Pre-Service Teachers' Cognition on Student Understanding in the EFL Language Classroom

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ARTICLE INFO	ABSTRACT
	The way language teachers respond to learners' failure to internalize language may considerably vary. Some teachers may prioritize making the language in their classrooms understood in its entirety, contrary to their teacher education in which roughly-tuned input is advised rather than finely-tuned input. Considering that teachers' practices are often influenced by their cognitions, this study set out to uncover teacher cognitions on student understanding during their teacher education. The participants were 13 pre-service EFL teachers doing their practicum at high schools in Turkey. Participants were interviewed to reveal their cognitions on student understanding. Semi-structured interview tried to uncover how they coped with failure to understand when they were learners as well as when they observed how their mentor teachers handled learner failure to understand a linguistic feature or skill. The qualitative analysis of the interviews revealed that the pre-service teachers' cognition on student understanding is a unified construct that covers many meanings of the word understand, and consists of pre-service teachers' beliefs and pedagogic knowledge. These findings shed light on pre-service teacher cognitions, paving the way for education curriculum.

It is becoming more and more observable in English language classrooms across Turkey that teachers seem to have developed a staunch attitude towards the issue of students' understanding the presented material fully. Ignoring the fact that targeted knowledge and skills are digested over a period through recycling and reinforcement as well as frequent exposure, practicing teachers tend to see each lesson as one compact knowledge pack to be immediately attended and internalized. This attitude inevitably yields unorthodox ways and techniques rather than solutions prescribed during their teacher training programs.

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One study reports that practising teachers have developed a distinct way of dealing with the reading texts and comprehension questions in course books to ensure students' understanding of the texts (Korkut & Ertaş, 2017). The study compared the unfolding of teacher talk while materials are the focus of instruction to an existing framework developed by Walsh (2006) in which teachers were taking extra pains, "to make the materials accessible to students" and "to warrant full comprehension of the texts in the material" by doing line-by-line analysis. The teachers' preoccupation about students' understanding the material fully had shaped the features of teacher talk and had created a classroom discourse different from Walsh's (2006) description. In another study, pre-service teachers had a similar preoccupation with student understanding of language in its entirety (Korkut & Şener, 2018). This study aimed to determine pre-service English teachers' attitude regarding mother tongue use. Majority of the participants stated that L1 was used "when students do not understand".

The studies above, coupled with our observations during practicum, intrigued us because the teachers' and pre-service teachers' apparent preoccupation with trying to have course content understood entirely seemed to contradict with their teacher training in which they are informed about comprehensible input hypothesis (Krashen, 1985) and the principle that input should be roughly-tuned. According to Krashen's (1985) comprehensible input hypothesis, students should actively try to understand the meaning of an unknown language item by piecing together a context from the surrounding items that are known. While the importance of process of meaning-making for acquisition is emphasized during their teacher education, how can we explain the attitude of pre-service teachers who insist on having everything comprehended before the lesson ends rather than providing comprehensible input? The explanation might lie in the pre-service teachers' cognitions on student understanding.

If teachers act based on their cognitions, we should have more information about it to better understand teachers' day-to-day decisions. Although there is considerable amount of research on various aspects of teacher cognition (see Borg, 2003, 2012; Burns, Freeman & Edwards, 2015 for comprehensive reviews), there is not any which address teacher cognition about understanding. As Borg (2006) points out, the teacher cognition research has become increasingly teacher-training oriented. Knowing more about pre-service teachers' cognitions on understanding can inform teacher training practices and provide the means for a more informed action plan towards student understanding.

1.1. Research on Understanding

In education, understanding has been studied as an outcome of instruction. Learners' understanding of several concepts is investigated to justify certain educational activities and used as a resource in assessment and in empirical research (Lindwall & Lymer, 2011). In other cases, how students understand the lectures is studied. This - often referred to as lecture comprehension- is especially more frequently studied in non-native learners' comprehension of lectures (e.g. Soruç, Dinler, & Griffiths, 2018; Youn-Kyoung & Boon-Joo, 2017; Zare & Keivanloo-Shahrestanaki, 2017).

Understanding is considered from a different angle in Conversation Analysis studies. "Conversation analytic studies of language in interaction have revealed two participant notions of understanding" (Koole, 2010, p.186): an understanding of the prior turn, and the understanding of a subject, which can be correct or incorrect. The former notion is studied in the sequential organization of the classroom interactions (Lindwall & Lymer, 2011; Macbeth, 2011), in apprenticeship (Hindmarsh, Reynolds & Dunne, 2011), and professional instructing actions (Mondada, 2011). Typically, understanding is studied in terms of I-R-F/E sequence: initiation, response, and evaluation/feedback (Cazden, 1988; Mehan, 1979; Sinclair & Coulthard, 1975). When the R step is problematic because the student did not understand the I-move well, this is called "IRE with a first position trouble (FPT)" and if the trouble is that the student gave the wrong answer, this is called "IRE with a second position trouble (SPT) (Zemel & Koschmann, 2011, p.

