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## Trustworthiness in Sampling Selection: Remedies Against Introspective Chaos

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## Trustworthiness in Sampling Selection: Remedies Against Introspective Chaos

### Abstract

The ethical dimension pertaining to protecting participants from psychological harm due to the in-depth nature of the inquiry and to the intimacy resulting from prolonged engagement is well-documented. This is laudable, but very few studies focused on guiding the researchers against chaotic emotions arising from introspectively questioning their beliefs and motivations and inspiring their judgments underlying their decisions. In our involvement with masters' students' thesis writing and research management training, supervision, and examination, we became aware of recurring cases of novice researchers silently disappearing from the program, eventually reappearing, continuously struggling with their thesis. Investigating this process, we identified the difficulty of becoming trustworthy researcher-instruments as the central issue leading to students disconnecting from their research. Students would disclose their anxiety of being accused of bias when defending their purposeful sampling. Therefore, we decided to equip them pre-emptively, helping them build their researchers' expertise and confidence. Firstly, we disclosed our vulnerability from the perspective of the researchers' awareness. Secondly, we exposed an intricate sampling case in terms of methodical considerations. Lastly, we provided a step-by-step demonstration of the initial, purposeful, and theoretical sampling selection process, illustrating the constant comparative analysis method, peer discussions and member reflections as safeguarding procedures towards trustworthiness.

### Keywords

Awareness, Trustworthiness, Grounded Theory, Action research, Educational technology, Supervision

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*The ethical dimension pertaining to protecting participants from psychological harm due to the in-depth nature of the inquiry and to the intimacy resulting from prolonged engagement is well-documented. This is laudable, but very few studies focused on guiding the researchers against chaotic emotions arising from introspectively questioning their beliefs and motivations and inspiring their judgments underlying their decisions. In our involvement with masters' students' thesis writing and research management training, supervision, and examination, we became aware of recurring cases of novice researchers silently disappearing from the program, eventually reappearing, continuously struggling with their thesis. Investigating this process, we identified the difficulty of becoming trustworthy researcher-instruments as the central issue leading to students disconnecting from their research. Students would disclose their anxiety of being accused of bias when defending their purposeful sampling. Therefore, we decided to equip them pre-emptively, helping them build their researchers' expertise and confidence. Firstly, we disclosed our vulnerability from the perspective of the researchers' awareness. Secondly, we exposed an intricate sampling case in terms of methodical considerations. Lastly, we provided a step-by-step demonstration of the initial, purposeful, and theoretical sampling selection process, illustrating the constant comparative analysis method, peer discussions and member reflections as safeguarding procedures towards trustworthiness. Keywords: Awareness, Trustworthiness, Grounded Theory, Action Research, Educational Technology, Supervision*

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### Introduction

We are involved as lecturers, thesis supervisors, and examiners, in a teaching English as a second language (TESOL) master's program. Most of the students involved in this program are in-service Omani English secondary teachers. In this program, conducting research and writing a thesis is a degree requirement. In their thesis, most students opt for action research, case study, and grounded theory research methods. In supervision meetings, students disclosed their apprehension related to handling the subjectivity of the qualitative researcher in relation to trustworthiness. When preparing for their proposal defense and viva voce, students reasoned that examiners would scrutinize the rigor and credibility of their purposeful sampling because a trustworthy selection of participants yields trustworthy data. Further investigation revealed the fear of being accused of bias in relation to the purposeful nature of sampling selection as central to the students' dilemma. During our discussions regarding the researcher's role as the main instrument, our Master of Arts (MA) students extended the methodological integrity debate and disclosed their anxiety of being accused of bias for having purposefully selected participants matching their beliefs. They argued that the "accusation of selecting data based on assumptions and bias" could be extended to the researcher's purposeful selection of participants (Hadley, 2017, p. 13). What transpired from their narratives was the chaotic situation the students endured ensuing from their feelings of hopelessness, loneliness, and

despair when introspectively questioning the trustworthiness of their sampling selection. Chaos fueled their lack of confidence which cascaded into delayed thesis submission, and to academic instability with students disengaging from their thesis, periodically disappearing, being unresponsive to emails, and suddenly reappearing, sometimes a year later. Therefore, we decided to reflect on improving the learning and research support environment for novice researchers to pre-emptively guide them in designing and defending their trustworthy sampling selection. Responding to our educators' dedication to qualitative research, we decided to share this experience in a how-to article. We hope this article will provide guidance and comfort to novice researchers who may at times find themselves lost in self-reflexivity and help them regain their confidence in defending their decisions regarding their purposeful sample selection.

### **Seeking Practical Wisdom**

We have been teaching foreign languages for 24 years and involved in this postgraduate program for 5 years. We have applied action research from the beginning of our career, relying on our reflections as well as on feedback from learners and peers to improve our practices (Mills, 2011; Stringer, 2008). We feel strongly motivated to establish a dialogue with students towards understanding the aspects influencing their learning process (Cordingley, 2015). Grasping the reasons explaining the students' learning patterns helps us to better reach them through developing what Elliott described in 2013 as "phronesis" or "practical wisdom" (p. 5). We are then able to adapt to their needs as well as to guide them towards becoming autonomous learners and researchers. Practicing action research which involves educators and learners thus transforms our teaching into "ethically committed action" (p. 8). We found that applying grounded theory's trustworthiness procedures added rigor to our quest and thus legitimacy to our practice (Baskerville & Pries-Heje, 1999; Dick, 2007). Grounded theory helped us build our researchers' expertise in dealing with the multifaceted forms of empowerment resulting from our omnipresent involvement both as lecturers and researchers allowing us to question our actions, and to identify the source of our emotions (Friedman & Rogers, 2009).

When novice TESOL researchers engaged in writing their MA thesis disclosed their apprehensions regarding being biased, they mentioned their fear of losing face at being rejected at their proposal defense for not being able to convince examiners regarding the reliability and validity of their research. Hadley (2017) very well described the fear of losing control during postgraduate examination seminars and the sensation of being interrogated rather than prompted to answer. Therefore, we decided to take pre-emptive measures to better equip our MA students towards reporting and defending their methodological integrity. In our supervision meetings, we introduced discussions about trustworthiness in dealing with the subjectivity of qualitative researchers, connecting introspection with awareness and the construction of the researchers' sensitivity with symbolic interactionism.

### **Building Novice Researchers' Awareness, Sensitivity, and Trustworthiness**

In our MA seminars related to trustworthiness, we begin with acknowledging our attempts as researchers to reach awareness. We explain the concept of awareness as essential in the construction of our researchers' sensitivity. Reaching awareness is the key to understand ourselves as the main instruments. Being able to see clearly through our beliefs is the main step towards reaching methodological integrity and thus towards reporting and demonstrating trustworthiness in our research. In our view, trustworthy researchers strive to be constantly aware as to the motives and emotions which might imperceptibly influence their actions. Being aware helps identifying potential sources of biases. Subsequently, seeing through biases is a step towards answering the right questions pertaining to our motives, towards sorting out and

confronting unconscious behaviors which might be lurking behind our decisions. Therefore, becoming aware of our true motives is a step towards trustworthiness of thought and action.

When practicing self-inquiry in pursuing answers, we become vulnerable to our subjectivity. Brand (2015) defined vulnerability as a double-edged concept invoking the fragility of participants and researchers alike in the research process. Brand acknowledged that participants and researchers might be harmed due to the unconsciousness of their own resistance and avoidance of distressing factors. At times, seeking the truth can be unsettling and painful. Truly, being introspective can result in feeling trapped in spirals of doubts generating destructing chaos and unproductive states of minds. The following sections explain the methodological procedures and theoretical foundations used as a remedy against introspective chaos which we shared with our MA students. These principles help us regain control over destructive thoughts sabotaging our researchers' confidence whilst strengthening our methodological integrity, and thus the trustworthiness of our research.

