FACULTAD DE CIENCIAS DE LA EDUCACIÓN

Communicative drilling as a strategy for the proceduralization of morphosyntactic features of English in the EFL classroom

Tesis para optar el Grado de
Magister en Educación con mención en Enseñanza de Inglés como Lengua Extranjera

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Piura, agosto de 2019

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Approval

The thesis entitled **"Communicative drilling as a strategy for the proceduralization of morphosyntactic features of English in the EFL classroom"**, presented by **Daniela Alejandra Flórez Neri**, in accordance with the requirements of being awarded the degree of Master in Education with a mention in Teaching English as a Second/Foreign Language**,** was approved by the thesis director **Dr. Majid Safadaran Mosazadeh**, and defended on 21st August 2019, before a Jury with a following members:

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Acknowledments

To my dear students.

To my family and friends, whose support and encouragement has carried me through the many challenges of life, including this one.

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Resumen Analítico - Informativo

Communicative drilling as a strategy for the proceduralization of morphosyntactic features of English in the EFL classroom.
Daniela Alejandra Flórez Neri
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Tesis
Magister en Educación con mención en Enseñanza de Inglés como Lengua Extranjera.
Universidad de Piura. Facultad de Ciencias de la Educación.
Fecha de sustentación: Lima, 21 de agosto de 2019

Palabras clave: *drilling* comunicativo / procedimentalización / conocimiento procedimental / automatización / fluidez / *the interface issue* / aprendizaje y enseñanza de gramática / EFL / ESL / ELT /SLA

Introducción: Tesis de maestría en Educación perteneciente a la línea de investigación sobre el aprendizaje y la enseñanza de lenguas extranjeras o segundas lenguas. La autora presenta los resultados de su estudio sobre la efectividad de una técnica conocida como drilling comunicativo en la procedimentalización de la gramática inglesa.

Metodología: El estudio pertenece a la categoría de investigación-acción –también conocida como investigación en aula. Tiene una orientación empírico-analítica y puede caracterizársele como de naturaleza cuantitativa. Por otro lado, se siguió un diseño experimental.

Resultados: Con relación a la hipótesis general planteada para el estudio, los resultados demuestran que la estrategia implementada en el grupo experimental tuvo un efecto positivo sobre la procedimentalización de las características gramaticales seleccionadas, que fue significativamente mayor al de las estrategias convencionales, lo cual fue evidenciado por los puntajes obtenidos por ambos grupos en la prueba temporizada. En consecuencia, es posible afirmar con un nivel de confianza del 97% que la técnica del drilling comunicativo contribuye a la procedimentalización de las características morfosintácticas del idioma inglés en los niveles iniciales del aprendizaje de dicho idioma, sin excluir la posibilidad de encontrar un efecto similar en otros niveles de competencia.

Conclusiones: Esta investigación ha verificado que las estrategias de procedimentalización pueden ser efectivas desde las etapas iniciales del aprendizaje del segundo idioma. Aunque es claro que las representaciones iniciales del idioma tienden a ocurrir en la forma de conocimiento declarativo, el proceso de procedimentalización no debe verse como algo de que ocuparse "después" en el proceso de largo plazo de aprendizaje del idioma extranjero. En cambio, respetando la secuencia natural de desarrollo de habilidades al presentar nuevos ítems lingüísticos, la procedimentalización de dichos ítems puede ser promovida poco después con la aplicación de técnicas adecuadas para este objetivo.

Fecha de elaboración resumen: 09 de agosto de 2019

Analytical – Informative Summary

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Date of dissertation: Lima, 21st August 2019

Key Words: Communicative drilling / proceduralization / procedural knowledge / automatization / fluency / the interface issue / grammar teaching and learning / EFL / ESL / ELT /SLA

Introduction: This is a thesis to obtain the degree of Mater in Education, which belongs to the research area of foreign language teaching and learning. The author presents the results of a study on the effectiveness of a technique known as communicative drilling on the proceduralization of English grammar.

Methodology: The present study falls into the broad category of action research – also known as classroom research. It has an empiric-analytic orientation and can be primarily characterized as quantitative in nature. This study follows an experimental design.