476). In sum, from the conversation analytic stand-point, both an understanding of the prior turn and the understanding of a subject are evident in the R move of the I-R-F/E sequence.

In second/foreign language learning, the role of short- and long-term memory in listening comprehension (Was & Woltz, 2007) and reading comprehension (Rai et al., 2010) were investigated. Experimental studies, in which different aspects of language are controlled to measure input processing and comprehension rates, were done (e.g. Lee, 1998). This line of research highlighted the role of learners' cognitive capacities for comprehension. As seen, research has often taken the issue from the view-point of the learner. Little attention has been paid to how teachers understand students' understanding.

An exception is Hamel (2003) who investigated teacher conceptions of student understanding of literature. He found that teachers' understanding of students' understanding comprises of conceptions of student understanding, instructional practices, and the sources by which teachers' knowledge and conceptions are formed. Based on findings, student understanding depends on age, level, motivation, resources available and social context. In Hamel's study, the teachers described how they structure reading curriculum, the typical activities in their class, discourse features (i.e. kinds of questions asked) to support understanding and how they assess student understanding.

Psycholinguistically speaking, students' understanding is critical for language acquisition according to comprehensible input hypothesis developed by Krashen (1985:2) who summarizes the hypothesis:

> humans acquire language in only one way-by understanding messages, or by receiving "comprehensible input". We progress by understanding input that contains structures that are a bit beyond our current level of competence ... We are able to understand language containing unacquired grammar with the help of context, which includes extra-linguistic information, our knowledge of the world, and previously acquired linguistic competence ... (p.2)

The input hypothesis was extended so that not only the input as its naturally occurring form, but also modified and negotiated input can foster acquisition. In other words, the teacher can make the input comprehensible to the learner by means of certain methods. There are two ways of doing this; modifying the input so that it becomes more accessible to the learner (Pica, Young & Doughty, 1987), and negotiated interaction. For example, Long (1983) describes fifteen strategies to avoid trouble and repair interaction through clarification requests, confirmation and comprehension checks (Loschky, 1994). Moreover, as White (1987) argues, problem areas during interaction can push the learner to revise his knowledge of the rules through corrective feedback and thus provide opportunities for acquisition, i.e. uptake. The teacher, therefore, has an extra responsibility to know how to modify input as roughly-tuned to the students' level, and to exploit negotiated interaction opportunities skilfully.

The notion of comprehension as a result of negotiated interaction is closely related with 'intake'. Intake is defined in at least three different ways; intake as the acquired language, i.e. as a product; intake as a process whereby language items are successively incorporated in the linguistic system by the learner; and intake as the portion of the input which is comprehended and which may later be incorporated in the learners' linguistic system (Van Patten, 2000). Still, very little conclusive information exists about the nature and processes of intake because of some certain difficulties summarized by Rast (2008) as follows:

- How can we know what elements of the linguistic environment are processed completely, partially, or not at all?
- How can we know if learners even 'hear' a signal in the input and if they process what they heard?
- How can we know what part of the signal is processed and what part is not?

We believe that all questions listed above are among a teacher's everyday concerns in language classes. The teacher has to constantly judge how input is being understood or taken in by the students.

1.2. Language Teacher Cognition

Language teacher cognition is "the unobservable cognitive dimension of teaching – what teachers know, believe, and think" (Borg, 2003, p.81). It is "an often tacit, personally-held, practical system of mental constructs held by teachers and which are dynamic" (Borg, 2006, p.35). The increasing recognition that teachers have an active role in shaping educational practices triggered an interest in how teachers make decisions during their lessons. Feeding from the developments in cognitive psychology which emphasizes the influence of thinking on behaviour, teacher cognition is a vast field of interest in teachers' thought processes, knowledge, beliefs, and subject-specific conceptions (Borg, 2006). According to Lee, Zhang, Song & Huang (2013), teachers' instructional practices are shaped both by their epistemological beliefs and conceptions of teaching and learning. Teachers explain their instructional actions according to students' understanding, interest, and unexpected behaviour (Borg, 2003). Cognition is affected not only from teacher education but also the teachers' past experiences, pre-existing beliefs and knowledge, personality, attitudes, and contextual factors (Burri, Chen & Baker, 2017).