### **Channeling Reflexivity with Symbolic Interactionism**

In supervising MA students, formative assessment practice and damage control expertise do not always suffice in handling our educators' emotional distress when responding to students' affective grief resulting from their disappointment. We listen to their difficulties with managing their professional, student, and family duties. As supervisors, we are at the front line of our students' despair. Their sadness, pain, and sometimes expressed anger regarding their dissatisfaction with their progress affect us. Aldiabat and Le Navenec (2011)'s article about symbolic interactionism provided us with inspiring reflexive lenses to analyze our students' as well as our own inner dilemmas. This quotation strongly appealed to us in our quest to reach trustworthiness.

Sometimes humans talk to themselves silently, loudly, or in whispery form. Sometimes humans evaluate themselves, plan for future action, and punish or reward themselves. Based on this internal interaction, humans act in relation to others as well as towards themselves. In other words, if one is to understand human interaction/interactions of others, one must first gain an understanding of the meaning of the self-concept. (p. 1065)

The self-concept principle is when we look for the interconnectedness between the acting "I," our image "Me," and the reflecting "Self." In this process researchers "coordinate their behaviors by decreasing the gap between their impulses "I" and expectations of others "Me" by using the reflective "Self" to guide "their behaviors through observation, interpretation, and evaluation" (Aldiabat & Le Navenec, 2011, p. 1076). Our efforts are geared towards understanding how our beliefs and perceived identities might fuel our actions.

Our teaching philosophy is imbued with social constructivism (Hickey, 1997) and thus we see the ideal supervisory relationship ecology as nurturing an immersive and engaged learning community providing opportunities for personalized, meaningful, and self-regulated learning (Pitzer & Skinner, 2017; Skinner & Pitzer, 2012). For these authors, ensuring a caring environment is central to nurturing engagement. Adhering to learner-centeredness taught us the need to delve into our learners' experiences and literacies to adapt our teaching to our learners' needs and interests. In our supervisory meetings and email conversations with our MA students, we searched for clues which could help us build a safer and conducive research support framework. We analyzed our students' narratives to identify their sources of struggles with writing their thesis.

Crick's (2012) definition of Vygotsky's (1934/1962, 1978) *perezhivanie* as "resources of the self" building the learners' "personhood" consisting of their "accumulated lived emotional experience, including values, attitudes, beliefs, schemas and affect" (p. 680) concurs with our pedagogical framework for action in the development of an engaging environment. In investigating our MA students' *perezhivanie*, we identified their need for a practical approach to guide them in making sense of the theoretical underpinnings of trustworthiness. The students needed practical exposure to methodological discussions to gain confidence in supporting and defending their methodological choices. Therefore, we decided to expose students to methodological discussions about trustworthy procedures through problem solving, starting discussions from a purposeful sampling selection case. From experience, we knew that our MA students would abstain from discussing their research topic with their peers for reasons related to plagiarism issues. As such, the methodological discussions had to be extracted from a sample case external to their research.

Consequently, we retrospectively delved into our experience with introspection, looking back at unsettling times. Sifting through our educational researchers' journey, we searched for illustrations of purposeful sampling techniques applied to seeking trustworthiness in participants' selection from our own research. Situated within scenario-based problem solving, the aim was to expose students to an intricate sampling case. We thought that disclosing our vulnerability and internal chaos in times of doubts, and the strength we ultimately gained from introspection would help novice researchers regain confidence. As such, the case needed to constitute a minefield of potential biases the students could identify themselves with as language teachers, novice researchers, and postgraduate students. Furthermore, the case should display an array of rigorous methodological tactics we used to disarm emotional traps which helped us lift the fog of assumptions and guided us past chaotic entrapment towards a trustworthy purposeful and theoretical sampling selection.

In this article we present the two axes of the supervisory support framework with a central focus on enhancing methodological integrity and credibility when reporting and defending a trustworthy purposeful sample selection. The first axis deals with aspects related to building novice researchers' confidence through providing emotional as well as methodological support. In this section, we describe our journey into our students' narratives which illuminated their perception of chaos from their perspectives. We then used our understanding of the sources of chaos to nurture a caring supervisory ecology. The second axis focuses on demonstrating methodological integrity which is crucial in supporting the qualitative researcher's role as a trustworthy instrument. We explain how we apply the constant comparative analysis method, peer debriefing and member reflections techniques in our daily practice to develop our instructor-researcher expertise and sensitivity. To this effect, we explain how each technique can be used to demonstrate rigor in the purposeful sampling selection process as well as credibility as an expert researcher. Therefore, we teach each technique showing concomitantly how it contributes to rigor and which researcher skill it develops.

### **Cultivating a Caring Mentor-Mentee Relationship Against Chaos**

In this MA program, part-time students write their thesis over three semesters. The thesis represents 6 credits out of 30. Only outstanding students with a cumulative grade point average above 3 out of 4 can start their thesis. Students defend their proposal in the first semester, their confirmation in the second and their oral defense or *viva voce* in the third.

Most students are full-time in-service secondary teachers and we schedule face-to-face supervisory meetings twice every semester. We organize mock defenses before and debriefing sessions after the proposal, confirmation, and oral defense examinations. Most communications, thesis review, and feedback occur through emails. Since we joined this

university, we have supervised four cohorts of students, which represents 25 students and served as internal thesis examiners to over 20 students.

In our attempt to find a solution to our MA students' distress, we initiated action research to find a cure that would support their researcher development. We first sought to develop our teachers' awareness hearing the issues they faced from their perspectives. We needed to identify the events which were sources of chaos. Data creation included discourses produced in one-to-one sessions and email communications. One-to-one discourses comprised supervision email communications and follow-up, face-to-face supervision meetings, examination observations of proposal defense, confirmation presentation and oral thesis defense examinations as well as follow up debriefing sessions. We listened to the students' voices, hearing and analyzing their stories. We scrutinized discourses for traces of apprehension, annoyance, and weariness, searching to reconstruct the disruptive episodes which were responsible for undermining their qualitative researchers' confidence throughout their thesis journey. We illustrated the students' expectations, confusion, and states of mind with excerpts taken from personal communications. Consent to analyze and publish anonymized excerpts from personal communications was sought from the students. We highlighted in blue the students' excerpts within email conversation threads with supervisors.

### **Establishing Rapport: Weaving an Emotional Safety Net**

The first supervision meeting is crucial to get to know the students, their reasons for pursuing a MA degree, their motivation for research, as well as their occupational and family duties. Therefore, the first contact session is sequenced with a warm-up phase, an immersion phase, a central phase, and a closing phase. In the warm-up sequence, we make the students feel relaxed. We invite them to talk about the place they are from, their family, educational, and professional background.

In the immersion phase, we inquire about their school, career, and reasons for pursuing an MA Degree. Then, in the immersion phase, we incite the students into telling and reflecting about their instructor-researcher stories. We discuss their research interests. The immersion phase gradually eases the students to explain their research topic and their motivation for selecting this topic. From the immersion phase, we can infer their researcher paradigm, epistemology, ontology, theoretical perspective, and research design. This phase is essential in the development of their researcher sensitivity because very often the students' choice of research topic is deeply rooted in their own experience. Therefore, their motivation for researching solutions to these educational aspects represent a genuine interest in helping future teachers and learners. As such, the research topic as well as the research design plan provide cues to their instructor identities and beliefs. The research process might have a self-healing dimension in the construction of their instructor-researcher identities. The immersion phase progressively leads the session to the central phase.

The central phase delves into their expectations from the thesis, supervision, and institution. We ask them to identify potential threats and vulnerabilities. At this stage, we bring up the contingencies that may hinder their progress such as conflicting calendars inherent to handling their studies, professional, and family commitments. The following excerpts illustrate unavoidable circumstances and the need to remain flexible.