Results: As for the general hypothesis of this study, the results presented above show that the strategy implemented in the experimental group had a positive effect on the proceduralization of the selected grammar features that was significantly higher than that of the conventional strategies, which was evidenced by the test scores obtained by both groups. Thus, it can be asserted to a 97% level of confidence that communicative drilling contributes to the proceduralization of morphosyntactic features of the English language at the beginning stages of language learning in the context of the EFL classroom – without excluding the possibility of a similar effect at other stages as well. Similar results were found for the specific hypotheses.

Conclusions: This investigation has verified that proceduralization strategies can be useful from the beginning stages of language learning. Although it is clear that the initial representations of language tend to happen in the form of declarative knowledge, proceduralization should not be seen as something to be taken care of "later" in the long-term process of language learning. Rather, while respecting the natural sequence of skill development when presenting students with new language, the proceduralization of the newly presented grammar can be promoted shortly after by applying appropriate practice techniques.

Date of drafting of the summary: 9th August 2019

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Introduction

Since the demise of audiolingualism, EFL/ESL teachers and experts have been inclined to frown upon the words drilling, repetition and even practice. This is a probable by-product of the rise of Communicative Language Teaching (CLT) and its supporting theory, which advanced the widely accepted notion that language should be taught for its real purpose, namely, communication. In order to do so, teachers had to make sure that students were engaged in authentic tasks that fostered real communication since only then would they be able to finally grasp and interiorize the actual meaning of language items.

We believe all of this to be true; moreover, we consider these to be crucial advancements for the TEFL field. Nonetheless, when reflecting upon what CLT has meant in terms of grammar instruction in the EFL classroom, we feel inclined to say that the role of consistent and effective practice has been unfairly relegated. Then, we are compelled to ask, could we have thrown the baby out with the behavioristic bath water? Have we wrongly equated the concepts of repetition and practice to mechanicist views of language learning, and therefore, neglected a major aspect of the language learning processes?

In recent years, general skill learning theory, a field in cognitive psychology, has seen significant developments that have been deemed pertinent to the SLA field by several renowned specialists. (See Ellis 2008, Dörnyei 2009, Dekeyser 2007). One such development is the discovery of a remarkable feature common to all skills: their improvement with practice, understood as repeated performance of the same activity (Carlson 2003). The evidence shows that with this repetition-fostered enhancement performance goes "from slow, deliberate, memory-intensive, error-prone performance to rapid automatic, near-error-free performance" (Johnson, Wang, Zhang 2003); and in between, we find the process of proceduralization, a key notion of skill-learning theory that seems to be crucial in second language acquisition.

More specifically, *proceduralization* is the gradual shift from relying on declarative knowledge of rules and facts to developing more effective procedures of skill performance, or procedural knowledge. This notion, which diverts from the classic ELT view of accuracy and fluency as two separate aims, is based on the theoretical framework of the declarative-procedural knowledge distinction (Anderson 2000) and has been often described in SLA theory as the interface issue (Ellis 2008, Dörnyei 2009).

With regard to grammar learning and practice, we can posit that if the task grammar serves is communication, then repeated communication is what is ultimately needed for grammar learning in terms of procedural knowledge. But how narrow or specific to each grammar item

need this practice be? Does it need to occur for every possible grammatical form of the target language structure? Moreover, can we assume that language skills consist largely of collections of automatic processes as it is the case for other skills? (Johnson, Wang and Zhang 2003)

This investigation seeks to contribute to answering these questions by determining whether the application of a practice strategy known as communicative drilling can benefit the learning of grammar features of the English language, specifically through aiding the process of proceduralization as described by skill learning theory.

Originally described by proponents of the audiolingual method, a communicative drill is defined as "one in which the type of response is controlled but the student provides his or her own content or information." (Richards, Platt, and Platt, 1992). By this definition, communicative drilling is consistent with the theoretical framework that supports this study, and we believe that its research is pertinent to further the discussion on the role of practice in the learning of grammar in the EFL classroom.

This work is presented in four chapters. In the first part, we formulate the problem that originated this investigation, along with the hypotheses and objectives of the study. We also describe the antecedents of the investigation, that is, prior research work on the matter, as well as the justification and limitations of the study. The second chapter comprises a discussion on the main theoretical considerations that underpin this study, namely, skill learning theory and the nature of practice and repetition in SLA, Anderson's Adaptive Control of Thought (ACT-R) Model and the distinctions between declarative and procedural knowledge, among other crucial notions. The third chapter describes the methodology of the study, i.e. type and design of the investigation, population, study sample, variables, and instruments for data collection. The final chapter is devoted to the discussion of the results of the study. The thesis concludes providing conclusions and recommendations.