Teachers' cognitions of different aspects of classroom communication such as intercultural communicative competence (Yang, Xiang & Chun, 2018) and beneficial teacher-led discourse (Kubanyiova, 2015) have been investigated recently. Yet the need for studying the understanding of student understanding, which arguably is the first and most essential step for any communication in the classroom, remains.

In addition, the mentioned studies were carried out with teachers in service. According to Borg (2003), teacher education programs which ignore the strong influence of teachers' previous experiences as learners are less successful. There is not enough information about the cognitions of pre-service teachers on student understanding.

Pre-service teacher cognition research typically deals with trainees' cognitions in relation to their prior learning experiences, beliefs about teaching, decision-making during practicum or the change in trainees' cognitions during teacher education (Borg, 2006). Issues such as pre-service teachers' cognitions on what it means to understand, what facilitates understanding, and what measures are available remain under-researched. To fill in this gap, this study is guided by the general research question "What is the nature of pre-service EFL teachers' cognitions on student understanding?"

2. Method

2.2. Research Design

This is a qualitative study in which semi-structured interviews were used as the source of data. Qualitative research allows researchers to examine certain phenomenon in its natural setting, that is, without manipulating certain factors influencing the outcome of an application (Tetnowsky & Damico, 2001).

2.2. Participants and Setting

The study took place in the Department of English Language Teaching of a state university in Turkey during the 2018-2019 academic year. The participants were 4th year students taking the practicum, which requires school visits under the guidance and mentorship of English teachers, doing classroom observation and micro- and macro-teaching. Using the convenience sampling technique, 13 pre-service

teachers; 6 males and 7 females who were in the first author's supervision group were interviewed for this study.

2.3. Data Collection Tools

Given the difficulty of accessing a nebulous construct such as cognition about understanding (Koschmann, 2011), it seemed best to organize an interview protocol to indirectly elicit their views, beliefs and experiences regarding "understanding" that formed their cognition about the subjects. Their cognition of learner understanding was rendered by the associations the participants made. In addition, we tried to supply their cognitions about understanding by analyzing the meanings in which they used the verb *anla-* (understand/comprehend) during the interviews. Furthermore, the interview protocol was organized in three sections according to Borg's (2003) observation that teacher cognition is formed by weaving together experiences from one's teacher education, personal experiences as a language learner, and classroom experiences as a teacher:

Section A: Your experiences as a language learner (5 questions)
   e.g. "Were you able to understand everything presented in a lesson during the lesson when you were a learner?"
Section B: Your observation as a mentee (8 questions)
   e.g. "Does your mentor make an effort to ensure understanding in his/her class?"
   "What strategies and techniques does he/she use?"
Section C: Your experiences as a trainee teacher (6 questions)
   e.g. "Were there times when you thought your students did not understand?"

We piloted the interview protocol before implementation to see if questions were clear and the interview would result in the desired density of information.

2.4. Data Collection Procedures

All the interviews were held by the first author in her office room at the faculty, which ensured swift execution of interviews. The researcher first gave the participants a print-out of the interview protocol and asked them if there were any questions that they would not want to/be able to answer. Subsequently, she asked for their permission to record the interview. The interviews were conducted in Turkish, the first language of both participants and researchers in order not to lose fine details that might otherwise be lost as well as to remove concerns about their proficiency "impacting the quality and quantity of the data provided" (Mackey & Gass, 2005, p. 174). Each interview lasted 25-30 minutes. Interviews were transcribed for analysis.

2.5. Data Analysis Procedures

Taking a grounded theory approach (Cohen, Manion & Morrison, 2007), we analyzed the interview transcriptions according to constant comparison method (Strauss & Corbin, 1998). Keeping an open mind, with no previous theories or pre-conceptions, we read each interview on the basis of the three sections and added labels according to the participants' answers. With each section, we compared the labels with the previously-read ones and branched, or collapsed them according to the emerging meanings, re-reading some interviews in the light of the subsequent ones when necessary until all information was coded. This open coding resulted in 22 labels.

Then, these labels were submitted to axial coding in which "codes are explored, their interrelationships are examined, and codes and categories are compared to existing theory (Cohen, Manion & Morrision, 2007, p. 493). This way, we grouped the codes and reached layered information about the pre-service teachers' cognitions from various angles. The following two superordinating themes emerged:

(1) pre-service teachers' conceptions of student understanding, and

(2) The pedagogical knowledge regarding student understanding actions that they associate with checking, ensuring, and restoring understanding in the classroom.