*Dear Doctor. Regarding our meeting on the fourth of January, I am **afraid** that I will not be able to come as **I am assigned correction duties** after 12pm which means **I will miss the bus**. I am **really sorry** Doctor. As you know, this is the end of the semester and finals time. **We need to finish marking on 11 January**. We can meet the week after (14-16 Jan) on any day as I will be in holiday.*

The following excerpts illustrate unavoidable circumstances and the need to remain attentive to variations in communication patterns. Variations might consist in submission delays, silences as well as changes in discourse showing pressure, urges, reluctance, sadness, and despair.

*Good morning. I hope this email finds you well and happy with your data collection and analysis 🕒 I am attaching a **Gantt chart template** for you to fill your progress as well as to **tentatively schedule** the next **thesis submission steps**.*

*Dear Doctor. The ministry of education **refused to extend my study leave**, and this makes me **busy with my work duties**.*

Most importantly, we try to suggest administrative solutions and above all to sympathize with the students' situations to alleviate eventual feelings of guilt and weariness. The students need to hear that we support their decisions.

***Completing in two semesters is very challenging and you may feel that you will not be able to reach that stage before the end of current semester. Therefore, if this is the case, I recommend asking for an extension (third semester).***

*Dear Doctor. I would be **very grateful** if you consider my situation and kindly grant me an **extension of one more semester** to submit my master's thesis.*

We raise possible setbacks that may arise from each milestone, highlighting the constant and often tedious review-revision-submission process. We emphasize the inevitability of the constant rewriting explaining that this is part of being an academic and expected from any researcher. The following extracts from the same conversation are an example of the emergence of the student's confusion and weariness after the second and third round of revisions and supervisors' feedback on the thesis first three chapters before submission to proposal examination. In the first email, the student is motivated and demonstrates enthusiasm despite the setback of having to revise the second chapter.

*Thank you, dear Doctor for your support. I really need 📖. I start rewriting chapter2 the first section of reading definitions. Many thanks. **I really appreciate your support and kindness.***

In the second email, the student begins to worry due to the approaching submission deadline. We can feel doubt and chaos looming underneath. The tone is distant and the request pressing. From experience, we denote two reasons for the student's apology. The first reason is related to guilt as well as frustration for not having submitted a perfect third draft despite the supervisor's feedback. The second reason is related to a reformulation request because the student does not understand the comments. Therefore, the student seeks assistance rather than risk making inappropriate changes. This interpretation is confirmed in the third email and follow-up conversation in which the student discloses her anguish and despair. However, the narrative shows relief, faith, and courage regarding the last stretch of effort before the submission.

*Dear Doctor. **I have a question** regarding your **feedback**. In order to edit my work based on your **valuable feedback**, what are the **main comments** in each chapter **that I need to address first** in order to submit the proposal? **Sorry dear Doctor for bothering you.***

*Sorry Dear Doctor for asking a lot. To be **honest** with you **when I read the suggestions** the first time, I felt **disappointment** but now I'm ok and I will work hard to complete the chapters in a **good way**.*

*Good afternoon. **Thank you for sharing how you feel**. I can imagine your disappointment. **Writing** research is **challenging** and at times **frustrating** due to **the revision process**. The process is common at **all levels of academia** whether it is a **thesis**, an **article**, or a **book**, and whether the **author** is a **graduate student**, or a **professor**. Manuscripts are **peer reviewed** and **revised** by the author **until approved**.*

*I insist that **your progress is impressive** and shows **hard work** and **dedication**. I would like to add that **I enjoy reading your work**.*

*May I **suggest** that we have a **meeting** to **discuss** your chapters and your **research proposal**. Are you available this coming Thursday?*

*Dear Doctor. I'm better than the two couple days 🙌😊 and sorry for the late reply but I'm trying to edit my work based on your **valuable feedback** and I wish to **finish as early as I can**. I really appreciate your **support, guidance, assistance, and kindness** as well as how you make my **research journey smooth**.*

The central phase seeks to establish rapport and trust as well as diagnose the most appropriate modus operandi for the supervision based on their needs in terms of support. Therefore, we encourage them to ask any question that comes to their mind, and to open their heart to disclose any apprehension they might have. Towards the end, we schedule the next steps and start planning for the proposal stage. The concluding phase ends in a discussion mode. Subsequent supervision meetings and debriefing sessions follow the same sequencing. We learn over the years the importance of nurturing a supporting mentee-mentor relationship with our students and to remain flexible to their needs.

*Doctor I wonder if we can discuss things by **email**. Actually, I **need to make the best of my holiday** by working on my thesis. So, I was thinking of conducting the introductory interviews and visiting the school. I wonder if there are any parts in the **three submitted chapters** that I need to **enrich**, work more on them. **The question in mind is what is next?** I would really appreciate Doctor if you can **help me** with some **guidelines to work with**.*

We help them build their confidence by acknowledging their expertise and progress.

*I would like to **congratulate** you on your **progress and hard work**. I attach my comments in a feedback file as well the in-text review of the three chapters. Comments are **suggestions**. Please **discard the changes** if you feel **I misunderstood** sections of your work. Please **get back to me** if you have **any questions**, if you feel you **need further explanations** or if you would like to **clarify** some points.*

We provide advice and share our experience regarding research management and thesis examination. Subsequent meetings follow a similar four-phase sequencing. Through meetings and email follow-ups, we help them weave their own emotional safety net and guide them in navigating the rules and expectations of becoming an academic regarding personal, ethical and methodological integrity. The first step is to develop the students' awareness regarding their state of minds. We encourage the students to listen to their feelings, to be observant of disruptive changes. In murky situations, we rely on emergency scuba diving mottos. The basic survival motto "stop, breathe, think" (Caroll, 2004, p. 160) is what we tell ourselves to avoid

succumbing to panic. We share this motto with our MA students from our first contact meeting. Controlled breathing quiets the mind thus allowing to resume lucid thinking in search for rational decisions.

### Diagnosing Chaos

Anxiety in relation to proposal defense anticipation is discernable from the first supervisory meeting. When we ask the students why they feel insecure, every student begins with telling the story of a peer and a predecessor's proposal defense. Their predecessors depicted the exercise as a "discouraging and disturbing" experience. What emerged as the main source of worries was the "cross-examination nature" of the question and answer session. The students described their peers' "struggles" to provide "suitable and convincing" answers to the jury regarding their sampling selection. Therefore, many questions focus on their sampling selection as illustrated in the following excerpts.

*Dear Doctor. Regarding the **sampling I think that 4 teachers will fit the purpose of the study. Also, I have questions regarding the sampling. Do I have to set the criteria for selecting participants, for example 4 years teaching experience, working at governmental school, or there is no need to state that?***

### Frontline Remedies

Struggle refers to the feeling of losing ground, of stuttering and becoming incapable to explain their research design, and to support their criteria for the purposeful sampling selection. The students dread this situation which would expose them and make them appear ill-prepared. To this effect, we organize on-demand mock examination seminars.

*Will you be available on Thursday, May 3rd after your presentation at the symposium for a mock proposal defense at 3:00PM? Please confirm as soon as possible. I believe it would be a chance to **practice the timing of the presentation and to get feedback.***

*Good afternoon. Sorry if my message was unclear. No, you do not have to resubmit your proposal. I just wanted to share with you the Turnitin results as well as to let you know that your proposal was fine 👍 You are **super ready** 😊. But I do need to know if you would like to meet me before your presentation and if you will attend and present at the mock proposal 😊*

*Dear Doctor. I hope you are fine. Thank you very much for the good news. **Insha'Allah, I will be ready, and I hope I can handle all their questions. I really appreciate your cooperation with me.***

In our list of pre-emptive measures, we stress the importance of ethical, deontological, and methodological integrity. First, out of respect for their participants, as well as to their readers and colleagues, we encourage students to be attentive to the tone of their discourse in their reporting. We warn them against the use of harsh, judgmental, and offensive language. Second, we stress the importance of remaining trustworthy and to adhere to quality assurance criteria. We highlight the need to support and describe all actions and decisions for the sake of transparency, and replicability. We advise against generalizations and recommend supporting all statements with references for credibility. Academically explaining their research design, fairly stating, and interpreting events while always remaining true and respectful is the best

defense strategy. Similarly, displaying expertise and rigor in their research design and interpretations of findings demonstrate scientific thinking and academic skills. The following excerpts shows supervisors' comments referring to the sensitive nature of the justifications provided in reporting the purposeful sampling section criteria in the thesis initial draft at the proposal stage.