Chapter 1

Investigation outline

1. Formulation of the problem

In recent years, it has been established that practice plays a paramount role in the proceduralization and automatization of skills, and that this appears to be the case for language skills as well (Dekeyser 2007). In SLA, there are strong reasons to believe that said practice should be communicative in nature since the task that language serves is communication. Moreover, for the learning of morphosyntactic features, practice should probably be narrow enough to entail a measure of repetition of any given targeted structure. But is there a way to foster communication and controlled grammar practice at the same time? What are some specific strategies that can be implemented in the EFL classroom to foster this type of practice? Is the old and forgotten communicative drill a strategy that can be proven effective for this purpose? Hence, the following research questions were formulated for this investigation:

1.1 General research question. Does communicative drilling contribute to the learning of grammar features of English, specifically, through aiding the process of proceduralization as described by skill learning theory?

1.2 Specific research questions. Does communicative drilling contribute to the learning of morphological features of English, specifically, through aiding the process of proceduralization as described by skill learning theory? Does communicative drilling contribute to the learning of syntactic features of English, specifically, through aiding the process of proceduralization as described by skill learning theory?

2. Hypotheses

2.1. General hypothesis. Communicative drilling contributes to the learning of grammar features of English, specifically, through aiding the process of proceduralization as described by skill learning theory.

2.2. Specific hypothesis

- ***Specific hypothesis 1.*** Communicative drilling contributes to the learning of morphological features of English, specifically, through aiding the process of proceduralization as described by skill learning theory.

- *Specific hypothesis 2.* Communicative drilling contributes to the proceduralization of syntactic features of English, specifically, through aiding the process of proceduralization as described by skill learning theory.

3. Delimitation of the objectives

3.1. General objective. To determine if there is an increased level of proceduralization of morphosyntactic features of English after the application of the technique known as communicative drilling, measured by the scored obtained in a timed-item test.

3.2. Specific objectives

- To verify the validity and reliability of the used instrumentation and adjust it if necessary.
- To determine if there is an increased level of proceduralization of morphological features of English after the application of the technique known as communicative drilling, measured by the error rate in a timed-item test.
- To determine if there is an increased level of proceduralization of syntactic features of English after the application of the technique known as communicative drilling measured by the error rate in a timed-item test.
- To determine if the effectiveness of the technique relates to the level of performance of students (low-performance students vs. high-performance students).

4. Justification of the investigation

With the rise of CLT and the functional-notional syllabus in the 1970s, traditional strategies for explicit grammar instruction were largely abandoned. Later, though, practitioners and field experts began to realize that students were failing to develop enough linguistic accuracy to facilitate adequate language development. In consequence, the field saw a progressive "weakening" of the so-called "strong" communicative approach and, soon enough, explicit grammar instruction was back in the classroom. What this meant for many teachers, however, was a return to the traditional models of grammar teaching, such as, Presentation Practice Production (PPP) or resembling paradigms, in spite of their unsatisfactory nature.

Despite being widely criticized, PPP remains quite popular in today's EFL classroom. Any teacher who uses it can attest to the fact that even when students are successful at the practice stage, they usually cannot make the transition to the production stage. But why is this? And why are teachers so reluctant to let go of the PPP model despite its obvious limitations? Besides

the reasons pointed out by Skehan (1996:17), this is also because teachers are often unable to determine where the model fails.

In our view, there are reasons to believe that the PPP model, being originally rooted in a structural and behavioristic view of language learning, fails to provide students with effective communicative practice – aside from the fact that the presentation of the language tends to be more form-focused than meaning-focused. In our view, for practice to serve the purpose of the model, which is language production, it must be communicative in nature, and this is where the problem lies. Many instructors may believe that because they provide students with practice exercises where language is used in a communicative context, they are engaging students in effective communicative practice; yet, from our perspective, this type of practice is only useful to help students better grasp the meaning of a language category and its forms, in terms of declarative knowledge what has been called "meaningful practice" (Paulston 1976) , but does not entail real *communication*[1] since there is no unknown information or message to be exchanged. A fill-in-the gap exercise within the context of a conversation, for example, is not truly communicative practice but just meaningful one. While this type of practice has a valid purpose and should not be disregarded, truly communicative practice must foster real communication, i.e. the exchange of information otherwise unknown, between two or more persons. It is posited in this work that this is the type of practice that better serves the purpose of language proceduralization and, ultimately, free language production.