2.6. Limitations and Trustworthiness

The participants were determined with convenience sampling technique in this study. "Although the term 'convenience' does have connotations which are antiethical to the notion of rigorous enquiry, the reality of much research involving language teachers is that it does rely on convenience samples" (Borg, 2012, p.16). Despite the limitation, one of the researchers' role of supervising the participants had certain advantages. She had access to in-depth and insider information about the cooperating teachers, schools, tasks the students had been carrying out and how much involvement each participant was showing. This background knowledge helped the researchers understand the participants' answers better and ask the necessary follow-up questions during the semi-structured interviews. Like in most qualitative studies, generalizability of the results is left to the judgement of the reader. Validity and reliability of qualitative studies are often referred to as trustworthiness (Lincoln & Guba, 1985). Apart from submitting our interview questions to expert review and piloting procedures, we used member checking by two participants which proved useful during the data coding process.

3. Findings

The analysis of the sections A, B, and C of the interview data resulted in 22 themes. Figure 1 shows these themes and their distribution across sections. Presenting the themes in this way, we can see where the cognitions of the teacher trainees are rooted the most; their own learning experiences (section A), their teacher training (section B), or their experiences as a teacher in front of a classroom (section C). Some themes were repeated in all sections. We interpret these as the strongest beliefs in the teacher trainees' cognitions about understanding.

When the themes presented in Figure 1 were explored in relation to one another as well as in line with teacher cognition theories, two superordinating themes emerged: Pre-service teachers' conceptions of student understanding, and their pedagogical knowledge about understanding in the language classroom. Figure 2 attempts to show these two superordinating themes in relation with the Figure 1's themes. In the subsequent sections, these relations are discussed and explained in detail with example quotes from the data.

Section A: Your experiences as a language learner
Section B: Your observations as a mentee
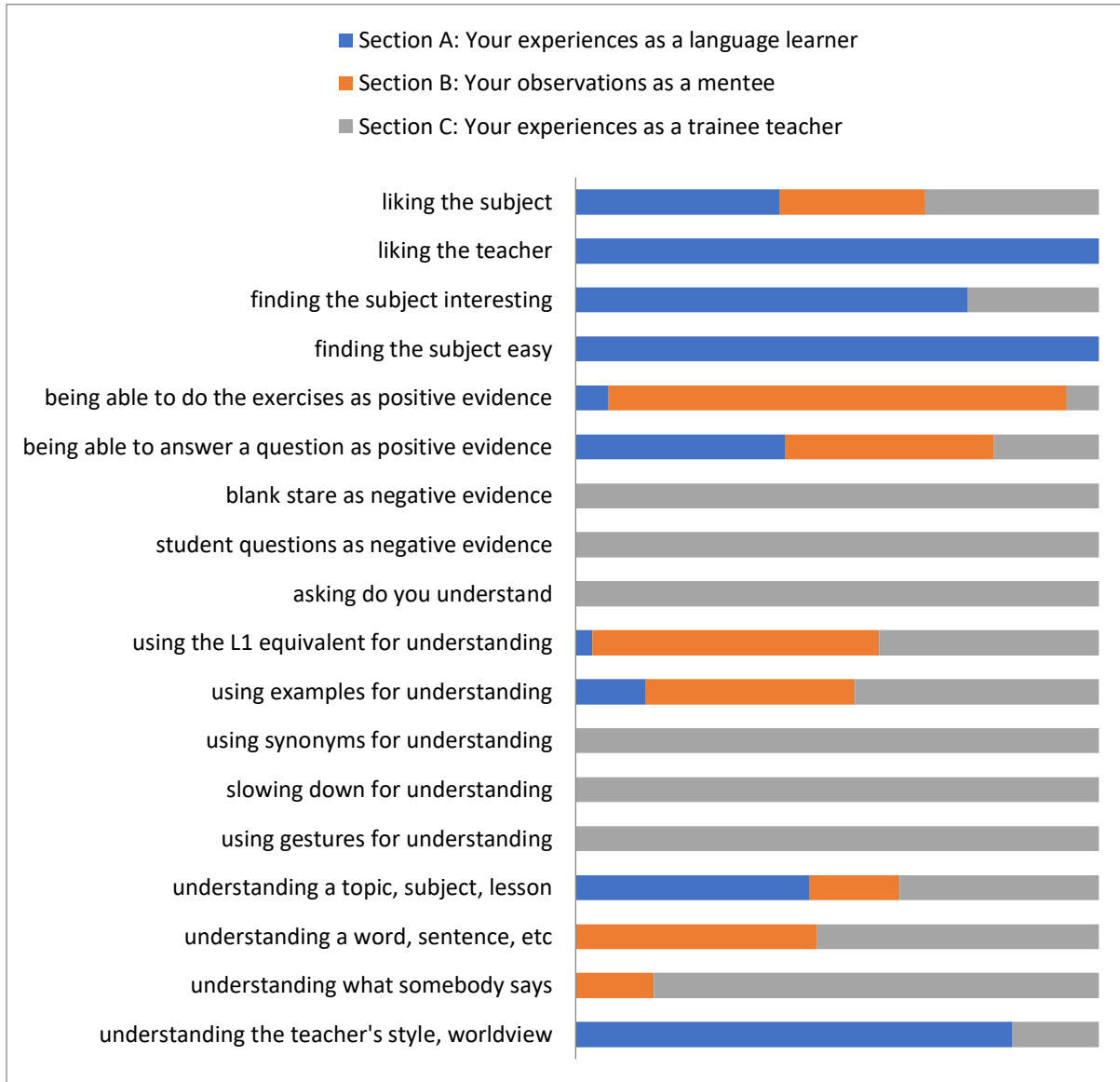**Section C: Your experiences as a trainee teacher**