[1] It is hard to me as a women researcher to get access to boy schools. Furthermore, to my knowledge, **men** tend to be **less expressive** as **they want things to be finished quickly**. On the other hand, women teachers tend to **be more expressive** especially with a women researcher.

*This statement is sensitive and could be ill-interpreted. I strongly advise against generalization and recommend **avoiding strong judgmental** statement. Analyze the possible social and cultural reasons why men might be less expressive and try to escape being interviewed. **How** would you feel interviewing men teachers? **How** would they feel being interviewed by a woman researcher? Do you feel that these feelings could support the sampling?*

[2] In addition, in Oman, women tend to be more welcoming to new approaches and to apply them.

*I strongly **recommend supporting** this statement with **references**. This would add rigor and credibility to the statement.*

In the thesis, we highlight words and expressions which struck our attention and add notes in the margins to notify sections that need to be clarified. We attach a feedback report where we raise ethical and methodological issues, inviting the students to reflect, often in the form of questions. However, we are careful to let them decide the course of action. We are guiding their path, not imposing our views. We respect their judgment and expertise.

*Please find attached the **edited and annotated** proposal draft. I also attach a **report explaining my recommendations and suggestions**. I would like you to **go through the comments** and to **apply the changes you agree with**. **If you decide not to apply the changes, just explain your reasons**.*

Regarding the example above, the student persisted in her perception of men, therefore she decided to keep the sentence. Understandably, at the confirmation stage the examiners were startled and demanded to amend the section.

*Examiner's comment: **You should be neutral as a researcher**. You **claim that women are more expressive**, and **this is a dangerous claim**. **Replace with explaining how you could not approach men due to cultural considerations**.*

## Anger Management

However, frustration and anguish culminated when the students relived their own proposal, confirmation, and thesis defense examinations, particularly when they recalled some of their examiners' questions and comments. As members of thesis examination committees, we are aware of the students' limitations regarding the intricacies of the art of defending their choice of research method. However, we perceived in our students' narratives the extent of emotional damage caused by the fact of being critiqued. Most of our students are experienced in-service teachers, and senior teachers. Most of them conduct teacher training workshops and are involved as teaching supervisors and mentors for their junior peers. They are in charge and

in control of their classrooms and manage teams of teachers. This affects their perception of self as successful instructors as well as their expectation of self as outstanding MA achievers. However, as novice researchers, they lack practice in academic rhetorical debate and are not used to receiving blunt comments.

As supervisors, we observe the examination sessions and take field notes of the examiners' questions and comments, as well as observe and note our students' reactions. In debriefing sessions, we noted that frustration progressively grew upon the examiners' request to reformulate, explain, and clarify. Furthermore, in follow-up emails, we noticed that the students found handling the comments from the examiners' report challenging. They were at a loss regarding the required revision. They were not accustomed to academic review and did not read between lines. Thus, they could not extract the meaning, hence they failed to interpret the comments.

The following excerpt illustrates the students' reaction to the external examiner's report which concluded with minor revisions: *"This is a good dissertation on an interesting topic. The data collection and data analysis procedures have been described clearly. Well done."* However, in the students' email, vexation is clearly expressed, and the tone is intensely upset.

*Dear Doctor. Regarding the comments, I am really sorry for this, but the majority of the comments are not convincing and not logical. Most of the time the assessor is asking for things that are already there in the thesis (with my respect, but I suspect if the assessor has read all thesis). He is trying to find comments even if there is none. I would like to know your view about the comments.*

In our email, we had congratulated the student on the excellent report, therefore, we interpreted the request "to know our views" as an SOS and the burst of wrath as a distress flare.

*Good morning. The report praises your work on numerous instances and acknowledges that the research was well-conducted. The comments are encouraging. The assessor carefully read the thesis and provides suggestions to help improve the thesis in terms of flow and clarity of language. [...] We recommend looking at the comments from the perspective of improving the readability and clarity of the thesis. The assessor praised the rigor, and scientific value of the thesis.*

*We provided our interpretation of the comments hoping you might see the usefulness of addressing them. We added suggestions meant as examples, responding to your email seeking my guidance on how to interpret and handle the comments. We are trying to guide you on how to proceed. Use your judgment and expertise to review the suggestions.*

Subsequently, we decided to combine the requested amendments in a table, reformulating and clarifying the actions needed to limit misinterpretations. In addition, we added suggestions regarding how to handle the comments.

*Examiner's comment: What do you mean by "theoretical sample"?*

*Doctor, it is there in the thesis. "Theoretical sampling was used where the researcher chose participants based on their expertise on the field and based on the need for data that evokes through data analysis."*

*Supervisors' suggestion: I believe you meant purposeful in the first instance.*

In the current study, **purposeful** sampling was used where the researcher chooses participants based on their expertise on the field. **Subsequently, theoretical sampling** enabled the researcher to collect richer data based on the need to enrich emerging themes evoked through data analysis.

The following conversations shows the usefulness to provide a checklist of amendments with indications regarding the interpretations of the comments to better guide the students regarding the requested revisions.

**Congratulations 🎉** We are **very proud** of you. The thesis examination **committee** was **impressed** with the **expertise** and **academic performance** you **demonstrated** during the **viva voce** 👍

Please find attached the **list of revisions required** from the thesis examination committee as well as the **examiners' reports**. We **added suggestions** regarding **two items**. We thought it **might be helpful**. However, **please follow your notes** from the viva and your **expertise in handling the comments**.

**Let us know** how we may **assist** you.

*Dear Doctor, I tried to address all the points that you mentioned in the report and made the recommended changes. Thank you for your suggestions and clarification. Regarding your questions, I made these changes because I felt the committee wanted these changes. For example, I replaced "implement" with "select" because I thought the committee suggested that.*

*Dear Doctors, I hope you are fine. Thank for your email. I attach the amendments. Really, I found your comments and feedback more convincing than the assessor. YOUR guidance made the work look more systematic and well organized.*

The narrative analysis highlighted that chaotic situations arose from supervisors' and examiners' requests to reformulate, clarify, and better support their research design. The quotes provided hereafter, specifically targeting the purposeful sampling selection emphasized the need to take further measures to improve our supervision support.

*Basing the research methodology in grounded theory is workable in this small-scale investigation. Need to **add reflexivity** for example in this section, you may **develop how the theoretical sampling was carried out**. **Explain/describe how the data was used to refine the sample**. See highlighted text. You may add to the description of their profiles.*

**Purposeful sampling criteria:** *Explain immediately after mentioning the six teachers how you selected them and how you used pseudonyms, not real names.*

**Purposeful sampling:** *explain and support "good and excellent proficiency students" as a selection criterion.*

Subsequently, we asked the students which methodological support would be most helpful. They explained that they found philosophical and theoretical underpinnings of qualitative terms difficult to grasp. Therefore, they suggested we organise hands-on sessions to illustrate the concept of trustworthiness applied to purposeful sampling selection. Consequently, we chose to initiate our MA students to the constant comparative method of

analysis, peer debriefing, and member reflections techniques. These techniques provide a rigorous check-and-balance ensuring a systematic and trustworthy sampling selection as well as contribute to demonstrating the researcher's expertise. In addition, the students requested a template to illustrate how we reported these techniques in our writing. Therefore, we took the same selected case from our practice to write a purposeful sampling selection which they can refer to and use as a reporting matrix.

