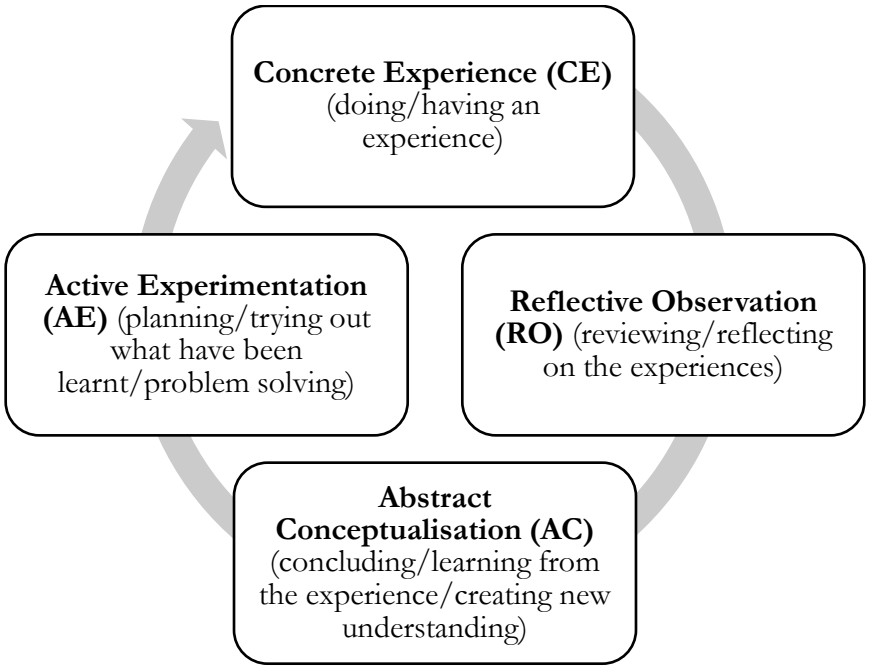
In relation with that and the previously-mentioned issues surrounding research method courses and scarcity of studies on research method instruction in the English as Second Language (ESL) contexts, this paper aims to answer the research question: How are pre-service teachers' first experiences in conducting mini-research using various methods in *Data Analysis* class seen from Kolb Experiential Learning Cycle?

Literature Review

David Kolb introduced Kolb Learning Cycle adapting the basic principle of Dewey's earlier theory that learners learn through continuous hands-on experiences (Kolb, 1984). Kolb Learning Cycle, furthermore, consists of four stages or components of learning. For successful learning, Kolb argued, learners should actively engage in all four components, Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualizations (AC), and lastly, Active Experimentation (AE) (Kolb, 1984). CE stage necessitates learners to be open-minded towards any new experiences and engage themselves in that experience to gain as much knowledge as possible (Kolb, 1984). In the RO stage, learners should be able to reflect on the experiences they have obtained in the CE stage and observe any meaningful knowledge from various viewpoints (Kolb, 1984). The next stage, AC, is where the obtained knowledge from the previous two stages are integrated; that is the integration of their background knowledge and experiences and new experiences to create concepts or a new understanding (Kolb & Kolb, 2008). In the last stage, AE, furthermore, learners transforms the new understanding obtained in AC to theories or realizations that could be applied in decision making as well as problem solving (Kolb et al., 2005). It is further argued that

learning is not only the product of cognitive process but also that of holistic integration of learners' thoughts, feeling, perceptions, and behaviors (Kolb & Kolb, 2008). Kolb Learning Cycle can be seen in Figure 1.

Figure 1. *Kolb learning cycle (Kolb, 1984)*



Experiential learning demands teachers to take a role of facilitators and guides helping learners to have as meaningful experiences as possible rather than take up the role of traditional teachers as experts (Knutson, 2003). Even though many ESL instructors have been familiar with this role, paradigm shift is needed for those instructors who still believe that teacher-centred approach is the best way to teach content courses (Knutson, 2003), research methodology course being one of them.