Figure 1. Distribution of themes and sub-themes across the sections of the interview

As shown in Figure 1, almost all themes appeared in section C of the interview where the participants were asked questions about their own practice teaching experiences. Considering that their practice teaching is their first time in front of an actual class those themes which appeared only in section C of the interview might be issues that they had never pondered before. The themes that appeared in section B of the interview invariably appear in the third section too. These aspects of the participants' cognitions were supported both by their observations of others' teaching and their own teaching. Finally, those themes which appeared in section A – about their own learning experiences – seem to be rooted deeper beyond the participants' teacher training years.
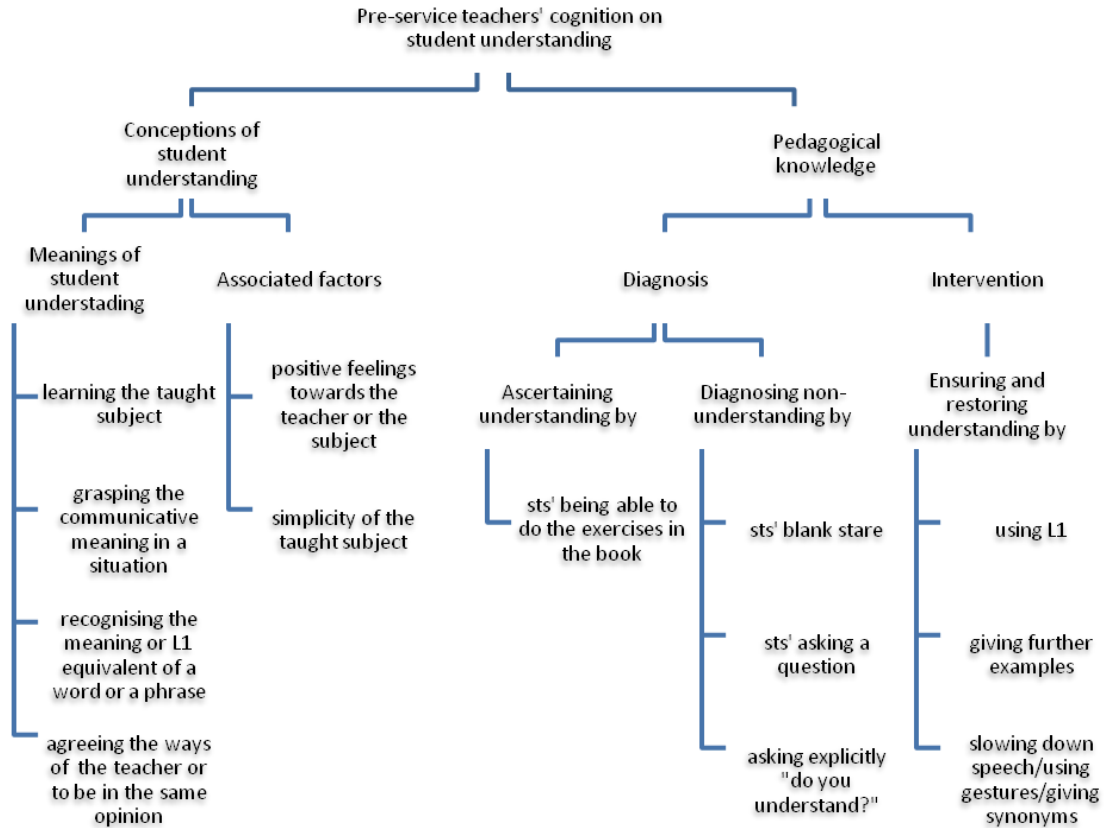
Figure 2. Pre-service teachers' conceptualization of student comprehension

3.1. Superordinating Theme 1: Conceptions of Student Understanding- What Pre-service Teachers Believe and Think About Student Understanding