### **Teaching Trustworthy Remedies against Chaos**

In our instructor-researcher practice, we develop rigor and methodological integrity using grounded theory's trustworthiness procedures. We found the constant comparative method of inquiry, peer debriefing, and member reflections helpful towards building our researchers' awareness, expertise, sensitivity, and hence credibility. These techniques are particularly useful in our dealings with the multifaceted forms of empowerment resulting from our omnipresent involvement both as lecturers and researchers. The nature of educational research implies investigating our teaching, our students, our peers, our institution. Therefore, we need to demonstrate a transparent and trustworthy sampling selection. We need to question our motives, to identify the source of our emotions before taking actions, and thus, applying these techniques contribute to our efforts in view of adding legitimacy to our practice. Our MA students being in-service TESOL teachers face identical dilemmas in their instructor-researcher practice. Therefore, we illustrate the constant comparative method of analysis, peer debriefing, and member reflections as we experience them.

### **How to Reach Awareness with the Constant Comparative Method**

When we were ourselves novice researchers, we needed lenses to help us rationalize our thoughts and assist us in viewing events and participants from various angles in a way similar to the zoom in and out function of optical lenses connecting "practical wisdom" with "theory-informed ethical inquiry" (Elliott, 2013, p. 16). In this regard, the constant comparative method of analysis provided rigorous protection bias throughout the purposeful and theoretical sampling selection. Rolling back in time allows for triangulating past and present emotions, unveiling processes, thus making sense of decisions. The comparative method of analysis was helpful in "examining the belief systems that had structured and shaped" (Brand, 2015, p. 519) our educator's identities. Applying the constant comparative analysis techniques of "personal reflection and sharing practices" resulted in "systematic and evidence based action" (Butterfield, 2009, p. 322). This technique applied to our sample selection supported our claims of a trustworthy participants' selection.

We believe awareness is the first step towards practical wisdom. Similarly, referring to the diver example, being aware of our surroundings modifies our course of actions and results in responsible diving, responsible towards our safety, the safety of others, and the environment. Seeking awareness in conducting research and in our teaching is our ethical attempt towards ensuring fairness and fidelity to our participants as well as to our MA students resulting in the resonance of pedagogical contributions. Therefore, we seek awareness with self-inquiry against blindness in times of excessive darkness and seek brightness through self-disclosure in our quest towards reaching a glimpse of enlightenment. Practical wisdom is our perpetual quest. As such, we pursue awareness relying on strategies to build our researchers' sensitivity which we describe as our expertise in analyzing ourselves as instruments.

## **How to Sharpen Reflexivity with Peer Debriefing**

To cite Bernauer (2013), we are constantly “engaged in an evolving process of interpreting experiences [...]. Even after years of practice as researchers and educators, we still feel like individuals “under construction” who are “seeking a perceived sense of control” when confronted to unsettling situations (p. 4). In times of doubts, our second lifesaving motto “stop, get control, remain calm, reverse, get help from your buddy” (p. 160) is used to escape entanglement and entrapment. Peer debriefing helps voicing out thoughts, conceive projects, grieve, regain faith, take a step back, reflect, and thus gain clearer perspectives when ready to pursue. Seeking to sharpen our researchers’ sensitivity, we apply Collins and Cooper’s (2014, p. 94) emotional intelligence rubrics encompassing “self-awareness,” “self-regulation,” “empathy,” and “power” relations to analyze events, actions, interpretations. We feel deeply connected to Brand’s (2015) inspirational stance where he describes the reflexive process as a commitment towards reaching “equity of relationship.” Thus, we engage in peer debriefing when analyzing our educators and researchers’ experiences in our attempt to detect and cure our “occupational blindness” (p. 522).

We channel our reflections through dialoguing about daily events. When we disclose events and seek guidance, chaotic thoughts tend to surface from our narratives. Our discourse becomes clouded, less organized. Our body reflects our agitated mind. Our answers and interpretations appear less sharp. A peer will discern these changes and help us make sense of what is truly bothering us, thus illuminating our interpretations. Similarly, when engaging in methodological discussions about the case, our MA students realized they needed to work harder on some aspects of their argumentation when they began to stumble on words or lost track of their thoughts. Regarding peer debriefing, when disclosing issues, establishing trust and good relationship is paramount. In seeking guidance, we advise applying similar criteria as for interviewers thus in selecting supportive and attentive listeners among resourceful peers and colleagues building “rapport and trust” to achieve mutual opportunities for “introspection and growth” (Corbin & Morse, 2003, p. 350).

## **How to Develop Theoretical Sensitivity with Member Reflections**

Dialoguing encompasses conversations between researchers with peer debriefing sessions and discussions with participants through member reflections grounding the data and our interpretations throughout the research process. Regarding member reflections, Friedman and Rogers (2009) defined this dialoguing process as contributing to understanding the phenomenon “as the participants have come to understand it and facilitating their understandings and choices about change as well as attempts to create new realities” (p. 32).

In the sampling selection process, we acknowledge hierarchical distance, building trust and rapport through prolonged engagement, inviting feedback, involving participants in decisions regarding the implementation, in imparting a caring and fair learning environment in which each participant felt supported (Fontana & Frey, 2000). These precepts frame the social constructivist engaging learning environment as well as guide the action research framework embodied in our researchers’ stance. The sampling selection as illustrated in our step-by-step section (coming up next) acknowledged the power distance. We sought participants who were willing and able to disclose their interpretations with their researcher-instructor. We avoided discomfort, for example selecting focus group interviews with introverted students or not forcing technological resisting students to use the devices. In the selected case of implementing foreign language engagement with tablet computers, methodological considerations were

articulated in terms of designing a trustworthy and transparent iPad distribution and sample selection criteria system.

Additionally, disclosing doubts and confronting our interpretations with relatives, colleagues with peer debriefing as well as students and participants with member reflections help reaching awareness. A daily practice becomes a journey connecting the present with the past, revealing imperceptible traits sparked from shimmering fragments of life across data, grounding interpretations with rich verbal, behavioral, and attitudinal expressions. Travelling through testimonies, hearing out emotions suddenly opens the doors to imperceptible dimensions uncovering profound truth about events and interactions triggering processes within the phenomenon from the perspectives of all actors. In the iPad project described below, scrutinizing the relationships between behavioral, attitudinal and verbally expressed impulses, expectations, and actions increased our researchers' self-reflexivity, awareness, and theoretical sensitivity which resulted in deeply grounded and enriched interpretations towards trustworthiness throughout our sampling selection (Aldiabat & Le Navenec, 2011). In our teaching MA students, relating practical wisdom to nurturing member reflections was the most rewarding aspect of engaging in methodological discussions. Our MA students were thankful for being introduced to member reflections. They explained that practicing member reflections with their participants in conducting their research contributed to raising their empathy towards their participants. They concluded that they had gained practical wisdom through acknowledging their participants' voices.

### **Setting the Scene for Methodological Reflections**

Based on our students' positive response, we decided to publish the matrix we share with our students as an example of purposeful sample selection reporting. In 2010, we were fulltime language lecturers and fulltime PhD students in Malaysia. We had received research funding for developing a foreign language engagement model with tablet computers. The research design consisted of action research investigating the foreign language engagement of the same cohort of 24 students over 2 years. The drawback which led to our methodological dilemma was financial. In the approved research fund, the equipment allowance was seriously trimmed down to the purchase of four iPads from the 24 initially budgeted. Therefore, the revised budget meant that the research design had to be modified to include this limitation.

The initial sampling included the whole cohort of 24 students registered in a French bachelor program. Educational research seeks to improve the learning situation which in our context translated to a need to improve the learning environment to address a lack of learners' engagement in French courses with immersive learning. At the onset of the research, Malaysian students enrolled in the French program came from low-income families and therefore, seldom owned tablet computers mostly due to social economic reasons. As such, the initial research plan aimed to provide each student with one-to-one access to the research iPads. Therefore, we had planned the budget to allocate an iPad per student. From our educators' view, allocating an iPad for each learner answered the ethical criteria of being fair by providing each student with equal technological access to online learning resources, opportunities, and communities which concurs with Reeves, Herrington, and Oliver's precepts (2005).