The space for actual communication, however, has been traditionally reserved for what the PPP model has called the "production" stage, a less controlled and freer context, such as a role play or a written composition. The main issue being that by doing this teachers are expecting students to go from a mere understanding of the language items to an almost fully automated use in free communication, with no controlled *communicative* practice in the middle.

This method has proven to be ineffective and, therefore, a new model for grammar instruction is in order, one that involves meaning-and-form-focused presentation of language as well as controlled communication, preceding the stage of free production and interaction.

This investigation intends to provide evidence on the effects, if any, of one strategy for communicative practice, and, in some way, contribute to the overall discussion of the role of practice in EFL teaching and learning.

[1] a process by which information is exchanged between individuals through a common system of symbols, signs, or behavior (Merriam-Webster Dictionary, n.d.)

5. Limitations of the investigation

Working with convenience samples, as it is the case of this study, always poses some constraints. For this investigation, only A1 level students were targeted since the number of classes available for the study sample was limited. Therefore, the study sample is only representative of students at this level, and the results of this investigation can only be generalized to A1-level students within this particular learning context. When referring to students at other proficiency levels (A2-C2 levels), these results should be treated with caution, since students at these levels were not represented in the study sample.

Another methodological limitation relates to the instrumentation of the present study. Given that the context in which the investigation was conducted was an actual course with a pre-stablished number of hours within an EFL program, the ratio of time used for assessment versus the time devoted to instruction could not differ greatly from that of normal classes in the Program. That would have implied providing fewer hours of instruction to the students participating in the study when compared to the service provided to students not participating in the study. In consequence, the implementation of an oral elicitation device was not feasible in this study. Although the conditions of an oral exchange were mimicked by timing the items of the written test, ideally, the instruments would also include a recorded oral production test in order to contrast the findings in the written instrument. Let us point out, nonetheless, that studies do show a significant degree of transferring of the process of proceduralization between both productive skills. (Dekeyser, 1997)

6. Antecedents of the investigation

6.1 DeKeyser, R. (1997). Beyond explicit rule learning: Automatizing second language morphosyntax. Studies in Second Language Acquisition, 19, 2, 195-221. This investigation addressed the issue of how explicit knowledge of morphosyntactic rules is automatized under different conditions of practice. For this study, a miniature computerized linguistic system was devised. The 61 participants were explicitly taught four grammatical rules and 32 vocabulary items. Then they were tested, given feedback, and tested again to assure complete vocabulary and grammar knowledge.

Learners were assigned to one of three practice conditions (A, B, and C). Learners in condition A practiced comprehension of two targeted rules and production of the other two targeted rules. Condition B was the opposite of condition A while learners under condition C practiced all four targeted rules in both comprehension and production. All participants received

the same amount of practice and exposure to each rule and the same amount of practice for both skills.

Exposure lasted 22 sessions of one hour, including learning and practice, over a period of 11 weeks. In the first six sessions, participants received a formal presentation of the grammar, then practiced in the remaining 16, based on the condition assignment. Performance was measured by both comprehension and production assessment tasks, including single-task and dual-task conditions.

DeKeyser reported the following results: practice led to automatization measured as reaction times and error rates. Automatization was evident both in comprehension and production and under single-and dual-task conditions. Practice also appeared to be skill-specific:

According to DeKeyser these results help support the notion that declarative knowledge changes into procedural knowledge during initial practice. Subsequently, proceduralized knowledge is slowly automatized, a process that requires little to no change in task components; instead, only a quantitative change within the same components is observed.

6.2 Bygate, M. (2001). Effects of task repetition on the structure and control of oral language. In M. Bygate, P. Skehan, & M. Swain (Eds.), Researching pedagogic tasks: Second Language learning, teaching and testing (pp. 23-48). London: Longman. Another factor that influences the impact of practice in L2 production is task-repetition. Bygate investigated whether the repeated use of the same or similar communicative tasks fostered development of an L2.