To understand the meaning of student understanding from the pre-service teachers' perspective, we first looked at different senses in which they used the word anla- (to understand) throughout the interview. Of the 178 times this verb was used, in 139 cases, object of the verb was "the topic, the lesson, the grammar rule, etc". When used in this sense, to understand was used to mean the state of being able to grasp the usage of a taught element, almost synonymously - and in some cases interchangeably, with to learn the taught subject. For example, see the following extract; (Participants' names are changed to maintain anonymity)

Extract 1
Ayberk: I try to understand the lesson during the lesson. I don't do a special study for the exam.
Nihat: So, when I was first teaching the subject, there were some students who didn't understand, … But when we did more examples later, everybody understood.
Nazile: She thinks these students should learn maths, physics, etc. They already study a lot, … she cares that the students understand and doesn't refuse to teach, but just she does not repeat unless students ask for it.

When used in this sense, understanding was associated with the simplicity or complexity of the topic to be understood.

Extract 2
Fidan: If the topic is a more difficult one such as passive voice, then it was not understood in that week.
Tahsin: When it was specific information for example prepositions, then I would try to understand it within that week but when the topic would be useful in the following weeks, I would leave it for later. For example, tenses which are included in many weeks' topics. I would deal with them more thoroughly.

A second meaning for the verb understand in the participants' interview answers was to be able to get the intended communicative meaning. The word was used far less frequently in this sense; only 20 times in the entire data.

Extract 3
Nihat: I tried to teach words like "girl" slowly. That way, I think they understood. They do like this: like playing taboo, they say a word and try to tell the meaning without using the word.
Nazile: certainly. For example, they understood such things like "I met with Lennon", etc. They understood these for sure.
Interviewer: Yes, it was so obvious
Nazile: Yeah, everybody laughed, so I could tell that they understood (the joke).
Halise: in my experience there, our teacher used to speak in English all the time. We didn't know German, either; I was coming from Turkey. The teacher would give an instruction; I used to try to understand (what to do). I progressed like this.

In 13 other times, the verb "understand" had an object like the word or the sentence. In such cases, understanding was associated with being able to recognize the meaning or the Turkish equivalent of the said word or sentence.

Extract 4
Pekkan: when there is when and while in past sentences, we use past simple and past continuous. I had said "time conjunctions" but did not know whether they understood it. So, then I explained what I meant by "time conjunctions" by writing "when" and "while".
Tahsin: actually, what I observe in many teachers is this: they give the Turkish translation when a student doesn't understand.
Interviewer: Why was the teacher translating, do you think?
Kaan: To make sure that they understand. Also, if there are unknown words, they can see them, at the same time to make students understand the sentence fully.
Interviewer: so, you think the teacher was thinking that Turkish helps understanding?
Zinet: Yes, definitely. Because she always translates the sentence and asks in Turkish "It says this, doesn't it?" and when the student replies "yes", she assumes the student has understood.
Kerem: Our teacher would say it in English. But there were students from different backgrounds, so he would repeat it in Turkish. By this way, he tried to increase understanding.

In a few cases, the participants used the verb understand generally, referring to the agreeableness of the teaching techniques and styles of the teacher

Extract 5

Ayberk: I think I used to understand my teacher's teaching.

Mine: My answer is No. Because although some subjects are simple, they were not so understandable, maybe due to teachers' method or the way they were presented. It was complicated, unfamiliar… I think we didn't understand some of it.

Kaan: I don't think it (the mentor's attitude) is so realistic. Because many people speak the same language but they live in different worlds, so not everybody has the same ways of understanding. I don't agree in this respect.

It was evident that the participants saw a strong link between positive attitudes and understanding. This was a recurring theme across the sections A, B, and C of the interviews. Below, example quotes from each section are presented:

Extract 6

Zinet: Maybe it is because I liked English very much, because I paid attention, and because I looked up to my teacher as an idol… That was why I tried to understand every week.

Tahsin: Some (of the mentor's) students were particularly interested. She already knew who they were. She would do her best to get things understood, but she would not toil and moil for everyone's' understanding that much.

Nihat: While I was teaching, the subject was a grammar point. I realized that <u>not everybody understood.</u> Sometimes there can be some indifferent students in class.

3.2. Superordinating Theme 2- Diagnosis and Intervention Strategies: What Pre-service Teachers Know About Student Understanding

Data revealed evidence about the pre-service teachers' pedagogical knowledge, or lack thereof, about diagnosis and intervention strategies regarding understanding. One common observation among the participants (e.g. Yudum, Kerem, and Sezai) is that understanding can easily be diagnosed with being able to do the exercises following a reading passage or dialogue, either during class or in the exam. This position is so strong that even when they were asked to indicate whether their mentors resort to other ways of ensuring comprehension, they ended up with stating how laboriously their mentors tried for the successful completion of exercises.