Similarly, exploring the motivational factors and self-regulated learning mechanisms demanded we expose the 24 students to learning French with the devices. Therefore, the reduced number of iPads placed the researchers in front of a methodological dilemma since the intervention needed to provide pedagogical opportunities for all students to access the course materials and tasks. Consequently, the budget cut resulted in the need to redesign the planned pedagogical intervention to incorporate the 1 to 8 iPad distribution ratios. This case resonated with our Omani postgraduate students because of the institutional context, the need to increase

practical and social exposure to foreign language learning, and the methodological implications induced by the financial constraint. Having situated the iPad distribution dilemma, we asked our postgraduate students the following questions.

*How would you cope with the 1 to 8 iPad distribution ratios? How would you plan the intervention allowing balanced access to the iPads to all 24 students from the initial sampling?*

Our postgraduate students responded well to the situational case-solving discussion. The case resonated with their own teaching contexts, inviting them to voice their own pedagogical and methodological constraints. Reflecting on novice researchers' distress with self-reflectivity helped them voice their own chaotic situations. In effect, scenario-based discussions propped their reflections on the researchers' role and subjectivity related dilemmas. Discussing trustworthiness, awareness, and theoretical sensitivity gave them the opportunity to defend their choices of methodological approach and subsequently build confidence. They found the case-solving step-by-step demonstration of grounded theory's trustworthiness procedures applied to purposeful sampling reassuring. Their positive response to the problem-solving experience inspired us to share the step-by-step illustration of the three phases of the sampling selection from our teaching case scenario in this article.

### **Step-by-Step Illustration of the Sampling Selection**

In this section, we describe the initial sampling decision to expose the whole cohort of 24 students to learning with the iPads and its methodological repercussion on the action plan. At that stage, the constant comparative method of analysis involved intensive peer debriefing sessions in view of designing the pedagogical and technological intervention in view of adapting to the 1 to 8 iPad ratios. Second, we detail the results from the focused coding stage which determined the purposeful sampling considering emerging findings related to the learners' engagement profiles with the devices and the emerging personalization factor. At this stage, the participants were closely associated through member reflections to rethink the devices' usage distribution on a one-to-one basis. Finally, we explain the data-driven theoretical sampling based on the emergent theory related to foreign language engagement with tablet computers. Findings from the theoretical coding pointed to seamless engagement being deeply related to ubiquity, a factor that led the researchers to reconsider the iPad distribution from a classroom usage to a one-to-one iPad permanent loan. At this stage, member reflections and discussions were essential in ensuring a transparent and fair distribution. All names have been replaced with pseudonyms (Damaniakis & Woodford, 2012). The constant comparative analysis method, code retrieving, memoing, and diagramming were carried out with the ATLAS.ti computer-aided qualitative data analysis software (Friese, 2012).

### **Initial Sampling: Reflecting on the Shared iPad Distribution**

This section illustrates the benefits of engaging in peer debriefing sessions to avoid feeling trapped in emotional turmoil when dealing with complex situations. The selected episode relates methodological concerns related to the delicate decision-making process while addressing purposeful sampling needs with methodological considerations. The research allocated iPads were limited to four devices for a cohort of 24 participants which prevented a one-to-one exclusive on-loan usage. Therefore, at the on-set of the research, we decided to distribute the iPads among groups of peers. This configuration respected both concepts of free will and free access regarding using the devices as well as enabled the researchers to determine the learners' pedagogical and technological profiles for the purposeful sampling purposes

(Angeli & Valanides, 2009). In the first cycle, the students were informed of the research. As it turned out, the 24 students agreed to participate in the research, to being photographed and filmed (Banks, 2007) as well as to participate in focus group interviews, however only 12 participants accepted to participate in one-on-one interviews (Kvale, 2007).

In the first semester, verbal quotes and behavioral patterns frequently occurred referring to the limited number of iPads which called for a deeper analysis in order to understand the reasons for the learners' expressed needs to use the devices individually (Angeli & Valanides, 2009). The learner-centred approach sought to enable the students to choose their preferred technological support tools. Meanwhile, the learner-controlled approach was pursued to cater to self-regulated learning. Therefore, it was necessary to identify the factors from the iPad distribution which hindered the implementation of both approaches. As such, we comparatively searched through data sets for codes related to the individualised learning concept in order to situate the context of occurrences and identify the participants corresponding to this profile. Two codes referred to this concept "Not enough iPads" and 'One-to-one versus sharing.' We examined and discussed the occurrences for these two codes in view of the participants' perceptions of the device's usefulness in order to determine how sharing the iPads restrained their intended usage. A summary of the findings reporting quotes which clearly identified the learners' needs are compiled in Table 1.

**Table 1**  
*Occurrences and Justification for Individual iPad Usage*

<b>Data set</b>	<b>Type of data</b>	<b>Participant</b>	<b>Quote</b>	<b>Justification</b>
1C	12 one-on-one interviews 12 participants	Lilly	4:4	Crowded to collaborate
		Lilly	7:48	Crowded to collaborate
		Lilly	12:17	Crowded to collaborate
		Sophie	5:1	Individual/collaborative
		Sophie	8:5	Individual/collaborative
		Sophie	11:35	Preloaded / Customised
1B	14 self-reflexive logs 24 participants	Colette	14:25	Replay multimedia
		Cerise	14:26	Course material, notes
		Laurence	14:27	Replay multimedia
		Violetta	14:29	Replay multimedia
1B	8 focus group interviews 24 participants	Nelly	32:520	Replay multimedia
		Vanessa	40:1010	Crowded to collaborate
		Virginie	41:512	Crowded to collaborate

The distribution of the devices had repercussions on three methodological aspects. Firstly, distribution affected the implementation procedures involving theoretical concepts such as technological acceptance and pedagogical usefulness which could modify the research outcomes pertaining to the learners' engagement using the devices, the central phenomenon. Secondly, the learning need emerging towards an individual usage of the devices implied a shift in the participants' profiles, experiences, and thus knowledge which would consequently lead to reconsider the theoretical sampling to better fit the research needs. Lastly, ethics demanded a transparent and fair distribution of the research iPads. The research should not be disruptive or harmful to the students, therefore extreme care was applied to the students' profiling to identify the students who would benefit pedagogically from receiving an iPad.

Peer debriefing sessions included research meetings to discuss interpretations of findings in determining the users' profiles as well as informal discussions to brainstorm ideas related to the best course of actions. Disclosing concerns and voicing multiple solutions contributed to refine the methodological implementation while limiting researchers' biases in the decision-making process. The results from the peer debriefing process were that it was necessary to identify the factors from the environment which hindered the implementation of both self-regulated learning and learner-controlled approaches. Furthermore, the purposeful sampling needed to be refocused to reflect the users' profiles. On the other hand, reports also showed learners with practical inhibitions towards the iPads such as the fear of being distracted as mentioned in Lucien and Emma's quotes.

*"It has **many games to take out my attention from the class**" (Lucien C1A: 2:148).*

*"I **may not concentrate in class**" (Emma C1A: 2:197).*

Therefore, in the second cycle corresponding to the second semester the lecturers decided to lay out the iPads on teachers' desk at the beginning of each course and to invite the students to use them on a voluntary, first-come, first-served basis. This method gave the students control over the tools they chose to use. Besides, allowing the students to borrow the iPads based on their needs was expected to unfold individual as well as collaborative usage of the devices along with peer dynamics. Furthermore, this method reduced the lecturer's technological intervention and thus limited bias as the willingness to continue using the devices would emerge from the learners. Moreover, since manipulating the various applications remained tedious for many students, the learners experiencing technological inhibitions would not feel pressured to use the devices, hence preventing eventual technological disengagement. Similarly, the learners who feared being distracted could restrain their usage of the tablets.