Whilst teachers no longer take the role of depositor of knowledge in class, their role as facilitator is central and will contribute much to the success of the students' learning through their thought-provoking questions, and accepting heart and mind (Boggu & Sundarsingh, 2016; Knutson, 2003). Through carefully designed tasks, teachers could facilitate learners to produce what Swain (1995) called as "pushed output", which is an output learners are questionably able to produce unless they are forced to do so by the tasks. In this case, teachers help learners to integrate the experiences and provide a connection between the experiences and the goal of the class and curriculum in general (Boggu & Sundarsingh, 2016), thus helping facilitate relevance.

Experiential learning has been implemented in various educational disciplines (Kolb et al., 2005) suggesting its interdisciplinary popularity. In ESL field, for instance, there have

been several studies on experiential learning in the Indonesian contexts (e.g.: Komalasari, 2013; Meitikasari, 2016; Mudra & Indrayadi, 2017) and outside Indonesia (e.g.: Biabani & Izadpanah, 2019; Burns & Danyluk, 2017; Campos, 2017) and they generally found favorable results on the role of experiential learning towards learners' language learning. Meitikasari (2016), for instance, reported that experiential learning helped the Indonesian learner participants achieve higher writing performance. Burns and Danyluk (2017) also found that their pre-service teacher participants developed emergent professionalism through examining their hands-on learning environment and various sources of feedback on improvements.

In the field of research methodology teaching, experiential learning has been implemented across educational disciplines as well (e.g., Braguglia & Jackson, 2012; Breunig, 2010; Davidson & Palermo, 2015). Davidson and Palermo (2015) found that undergraduate nutrition students showed enjoyment and improvement in research skills when they experienced research itself, consistent with findings of previous studies in the same field. Braguglia's and Jackson's (2012) study in the business management field, furthermore, reflected critically on experiences in teaching research courses at undergraduate level. They found a research methodology course offering interactive environment where students master technical information through experience, reflection, and critical analysis is more effective for the development of students' research skill and generally more favored by students. This resonates several other authors' idea that in order to learn research and evaluate research practices critically, problem solving experiences are better than memorizing research definitions and terms (e.g.: Ball & Pelco, 2006; Lundahl, 2008; Pfeffer & Rogalin, 2012).

Methodology

Research design, site, and participants

In general, the present study employed qualitative research design with secondary document analysis as the method of data collection (Creswell, 2014). The secondary documents were in the forms of student participants' written reflections they submitted to the class teacher in the middle and at the end of the even semester of 2018/2019 academic year. The reflections were about any notable experiences they had during practicing conducting mini-research using interviews, observations, and questionnaires. There were in total sixteen reflections with 500-1000 words in length each. These reflections were written in English.

As the secondary data were not specifically aimed for the study, there was a possibility that particular information in relation with the research purposes was not extensively available (Hox & Boeije, 2005; Walliman, 2011). Hence, these data were evaluated to ensure the adequacy as well as the suitability to address the research purpose before they were further analysed (Hox & Boeije, 2005; Kothari, 2014). Furthermore, the use of reflections could also serve some merits as learners were not under study at the time of writing the reflections. This enabled more truthful accounts free from any tendencies from participants to "help" the research by giving desirable, yet dishonest responses as what they

wrote in the reflections was not influenced by the current study's purposes in any way (Subekti, 2019).

The use of students' reflections in the area of experiential learning is an already established practice. In the field of research method instruction, more specifically, several previous studies has highlighted the roles of the student researchers' reflective accounts in capturing the dynamics of their experiences in dealing with research (e.g.: Boggu & Sundarsingh, 2016; Emo et al., 2015). Besides, in the ESL field, the use of reflections is not new at all (see Komalasari, 2013). More specifically, analysing students' reflections to capture students' reported experiences could not only be seen as methodologically appropriate (Creswell, 2014), but it was also a strategic choice considering the big role of reflections in the field of experiential learning (Chrysostomou, 2013; Kolb, 1984; Mesquita, 2016).