A second parameter to notice understanding is participation and activity as revealed in the following.

Extract 7

Yudum: They have understood if they can do it in the exam.

Kerem: … if the student can do it, she would think that it is understood. You know, generally those who don't understand do not want to do exercises.

Sezai: … the participation. For example, only two-three people participate – you already know whose English is good. If only these students are answering and others are silent, then you think it is not understood.

Interviewer: Does the teacher work hard to get everything understood?

Fidan: Yes, especially during exercises, she would deal with each student who could not do it.

    A third parameter is blank stare. The following are responses to the question 'Why did you think they didn't understand?'

Extract 8

Fidan: I was asking questions and everybody was staring at me with blank eyes.

Ayberk: because of the looks in their eyes. I say "Do you understand?", and nobody looks at me knowingly. This time I ask it in Turkish, and still no answer.

Yudum: you already realize from the look in their face. They just stare at you. "Do you understand?" they just stare. Or they say "yes". They did not understand for sure.

Nazile: you know, sometimes I feel that the students are staring blankly in some situations

Zinet: … because of their face expression. You can easily interpret the actual meaning of "I understand".

The fourth way they diagnosed non-understanding in their teaching sessions was through students' questions, frequently about the exercises.

Extract 9

Interviewer: What was your response when your students did not understand?

Fidan: Once questions like "how do we do this (exercise)" or "how is this done" began to come from students. I decided to sit down and teach each student individually.

Pekkan: When I say in English, "Do you understand?" they say "We do." and subsequently do the examples correctly. Still, they are not fully sure as I see them discussing difference between while and when in Turkish during the break.

Nazile: But I could see when they did not understand for example: They were cooperating to do exercises. They ask each other questions like "how do we write this" etc. I sometimes corrected them for example I asked "do we really write like this"

Once the non-understanding is diagnosed, some pedagogical intervention strategies follow. Turkish is seen as a facilitating factor for understanding. Sometimes, the participants stated this explicitly when we asked them about their practicum mentors' notion of understanding in section B of the interview. At other times, it beamed through their answers to other questions in section C. The following extracts present examples:

Extract 10

Mine: Yes. Gözde teacher would usually speak in Turkish. And yes, she thought they learned. Because it is already in Turkish (h) they didn't have a chance of not understanding. So, it was understood, kind of.

Halise: In terms of grammar subjects, it was in Turkish. She speaks in English at other times, and if the instructions are not understood, she repeats them completely in Turkish.

Interviewer: Why was the teacher translating, do you think?

Kaan: To make sure that they understand.

Kerem: So, he would repeat it in Turkish to increase understanding.

Kerem: Perhaps only during grammar instruction can we use Turkish, just to be sure that everyone understands.

Interviewer: So, when you said it in Turkish, were you sure that they understood?

Fidan: To be honest, I thought they understood better.

Kaan: This was what I did: I tried to get him to understand by giving Turkish equivalent. I tried to explain why it is said that way.

The second intervention is offering more examples. Participants think that giving plenty examples will bring about understanding, based on their own learning, practicum observations as well as practicum experiences.

Extract 11

Zinet: of course, they wouldn't understand. It is necessary to do many drills to get it understood; or many examples.

Yudum: Well, she gives them chances to speak. As soon as she notices that they haven't understood, she gives additional examples.

Halise: Our teacher would turn to reinforcement. When we didn't understand something, he would repeatedly recycle it in different topics week after week.

Tahsin: She would just teach the subject to create a general outline of the topic and then she had this attitude: I will give more examples at the end so you will understand better.

Extract 12

Zinet: When my examples aren't understood, I say "let's try another example." This way, I gave more examples that they already know from their experiences to reinforce.

Tahsin: Then I said "Let's do one more example. You'll understand" I gave the example and they understood immediately.

Although rare, there are other strategies that the participants follow. These are switching to

Turkish, giving the synonym of the word, ostension or demonstrating, slowing the speech down and establishing eye contact (Extract 13).

Extract 13

Fidan: Yes, I used Turkish as well.

Ayberk: Once they hear the word, their faces tell you that they don't know it. If I can think of a simple synonym that they might know.

Mine: I tried to avoid Turkish. I always tried giving a synonym. Or I tried miming it in a situation.

Nazile: To make sure they understand, I slow down and exaggerate my voice like "don't you thiiiiink" while trying to establish eye-contact.

4. Discussion

The analysis resulted in core beliefs (i.e. conceptions) and pedagogical repertoire, which are dependent in a way that reflected its complex nature. The themes intersect and support each other.