### **Purposeful Sampling: Digging into the Emerging Personalization Factor**

As planned, at the beginning of each course, the lecturers placed four iPads on their desks stating that the devices were at the students' disposal. Three students were using their newly acquired iPads namely Johanna, Céleste, and Sophie. Unexpectedly, with the new distribution method, the loaned iPads remained unused, stationed on the table. After a week, the students seemed uneasy as if they did not dare take the initiative to borrow a device. After the first coordination meeting, the lecturers decided to offer the iPads at the beginning of the course walking around the classroom while handling the devices. On the second week, Lilly and Fanny respectively raised their hands followed by Gaetan and Antoine. The four students were observed discreetly looking around before raising their hands. The four of them received an iPad each and for the duration of the lesson.

We sought to understand the reasons for the learners' hesitating behaviors with member reflections. Our reflective memos attached to the observation grids referred to uneasiness, shyness. However, during member reflection meetings, Sophie associated the act of borrowing an iPad to classroom seat attribution rules established among learners. Sophie interpreted hesitations and reserved behaviour as social inhibitions rooted in power relations existing between peers regarding reserved classroom seats.

*It is like the seats. The **seats are taken from the start of the semester . . . It depends who is faster, who goes to class first. Like on Tuesdays, in the computer lab; the seats are the same as last semester because it is same classroom. Monday the lecturer asked us to sit in front because the others are not there. But we wait, it depends if they come. If they come, we need***

*to go back to our seats because they sat there first and it is their seats. We need to wait after half an hour. After half an hour if we think they are not coming we can move to their seats. If they come, they'll look at us like asking why we are in their seats. So automatically I go back to my seat. They just make a face to show you that they are not happy* (Sophie C1B: 8:28).

Sophie's explanation confirmed the motivation of the learners who expressed their willingness to use the iPads as these students decisively defied established classroom social behavior rules. During the second and third weeks, Lilly, Fanny, and Gaetan demonstrated their willingness to use an iPad for each lesson. Therefore, we decided to lend them the same device whenever feasible in order to facilitate their technological adaptation in congruence with the emergence of device personalization and customization as a strong factor of engagement. The fourth iPad was alternately borrowed by Cerise, Violetta, and Antoine on a first-come, first served basis. From the fourth week of the semester, Cerise became the main user of the fourth iPad as Violetta and Antoine were often absent due to their involvement in extracurricular activities. The iPad's usage repartition is represented in Table 2. Habitual groups of peers are represented within the columns while the grey and white backgrounds highlight the extended collaborative usage when peer groups merged during some activities. The names in italic represent cases of irregular attendance.

**Table 2**

*Main and Peer iPad User*

Device	iPad 1	iPad 2	iPad 3	iPad 4	Johanna's	Céleste's	Sophie's
Main users	Gaetan	Cerise	Fanny	Lilly	Johanna	Céleste	Sophie
Peer users	<i>Antoine</i>	<i>Violetta</i>	Clarisse	Elodie	<i>Vanessa</i>	Annabelle	Nelly
	Alain	Jasmine	<i>Zazie</i>	Colette	<i>Jocelyne</i>		
	Lucien	Laurence		<i>Nancy</i>	Virginie		
					Emma		

The iPads were either used individually or collectively among groups of friends. However, the students regularly using the same devices seemed to benefit more from the increased technological exposure. This was reflected in their academic usage of the devices as they explored several applications for editing and note taking as well as reference tools.

At the end of the second semester, we carefully searched our data and organized one-on-one interviews followed by member reflections in order to refine our understanding of the learners' perceptions of usefulness and readiness towards using the device for learning French. We identified a key concept regarding the exploration of "foreign language learners' engagement using iPads" which was the learners' satisfaction in learning French with the device based on perceived usefulness and learners' readiness to use the device congruent with the Technology acceptance model (Venkatesh et al., 2003) and the TPACK framework associating educational needs and know-how (Archambault & Barnett, 2010).

In addition, the code "device customization" emerged as a key-component of the personalization factor leading to perceived usefulness, related to enjoyment, a strong factor of engagement. However, customization implied a one-to-one usage of the device which led us to reconsider the iPad distribution on a one-to-one basis.

Therefore, we considered the theoretical sampling criteria based on our need to gain rich data. The retained criteria were two conceptual themes, "Pedagogical user satisfaction" and "Technological readiness," and two were methodological themes, "Willingness to share"

and “Ability to share” their experience. Regular attendance was a criterion for the selection of participants in order to explore classroom engagement with tablet computers.

In ATLAS.ti, we identified all relevant codes belonging to each theme, and organized them in two categories. We then performed an analysis to identify the participants who fitted into both methodological criteria. We used the consent forms to select the students who had agreed to all forms of data collection, and then sorted the participants based on their commitment in terms of regularity of class attendance, participation to interviews. Then, we performed an analysis of the participants’ quotations attached to the codes investigating the richness of emerging concepts, detailed experiences, and story-telling styles. Finally, we investigated their contributions during their member reflections. The purposeful sampling retained Cerise, Fanny, Gaetan, and Lilly, and as main research iPad users as well as Céleste, Johanna, and Sophie.

### **Theoretical Sampling: Theorizing Emerging Seamless Engagement Processes**

This third cycle sought to explore the concept of device personalization in order to uncover its implications on the development of the students’ seamless engagement related to self-regulating learning. Seamless engagement refers to ubiquitous learning describing in-class and out-of-class learning. Ubiquitous learning results from mobile learning also defined as flexible. Fanny’s quote illustrated hereafter is one example of seamless engagement related to flexible learning.

*It's been six days now and I haven't touched my laptop because I had a more sophisticated gadget with me which is the iPad. I found this gadget is **definitely handier** than my own laptop. I did some of my assignments in iWriter and afterwards, **I sent them to my email. I prefer doing my assignments using iPad because I can complete them anywhere, anytime.** [...] **Last night, I created a new book for French vocabulary in the Totes M'Notes while doing my laundry. I even finished my assignment while having my breakfast. I couldn't stop myself because that is the only time where all the ideas pour down on me.** [...] Compared to my laptop, I need to switch it on, connect it to the battery supply and the most part **I hate** would be; **sitting at the same place for a long time and staring at the monitor** (Fanny C2B:133:1,3,4).*

The theoretical sampling was data driven and as such was conducted to further explore emerging concepts and their relations. Similarly, the research needs guided the methodological distribution of the research allocated iPads. Therefore, we opted to loan a research iPad to each main user identified through the purposeful sampling namely Gaetan, Cerise, Lilly, and Fanny until their graduation to gain richer data regarding seamless learning processes. The theoretical sampling consisted of knowledgeable participants selected based on their learning and engagement patterns with the devices.

Subsequently, knowledgeable individuals were screened based on their willingness and ability to share their experience with the researcher. In addition, ethical considerations guided the researcher throughout the theoretical sampling in order to ensure the data collection methods were respectful of the participants’ concerns and preferences. These considerations included the participants’ reluctance regarding one-on-one interviews, their expressed apprehensions pertaining to the consequences of their involvement in the research on their study load as well as their reluctance to borrow the iPads outside the classroom.