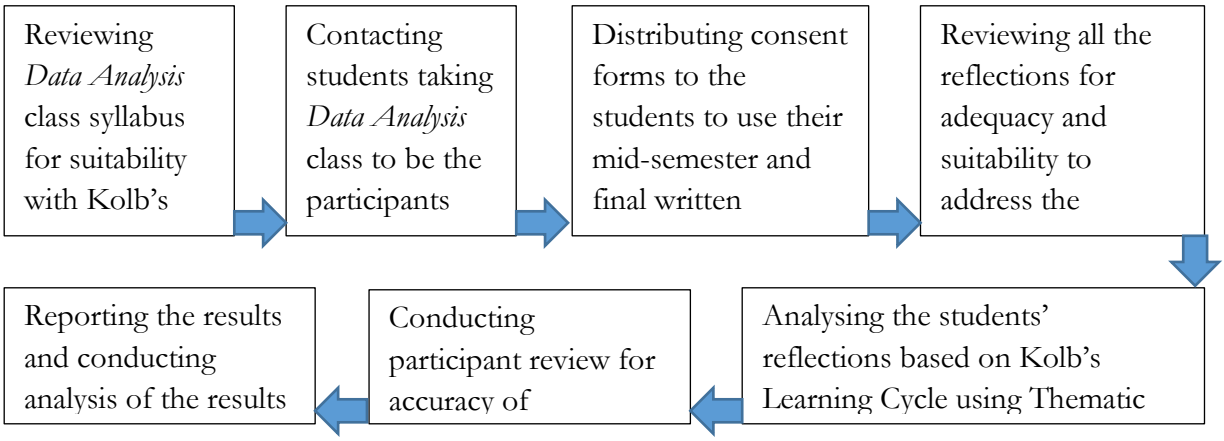
The participants of the research were eight pre-service English teachers taking *Data Analysis* class at a university in Indonesia in the even semester of 2018/2019 academic year. Of these eight participants, one was male and the other seven were female. They were in the sixth semester of their undergraduate study. The participants filled consent forms indicating their voluntary participation in the study as well as their consent allowing the uses of their reflections to be used for this study's purposes. This practice was in accordance with several principles of research ethics emphasizing voluntary participation and the participants' autonomy in making decisions (Israel & Hay, 2006). To protect the confidentiality of the participants (Israel & Hay, 2006), throughout the presentation of the data in the report, the participants' real names were changed into pseudonyms.

Data analysis

The students' reflections were analysed using Thematic Analysis. As suggested by Braun and Clarke (2006), results would be presented in themes. The first step was to familiarise with the analysed data by reading and rereading them and giving comments in each of the Microsoft Word reflection file on potential themes. The next was finding the recurring themes and it was conducted through taking separate notes on possible themes. Then, extract examples, the participants' verbatim quotes, best reflecting the themes in relation with the research purposes were selected for report (Braun & Clarke, 2006). They were presented sequentially from the mostly repeated to the least. The use of verbatim quotes, instead of indirect reports, were emphasised in this study to enable each theme to offer rich descriptions of data as the key characteristics of qualitative research (Creswell, 2014). The use of Thematic Analysis allows an in-depth presentation of qualitative results showing particularity and uniqueness of each participant's viewpoints (Creswell, 2014). To ensure trustworthiness of the study, participant review (Gray, 2014) was conducted after Thematic Analysis was completed. At this stage, all of the eight participants were asked to review the synthesised themes for accuracy of representation (Gray, 2014). After participant review was completed, the results of the Thematic Analysis were further reported and analysed.

The sequence of data collection and analysis could be observed in Figure 2.