Pre-service teachers tend to think of comprehension of material presented in English in the classroom as a subject to be learned rather than a form of communication. In Koole's (2010) terms, their replies were dominantly on the understanding of the subject rather than an understanding of the prior turn (See meanings of understanding in Figure 2). This is also reinforced by the finding that understanding is ascertained based on completion of exercises. This may be due to the importance attributed to materials in classrooms. The teacher often "becomes the voice of the materials, managing the turn-taking, evaluating the answers, and conducting the exercise" (Korkut & Ertaş, 2017, p275). Their own learning and experience have them to believe translation, final intervention, will bring about comprehension. More importantly, they hold the view that, of the material presented, nothing should be left un-understood before they leave the classroom!

Central to learner's comprehension of the material is positive attitude towards English and the teacher, lack of which may result in poor participation, a sign to be interpreted as non-understanding. Data shows there was a clear association between positive feelings and better understanding, a finding seconded by Bailey et al. (1996). Further, Schumann (1999) explored how positive appraisals promoted second language acquisition. Roorda, et al. (2011) reported "positive associations between positive teacher-student relationships and both engagement and achievement, and negative association between negative relationships and both engagement and achievement" (p.515).

The association between the easiness or complexity of the subject and affinity with the subject can be explained by the commonly accepted role of linguistic complexity in language acquisition for example processability theory (Pienemann, 2008). Lee (1998) found that learners comprehend more if the input is simplified, releasing more mental resources to devote to understanding.

The most predominant diagnostic technique for understanding was students' accurate response to questions. Poor or lack of participation, in turn, is regarded as absence of interest at best or outright non-understanding. Besides, participants also diagnose non-understanding based on questions students ask related to what was already explained. Technically speaking, typical discourse pattern in any instructional setting is the I-R-F/E especially when elicitation and concept questions are used to ensure and check understanding. Evidently, pre-service teachers ascertain understanding according to the R stage of the I-R-F/E sequence. Understanding is ascertained if the students are giving appropriate responses.

Pre-service teachers referred to the complete absence of the R stage as "blank stare" (see Extract 8) which is listed as a diagnosis technique (Fig.1). According to Hindmarsh, Reynolds & Dunne (2011), "In training contexts, the expert is sensitive to signs of confusion and trouble" (p.491), and "the body is a central resource to exhibit and to assess understanding in real time" (p.501). Namely, the teacher does not rely only on verbal claims of understanding, but also constantly checks for visual clues (Mondada, 2011). It seems clear that for the participants, the R move is at the focal point of attention. Both the verbal and non-verbal cues are taken into consideration as a critical point of reference for ascertaining understanding and diagnosing non-understanding. Students' ability to answer the questions is related to three of the meanings of understand: (1) Successfully giving the right response in the right time is considered as an indicator of learning of the taught subject. (2) At the same time, it means that the students have successfully caught the communicative meaning and the situation; otherwise a blank stare would happen. (3)

Participants attribute great role to examples for ensuring and restoring understanding. Giving a lot of examples increases the exposure to input and the chances of noticing. This point is in the same direction with "input flood", "enhanced input" and "information processing" studies. Such studies draw second language learners' attention to language forms in different ways, for example, by providing high-frequency exposure to specific language features, enhancing the features in some way, and/or providing explicit instruction" (Lightbown & Spada, 2006, p.147).

The theme of using L1 emerged many times throughout the analyses. For example, L1 is mentioned as a facilitating factor for understanding. It is also mentioned as a way of restoring understanding. Among the meanings of understand, this theme is especially related to understanding in the sense of recognizing the meaning or the L1 equivalent of a word or sentence. This might be because giving the L1 equivalent is a traditional way of presenting vocabulary items, which is preferred because of its practicality (Thornbury, 2002, p.77).

5. Conclusion

This study examined pre-service English teachers' cognition about student understanding. Participants' responses were largely consistent across the three sections of the interview, with the implication that pre-service English teachers share a relatively uniform cognition about understanding, rooted in their teaching, education, and experiences as learners. The analysis uncovered that the pre-service teachers use the word understand in different meanings and relate learners' understanding of a linguistic item or skill to certain factors such as affect and simplicity. In addition, they have a repertoire of diagnosis and intervention techniques. Diagnostic techniques include completion of the exercises, level of participation in activities, presence of blank stares and failure to follow procedural instructions. Intervention techniques on the other hand involve providing additional examples, translation of the unknown element, supplying of synonyms

and antonyms, ostension, demonstration, slowing the pace of speech and establishing eye-contact. Based on results, one would suggest that teacher training programs place emphasis on both diagnostic and intervention techniques to identify and rectify an ailing learning session. It would be more profitable if such orientation could be implemented before the beginning of the practicum. Further studies could be conducted whereby how topic organization affects pre-service teachers' cognitions and teaching practices.

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