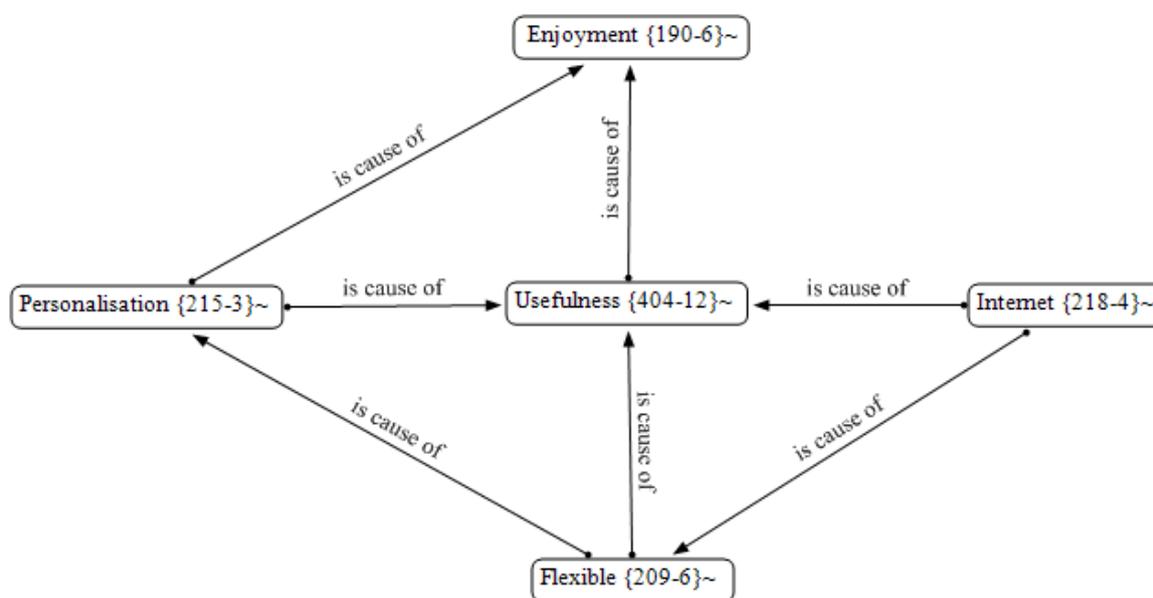
Consequently, the theoretical sampling distinguished two categories of knowledgeable participants based on their full or partial involvement in the data collection. Expert participants were fully involved whereas resource participants were occasionally consulted on specific

matters. Based on these criteria, the theoretical sampling retained seven expert participants comprising Céleste, Sophie, and Johanna using their own iPads as well as Cerise, Fanny, Gaetan, and Lilly using research loaned iPads on an individual basis. Knowledgeable participants punctually included participants exhibiting divergent behaviors.

The usefulness of the iPads in the seamless learning processes was triangulated within the multiple sources of data. Furthermore, the affordances of tablet computers in fostering the students' engagement concurred with the technology acceptance model's perceived enjoyment and perceived mobility criteria for mobile learning defined by Huang et al. (2007). The theoretical coding revealed the processes linked to the students' perceived usefulness of the iPads in their French courses illustrated in Figure 1.

**Figure 1**

*Theoretical Coding Related to Contributing Factors of Perceived Engagement*



The constant comparative analysis method applied to the data sets covering the four cycles confirmed the concept of “Personalization” as directly influencing the usefulness perception of tablet computers as well as generating engagement through perceived enjoyment. A separate category was identified which represented the learners’ definitions of the “Internet” concept in order to reflect the abundant occurrences referring to Internet as a social and knowledge-based sharing as well as learning space. The code “Internet” was interpreted as representing the perceived students’ ability to remain permanently connected to the global networked community on a macro level and to their private learning community on a micro level. Thus, Internet was defined as useful to learning as well as contributing to mobile or flexible learning. The category labelled “Flexible” encompassed the individual and collaborative learning affordances represented by the concepts of mobility, versatility, as well as connectivity aspects such as weight and screen size, installed applications, Wi-Fi coverage, and cloud computing. The “Personalization” effect was reported as highly procuring the students with feelings of perceived usefulness and enjoyment. As such, “Personalization” resulted in the students’ practical and affective behavioral intention to use the devices which enhanced their perceptions of the learning environment. “Personalization” strengthened the perceived usefulness and enjoyment factors hence further enhancing the learners’ feelings of belonging, confidence, and self-efficacy which fueled their motivation for engagement.

Associating peer debriefing and member reflections with the constant comparative method of analysis was essential in determining the best methodological course of action regarding the technological implementation due to the research constraint in terms of a limited number of devices. The peer debriefing and member reflection contributions were threefold. First, discussions ensured a transparent sample selection and fair device allocation based on the learners' needs as grounded in the data. Second, openly disclosing insights and thoughts provided a constant system of check and balance throughout the decision-making process thus ensuring trustworthiness throughout the theory generating process. Third and perhaps most importantly, both methods rationalized the decision-making process, limiting harmful affective factors because decisions were pedagogically and methodologically supported.

### **Conclusion**

Biases may occur in the participants' as well as in the researchers' interpretations. Therefore, applying the constant comparative analysis method associated with peer debriefing and member reflections helps researchers analyzing and processing events, attentively listening to the voices within the stories of the people involved. Thus, the constant comparative method of inquiry can enable novice researchers to delve in the phenomenon while remaining grounded to their participants' views and experiences as well as aware of their own possible entangled emotions and hidden motives. This method allows researchers to scan narratives elicited from all intervening actors to understand the context in which they were produced (Connelly & Clandinin, 1990). Interpretations are then scrutinized, dissected, and triangulated to ensure credibility and trustworthiness. For researchers, reporting the iterative analytical process throughout the sampling selection phases provides transparency related to their actions and interpretations as the main instrument, thus strengthening methodological integrity.

Member reflections can guide novice researchers so that the resulting interpretation truly reflects all contributions, imparts new knowledge, and is applicable in the research context. This technique ensures that the purposeful selection of participants is grounded in the data, resonates with the research purpose, and is useful in the research context. The member reflection technique is ethical to all actors because researchers and participants alike are considered experts as well as emotional beings. Contrasting perspectives and seeking help provide new insights and deeper understanding as well as guidance in the sampling selection process. In educational research, it is important to minimize the hierarchical gap which may be implied in the researcher-participant relationship especially when the researchers are directly involved in the research institutional context. In our case, instructional research is about understanding both teaching and learning needs in order to find solutions applicable for all. Therefore, it is crucial for participants to be implicated to ensure the fitness of interpretations as well as to convey a caring message that their participation is appreciated, and their judgments accounted for. In addition, member reflections contribute to alleviate doubts and provide support and guidance to the researchers in darker times.

The highly reflexive nature of qualitative methodological set-ups appears at times as extremely unsettling and thus harmful to the researchers. Introspective turmoil can paralyze and swallow researchers like quicksand. Peer debriefing can help alleviate guilt, sadness, and frustration. Reaching out to someone we trust means accepting we need support and guidance. Disclosing emotions relieves inner tensions. In addition, voicing doubts can help us uncover the paths hidden in our labyrinthine jungles of reflections. For novice researchers, disclosing doubts and exteriorizing inner voices with peers, colleagues, and supervisors helps regaining confidence and reaching a comfort zone.

In our view, seeking trustworthiness is remaining true, humble, and aware of our weaknesses, seeking advice and help in times of need, imparting warmth, sympathy, and

respecting privacy. Within this definition, trustworthiness can be interpreted as the Hippocratic Oath of qualitative researchers. Resonance in the ethical terminology and safeguarding deontological stances of both discourses is remarkable particularly in Louis Lasagna's (1964) modern interpretation. In terms of ethical concerns, both discourses emphasize practitioners' integrity as central in protecting and respecting participants as illustrated in Hulkower's (2016) comment, "a tradition based upon sound scientific investigation combined with patient-oriented care" (p. 43). Comparatively, little is said about protecting novice practitioners.

Therefore, this article sought to address potential harm in practicing research illustrating applications of trustworthiness procedures which novice researchers could use to sort their dilemmas and lighten their emotional burden. Likewise, in supervising postgraduate students, we seek to impart this philosophy from the beginning of their researchers' journey. The ethical reporting criteria of "resonance" and "usefulness" (Charmaz, 2006, pp. 182-183) is congruent with Miles' (2009) analysis of medical discourses in disclosing findings with a reporting approach "grounded in the patient's experience of the syndrome which communicates" (p. 1323), by contributing to humanity through reflecting those who contributed. Applying a constant comparative method of inquiry, member reflections as well as peer debriefing techniques from the initial sampling to the theoretical sampling stages preserves novice researchers from wandering away and erring into chaotic paths. Furthermore, in our journey, we believe that the best defense in demonstrating trustworthiness resides in transparency through demonstrating awareness and remaining true in reporting research.

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