Figure 2. *Sequence of data collection and analysis*



Findings

There were eight student participants in which one was male and the other seven were female. At the time of the study, they were in their sixth semester of their study. The pseudonyms of the participants were as follows: Banu (Male/M), Linda (Female/F), Lina (F), Merry (F), Sari (F), Susi (F), Julia (F), Lisa (F). Table 1 shows the emerging themes on the participating students' first experiences in their conducting mini-research using various methods.

Table 1. *Emerging themes on the student participants' first experiences in their conducting mini-research using various methods*

Theme 1.	**Conducting interviews was not as easy as the students imagined.**
Sub-theme 1.1.	Interviewing demanded good skills in asking impromptu questions.
Sub-theme 1.2.	Transcribing and translating interview transcripts could be time-consuming and they needed students' focus.
Sub-theme 1.3.	Finding interview participants could be tricky.
Theme 2.	Experiences in conducting various methods enabled students to decide what methods they were going to use in their theses.
Theme 3.	The experiences were relevant to their future needs in conducting research for their theses.
Theme 4.	The experiences facilitated the students to realise their difficulties and formulate solutions.
Theme 5.	Teacher's encouragement and demand were necessary to push students to stretch their own limit.

Theme 1. Conducting interviews was not as easy as the students imagined

Almost all learners reported that they used to think conducting interviews was easy, but they later found that it was not that simple. Lina and Linda, for examples, explicitly reported:

> "... Doing the interview ... is not easy." [Linda]

> "... I thought that interview was really easy ... Until the time came, I did the interview and I felt how hard it was." [Lina]

As to why the students perceived conducting interviews was challenging, this study found several recurring sub-themes.

Sub-theme 1. 1. Interviewing demanded good skills in asking impromptu questions. The most common findings on the perceived difficulties were on preparing interview checklist and asking follow-up questions on site. Lina and Susi, for instances, reported that their first interviews did not run as expected because they did not know how to ask further questions to their participants once these participants had responded to their initial questions.

> "... I found difficulties in formulating... questions. I had no idea to ask more questions... when I asked about my friend's perceptions... she gave an answer. But the problem here was I did not know what to ask next." [Lina]

> "Questions I prepared were not answered well by the participant and I was also confused what to ask next... the participant just answered "yes/no" then I was confused on how to continue my interview." [Susi]

Julia, furthermore, also reported the same challenge. As she was still lacking, she reported that the success of the interviews was partly attributed to her interviewees. When the interviewees talked more without any prompting, the interviews tended to be more successful, and vice versa, if the interviewees were reticent ones, the more unlikely she would obtain much information. Regarding this, Julia asserted:

> "Maya* did not talk as much as Nora* did. So, I had to make spontaneous questions to get more answers. This was quite challenging… I needed to make more than four spontaneous questions to fulfil ten minutes." [Julia] **formerly identifying information changed into pseudonyms*

Despite their reported lacking, however, some students were able to come up with ideas on what to do differently for more successful interviews. For example, whilst Merry prepared more interview questions beforehand, Sari used "Why" questions to inquire more. They reflected:

> "[Preparing] more questions [interview checklist] beforehand is better to find more information from the participants." [Merry]

> "... While interviewing we have to dig much information from the participants naturally... asking them like 'why do you think so?' We can follow the participants' flow but do not lose focus. Remember, we have to always remember our research questions." [Sari]

Sub-theme 1.2. Transcribing and translating interview transcripts could be time-consuming and they needed students' focus. The second most commonly reported difficulty in relation with conducting interviews was the transcription and translation stages. Lina, for instance, reported that translation machine could not help her much and she should translate manually. She reported:

> "My interviewee and I did not use the formal language, so Google Translate could not translate it properly. Therefore, I translated it myself manually." [Lina]

The use of informal Indonesian language in interviews seemed to pose a particular challenge for the students. Susi also reported a slightly similar view:

> ."... Such a burden for me to finish these two things [transcription and translation]... we were using informal Indonesian language and there were a lot of informal Indonesian words in my interview... I was not sure on how to transcribe them correctly... the process did not end there. The next step was waiting and it was translation! ... So difficult for me to finish... a lot of informal words..." [Susi]