Using three groups of overseas students in the United Kingdom, Bygate researched the effects of task-type practice, task repetition and task type, on L2 development. One group participated in narrative tasks, one in interview tasks, and one received no treatment. The investigation focused on learner performance on one repeated and one new version of each of the task types in terms of fluency, accuracy and complexity. Fluency was measured by the number of unfilled pauses per t-unit, while accuracy was measured by the incidence of errors per t-unit and complexity by the number of words per t-unit.

Results indicate that the effect of task repetition was considerable, especially on fluency and complexity. Bygate's findings imply that repetition of a task is effective to help learners perform a task in more fluent and complex manners because it can change the learners' allocation of attention. Bygate assumes that "part of the work of conceptualization, formulation and articulation carried out on the first occasion is kept in the learner's memory store and can

be reused on the second occasion, therefore freeing up some of the learners' capacity to other aspects of the task." (2001, p. 29).

6.3 Arevart, S., & Nation, P. (1991). Fluency improvement in a second language. RELC Journal, 22,1,84-94. With regard to the automatization of cognitive processes and its relationship with the availability of cognitive (attentional) resources, Avert and Nation report the positive effects of a technique that helps learners automatize existing linguistic knowledge by telling the same story three times to different listeners, decreasing the time for each retelling (4 / 3 / 2 minutes).

Avert and Nation investigated the effects of this technique with intermediate to low-advanced learners of English in New Zealand. The automatization of the existing linguistic knowledge, or fluency, was measured by calculating the speaking speed in words per minute and the frequency of hesitations per 100 words.

Results indicate that the participants significantly improved their fluency over the three deliveries of their stories. This implies that activities that provide the opportunity for repetition with a focus on the message can lead to "gradual automatization by making the learner go through the same production routines under conditions of increased time pressure and increased integration with other cognitive demands" (DeKeyser, 2001, p. 150).

Chapter 2
Theorical framework

1. Skill Learning Theory

Carlson (2003) defines a skill as "an acquired ability that has improved as a consequence of practice." He adds that skills can be cognitive as well as physical or motor in nature. From this, it is noticed that the term "skill" is quite broad and fuzzy, which makes it difficult to determine the extent to which the notions of skill learning theory can be generalized to language learning (Dörnyei 2009).

But how did such a broad concept become so central to a very influential theoretical approach? The answer lies within its very definition: a skill is an ability that has improved with practice, and this improvement goes from initial representation of knowledge to effortless highly skilled behavior. In consequence, that a wide range of skills develop in a remarkably similar pattern constitutes the basic claim of skill acquisition theory (DeKeyser 2007c).

As mentioned, this uniform learning pattern entails a practice-related progression towards an automatic process, and it is this latter aspect that Johnson, Wang and Zhang (2003:30) highlight in their description: "Skills are thought to consist largely of automatic processes. Automatic processing occurs without attention. It is often fast, effortless, stereotypic, autonomous, and unavailable to conscious awareness." This is a notion of particular interest for this investigation and will be elaborated further down in our theoretical discussion.

2. Declarative and procedural knowledge

It has been established that virtually all human skills are acquired in a characteristic fashion, and this development process is thought to occur through stages that relate to the type of knowledge that is formed. Fitts and Posner called them *cognitive, associative,* and *autonomous,* whereas Anderson used the terms *declarative, procedural* and *automatic* in his model. These two sets of terms, however, are considered equivalent.

The main thing to remember is that skill learning progression happens trough a gradual change from labored, conscious processes, which relate to declarative knowledge, to nearly effortless, unconscious processes, which relate to procedural knowledge.

2.1. Anderson's Adaptive Control of Thought (ACT) Model. The basic notion that underlies Anderson's model is the distinction between declarative and procedural knowledge. Anderson (1976) described their essential differences in the form of three assumptions:

1. Declarative knowledge seems to be possessed in an all-or-none manner, whereas procedural knowledge seems to be something that can be partially possessed.
2. One acquires declarative knowledge suddenly, by being told, whereas one acquires procedural knowledge gradually, by performing the skill.
3. One can communicate one's declarative knowledge verbally, but not one's procedural knowledge.

(1976:117)

Perhaps a simple way to look at this distinction is to think of declarative knowledge as information that has been stored, while procedural knowledge is the type of knowledge involved in the actual performance of a skill.