Lisa seemed to conclude that to finish the whole process, persistence and focus were needed. She stated:

> "[That we] should listen and type the recording word by word [transcribing] was not really easy. It really demanded our focus and [I] needed some time to repeat it again and again." [Lisa]

Sub-theme 1.3. Finding interview participants could be tricky. The students reported that to find participants willing to be their interviewees posed a particular challenge. Banu reported he thought finding research participants was easy just like it seemed to be in many journal articles he read. He then realised that he might have mistaken. He stated:

> "… What I learned from this class is conducting the research... especially looking for participants was not as easy as [it looked like in] journal [articles] that we read." [Banu]

Sari also acknowledged the same challenge, commenting that she had a particular difficulty in finding matching schedules between her and the prospective interviewees.

> "... Finding participants is not easy... I contacted two of students and none of them had a matching schedule with me. Eventually, I had to change my topic... it was difficult to match schedule with students from other faculties." [Sari]

Even when an appointment had been made, some unexpected things might happen. This was reported by Merry in which the prospective teacher participant suddenly forgot they had prior appointment. She said:

> "I contacted a teacher to be my participant... He agreed... we made an appointment... [But then] he forgot it and I should suddenly change my plan." [Merry]

Theme 2. Experiences in conducting various methods enabled students to decide what methods they were going to use in their theses

After conducting mini-research using various methods in *Data Analysis* class, learners seemed to be pleased with all the experiences and have been able to consider each method's merits and challenges. Regarding this, Sari and Susi commented:

> "I am really grateful to experience them [the methods] because I could comprehend each method; both its strength and weakness... each has its own challenge." [Sari]

> "I am so grateful learning different methods... Each of them has its own strength and weakness." [Susi]

Both went on to state that experiencing various methods helped them decide which methods they were going to use in their future theses. They further reported:

> "I have decided qualitative method... to be implemented in my future thesis... [I] decide the suitable method... real plan for future thesis." [Sari]

> "I have decided that I am going to use qualitative method for my future thesis by conducting observations and interviews... Also, comparing methods that I learned in this class, I still prefer qualitative method. It caught my interest... after I have experienced other methods, I find that I am more capable to conduct qualitative method than other methods." [Susi]

Another student, Lisa, also gave comments resonating similar message. She stated,

> "By learning two models of research methods, I can understand which method that is appropriate to be used... The class helps us to be ready to decide how many participants we need, [and] the sequence of conducting research." [Lisa]

Theme 3. The experiences were relevant to their future needs in conducting research for their theses

Learners reported the usefulness of the experiences they obtained from the class for their future theses. Linda commented that through the class, she finally realised that conducting interviews and observations, which she would do in her future thesis, needed thorough preparations and treatments. She reported:

> "[The class] helps me to know how to make interview questions, transcribe, do thematic analysis, and build an observation checklist. Beforehand, I really did not know that observation and interview need such treatments... [Now] I really know how to make my interview and observation run well for my thesis later." [Linda]

Though being less evident as a recurring theme, the class was also perceived positively in equipping learners with knowledge on how to conduct quantitative research in their theses. It could be seen from Merry's remarks:

> "As I plan to use quantitative method [in my thesis], this class really helps me to learn about analysing data using SPSS. I learn how to make correlation formula." [Merry]

Julia, another student deciding to conduct quantitative research, even commented that the hands-on experiences she obtained in the class facilitated her to understand her choice of method better. She stated:

> "[Though] I have difficulty understanding and interpreting the correlation in SPSS ... I keep trying to understand and interpret the correlation in SPSS ... I need to explain further the results of the correlation in my thesis... [The class] really helps me not only to understand some theories of the quantitative and qualitative methods but to practice directly in the field. So, later when I do my thesis… I will… exactly follow the sequences... that I have done in this class." [Julia]

Theme 4. The experiences facilitated the students to realise their difficulties and formulate solutions

Facing challenges when practicing using certain methods did not seem to discourage the students from practicing the methods in the future. Lina, for instance, despite acknowledging that she was weak in dealing with number and making mistake in interpreting correlation data in SPSS, decided she would use quantitative in her thesis. She seemed to be determined in compensating her lacking by continuing practising. She commented:

> "I do not fully understand about correlation [formula]. It is very hard... honestly, I am very slow at analysing... numbers ... Yet, it does not mean that I give up. I can still learn and improve myself... I will continue to study hard... I read some books and articles... about quantitative method... I could learn how to deal with my mistakes ... I made mistakes in analysing the data. Yet, it was yesterday. That means there is still time to learn from my mistakes and practice more." [Lina]

In a similar tone, Sari reported her experience of having unfruitful interviews where she was unable to obtain useful data due to her lacking in questioning skills and through that experience, she was able to formulate possible solution. She stated:

> "Going through this experience [missing in-depth perceptions of the participants due to low quality interviews], I will do real action to improve my skill, especially in finding the participants, preparing and asking questions in detail and obtaining good quality data." [Sari]

Another student, Susi, who faced a similar challenge in interviewing, had even planned to practice with her fellow friends before conducting real interviews in her thesis. She stated:

> "I did not refer to my research questions [when asking questions]... the data that I got was not answering my research questions... Before conducting the real interview for my future thesis, I have to practice a lot... My plan is to practice with classmates and also other students from different faculties or even university." [Susi]

Theme 5. Teacher's encouragement and demand were necessary to push students to stretch their own limit.

The last but not least, teacher's encouragement and reassurance were reported as a factor contributing to the students' courage in dealing with the demands of the class. This theme was particularly evident at the beginning of the semester when the students might still feel anxious about their perceived incompetency in facing stereotypically difficult research method courses such as *Data Analysis*. Sari, for example, confessed that her teacher's assurance boosted her self-confidence. She reported:

> "Honestly, in the first meeting of the class, I was afraid of facing this subject because I thought I would not be ready for this. But, the teacher told us, 'You will never know if you never try'. Therefore, instead of being worried too much, I tried first." [Sari]

Furthermore, the teacher's emphasis on hands-on experience rather than merely getting things right as the focus of the class was also reported to alleviate the students' worry. Regarding this, Susi remarked:

> "I was actually not so ready for it [interviewing], yet the teacher told us that the most important thing in this class is 'hands-on experience'. Therefore, I just followed what she asked us to do and finally I could finish my first interviews with three participants... I never postponed my work, so it was finally done. As the teacher said the most important thing is 'hands-on experience' so from it I know the struggle of using qualitative method." [Susi]

Lisa, who was initially able to conduct interviews for only four minutes long, could finally be able to conduct two interviews, each of which being ten minutes long, after the teacher demanded her to do so whilst still emphasising on hands-on experience. Lisa reported:

> "My teacher [said] we should get [at least] ten minutes for each interview. She also asked us to look for more than one interviewee, so we could compare different interview results. I tried again to interview my friend [after conducting an interview for only four minutes], and finally, I got more than ten minutes for that interview. Then I did my second interview… I also got more than ten minutes." [Lisa]

Discussion

The most recurring theme on the unexpected difficulty surrounding conducting interviews captured learners' reflective observation (RO) and abstract conceptualisation (AC)

of their experiences in conducting their first-ever research-based interviews. Learners came to a realisation (RO and AC), through their Concrete Experience (CE) (Kolb & Kolb, 2008) of conducting interviews, that conducting interviews to answer research questions were not the same as, or as simple as, having informal conversations with people in daily life. The finding that the participants stopped at the third stage, RO, in which they realised challenges of interviewing through reflections of experiences, may be attributed to the fact that the participants had never conducted any research-based interviews before. Hence, whatever they experienced in the process may be a first for them. However, this also suggested that the hands-on experiences they had facilitated them to realise future challenges in conducting interviews they otherwise would not have realised sooner, signifying, to some extents, learning progress.

Furthermore, the results indicating that the hands-on experiences on conducting various methods enabled them to decide the methods of their future theses indicated the ability of decision-making. This showed evident RO, AC, and AE of learners (Kolb, 1984). This finding might also suggest the effectiveness of experiential learning in teaching students research, further replicating the findings of several previous studies in the field of research methods (e.g.: Braguglia & Jackson, 2012; Breunig, 2010; Davidson & Palermo, 2015; Lundahl, 2008). Another thing worth further comment was that the participants achieved all the four stages of Kolb Learning Cycle, especially the AE stage characterised with decision-making ability, after they experienced conducting mini-research with different methods in a semester. This indicated that the more exposure to various hands-on experience the students had, the more they learned.

Moreover, the theme on the relevance of the experiences they got in *Data Analysis* class to their future needs of conducting research for their theses might suggest, to some extent, the success of the implementation of experiential learning in *Data Analysis* class unlike many such classes heavily focusing on understanding concepts without hands-on experiences in conducting research (Breunig, 2010). That learners saw connection between the class instruction and their future needs in doing their theses also indicated that the course had facilitated relevance (Ball & Pelco, 2006). Seen from Kolb Learning Cycle, learners' excerpts also further suggested reflective observation on their own experiences and connect the experiences with their future needs (Kolb, 1984). This finding may also give some kind of support that research method courses should be designed as relevant as possible to learners' future needs of conducting research, minimising the stigma on the perceived irrelevance of research method courses' materials to students' needs (see Ball & Pelco, 2006; Breunig, 2010). Furthermore, the fourth theme that learners' experiences in the class facilitated them to realise their difficulties and formulate solutions was particularly interesting. It was worth noting that all four components of Kolb Learning Cycle were evident in this particular theme. Based on learners' reflective observation on their research experiences, learners created a new understanding based on which they made decision on how to solve their problems. The excerpts from learners in this theme reported that they were progressing from AE, RO, AC, to AE (Kolb et al., 2005; Kolb & Kolb, 2008). This finding could indicate that learners' immediate needs could stimulate them to achieve the last stage of Kolb Learning Cycle, AE. Students faced the reality that they were not yet good at

things they really needed for success and this realisation compelled them to plan possible solutions.

The last recurring theme was teacher's encouragement and demand were necessary to push students to stretch their own limit. Whilst this theme indirectly further confirmed the reiteration of several authors stating that learners tended to be intimidated by the research method course even before it started (e.g.: Ball & Pelco, 2006; Denham, 1997), as seen from learners' excerpts, this theme also indicated the phenomenon of "pushed output" (Swain, 1995). It was a phenomenon in which learners were finally able to perform something they previously thought they were not able to do due to being compelled by the task, in this case, by their teacher's encouraging instruction, neutralising learners' anxiety. This theme, as seen from Sari's comments, also suggested learners' open-mindedness to experience something new however daunting it might be, suggesting the first step of experiential learning, CE (Kolb & Kolb, 2009; Kolb, 1984). Susi's and Lisa's comments, furthermore, indicated that they pushed themselves and finally succeeded in meeting the expectation of conducting interviews with minimum 10 minute-duration, suggesting open-mindedness to a new experience as the starting points of learning (Kolb, 1984).

From all the five themes, three themes suggested that learners' experiences were dominant in the first three stages of Kolb Learning Cycle. They were CE, where learners actually experienced conducting mini-research studies, RE where they reflected on their experiences and mentioned various new knowledge they obtained from the experiences, and AC where they formulated new understanding or realised something they did not know previously. AE, characterised with planning, decision-making and problem solving based on experiences (Kolb et al., 2005; Kolb, 1984), were evident in only two themes out of five in which learners reported that from the experiences and their mistakes, they knew what to do in the future theses including deciding what methods they would use and anticipating potential problems. That the last stage of the cycle was only evident in two themes might be attributed to the participants being very new in the field of educational research and they were yet to take real full-scaled research studies. Hence, characteristics seen in AE were not fully evident at this early stage of participants' research journey.

However, it should also be noted that Kolb Learning Cycle is not a matter of rigid step-by-step process, one after another, but it depicts learning growth based on experiences which does not have an end (Kolb & Kolb, 2008; Mesquita, 2016). Hence, it was possible that instead of continuing the step to AC, after RO, learners went back to CE, then went all the way to RO and then AC. In other words, whilst it was possible that learners continued their AC to AE, it was also possible that they went all the way back to CE. All depended on various factors such as individual learners' engagement in their experiences, level of difficulty of tasks, and external factors like, as seen in this study, teachers' encouragement stimulating learners to produce "pushed output", output learners were doubtfully able to produce if they were not required to do so by the task (Swain, 1995).

Conclusions and Recommendations

The present study has several possible contributions and implications. This study became one of very rare studies on educational research method instruction in the ESL

setting, which may have long been neglecting the teaching of research methods to ESL pre-service teachers at university. Hence, this study offered an exploration of the under-research field, thus paving a way for further research in the area. Furthermore, as it was found that experiential learning focusing on hands-on experiences were reported not only to help learners really understand research methods but also to actually facilitate them to be engaged in the process of learning, it was suggested that research method instruction in the ELED settings shift from typical lecturing style and memorisation of various terminologies in research to the one allowing learners to actually experience research first-hand with prior, necessary lecture sessions on theories to equip them.

Despite the possible benefits this study offered in the field of educational research methods and on research method instruction, the limitation should be acknowledged. The use of learners' reflections written only in the middle and at the end of the semester might contribute to this study's inability to capture a relatively complete picture of learners' experiences in Kolb Learning Cycle. For example, the themes could not capture the possibility of the progression of learners' learning from AE, characterised with decision-making and problem solving, to CE, in which they re-experience and solved problems using their previously-acquired understanding even though, intuitively speaking, despite not saliently, might have happened during the process of their experiencing research. In the light of the study's limitation on its inability to capture, in a very detailed way, learners' experiences, it is suggested that future studies researching research method instruction take into account learners' research journals written in a more frequent manner, such as those written once a week. This will improve the level of details of their experiences. However, care must be taken that writing research journals too frequently might be too burdensome for students who have a high load of other responsibilities. Furthermore, as this study had explored research method class' students' experiences in conducting mini-research in a qualitative way, to investigate using an online survey the views of teachers teaching research method classes at various ELEDs on teaching research methods can also be worthwhile doing. As studies on research method instruction in the ELED setting is generally still under-research, such quantitative study could provide a useful finding with the possibility of generalisation.

Disclosure statement

No potential conflict of interest was reported by the author.

Acknowledgments

I would like to thank all the participants who have willingly participated in the study. My gratitude also goes to the English Language Education Department for the access granted to conduct this study.

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Biographical notes

ADANINGGAR SEPTI SUBEKTI, who obtained her M.Sc. in TESOL from University of Edinburgh, Scotland, UK, currently works as a lecturer at the English Language Education Department, Faculty of Education and Humanities of Universitas Kristen Duta Wacana (UKDW), Yogyakarta, Indonesia. The Editor-in-Chief of SAGA Journal UKDW, she is also a reviewer of IJELTAL journal, IAIN Samarinda, and LLT

Journal, Sanata Dharma University. Her research interest includes L2 learner's individual differences, Global Englishes, L2 writing, inclusive education, and literature. Throughout her teaching career, she has taught students from various levels of education, including teaching ESP to Medical students and Biology students as well as teaching non-English teachers of High Schools. Though her specialty is in English instruction, she was once also a teacher of the Indonesian language at Arizona State University from 2013 to 2014.