As stated above, in Anderson's model, the transition of declarative to procedural knowledge happens in three stages:

2.1.1. *Declarative stage.* It is the initial stage of skill learning which typically requires some kind of explicit direction and guidelines according to most experts. At this stage the learner develops a coarse mental approximation of the skill, which is why this stage is also known as the cognitive stage.

The methodological implication of this is that the most effective method to introduce a learner to a new skill is to prepare them through verbal instruction or explanation, as well as through examples and demonstrations, something that is commonly known in ELT methodology as *modelling.*

Once the initial encoding of the skill has occurred, the newly-formed declarative knowledge can begin to be interpreted and rehearsed during the performance of the first trials. Such first performances "present a massive load to the working memory in terms of remembering the sequence of things to do and what to pay attention to" (Dörnyei 2009). Thus, the initial performances are error prone and arduous. Luckily, this does not usually last for more than a few trials.

2.1.2. *Procedural stage.* Because it is difficult to use declarative knowledge, the learner increasingly resorts to the use of more efficient procedures. Thus, at this second stage, there is a gradual shift from relying on declarative knowledge of rules and facts to developing more effective procedures of skill performance. This gradual process is what has been called 'proceduralization' (Anderson 2000).

Anderson suggests in his ACT-R theory that the process of proceduralization involves the development of certain condition-action rules, or production sets, that the learner will use more

and more instead of the previously acquired declarative knowledge. An example of this within the SLA context is the observation that if we want to generate a past tense verb, we need to add an -ed to the verb. A learner may have learned the words ‘played’ and ‘worked’ as two separate items, but he will soon realize that they can be represented more efficiently as one production set. (Ellis 2008). This may then be generalized as the procedure to generate all past tense forms, including incorrect ones such as “drinked”. As Anderson (1983) noted, errors are still quite likely during the associative stage.

2.1.3. ***Automatic stage***. This is the stage in which errors are reduced significantly by means of increasingly automatized procedures. At the autonomous stage, the learner’s mind continues to generalize productions, but it also learns to discriminate better the situations when specific productions should be used. For example, the mind can now alter the production set of the -ed ending for past form verbs so that it applies exclusively to a group of verbs.

As Johnson, Wang and Zhang (2003) point out, the level of automaticity increases while cognitive involvement decreases, even to the degree of losing one’s ability to verbally describe how one is capable to do a task. Reaching this stage, however, requires a considerable amount of practice.

Dörney (2009) highlights two important considerations regarding the expertise produced at this stage: 1. that automated skills require fewer attentional resources, which means that, once the skill is established, tasks are performed ‘on auto-pilot’, and 2. That the increasingly fine-tuned production rules become increasingly skill-specific. The latter characteristic is of special interest for methodologists and practitioners since it probably means that we cannot talk about ‘transferrable skills’ in language learning, a common concept in contemporary education. Skill learning theory actually predicts that the transferability of skills from task to task is quite narrow. DeKeyser (1997), for example, documented that skills in L2 comprehension do not transfer well to L2 production.

2.2. McLaughlin’s Information-Processing Model. For McLaughlin, the representation of knowledge is closely related to its processing. He draws on research on information processing in cognitive psychology and proposes that there is a limit to the amount of information that learners are able to process which is caused by both the nature of the task and their own information-processing capacity. In other words, a learner’s mind is not capable of attending to all of the information in the input or in their own memory, at the same time.

A consequence of this limitation is that learners routinize skills to maximize their processing ability. At the beginning a skill is usually available only through controlled processing, which

entails attentional control of the subject and the activation of a single sequence of nodes at a time. (McLauglin, Rossman, and McLeod, 1983). Automatic processing, in contrast, allows the activation of certain nodes every time certain inputs are present, reducing the burden on the subject's information processing capacity.

2.3. Ullman's Declarative-procedural Knowledge

At his Brain and Language Lab at Georgetown University, Michael Ullman has been using neuroimaging to investigate the neurocognition of both first and second language. Ullman's research, which is based on Anderson's model, has led him to propose a theory that applies the procedural/declarative knowledge distinction to L2 knowledge. He presents a large amount of evidence that supports the existence of a dual language system.

According to this evidence, the brain system underlying declarative memory also underlies the mental lexicon, while a second independent brain system subserves both procedural memory and grammatical knowledge. Hence, the declarative-procedural (DP) model supports the existence of a dichotomy corresponding to the dual nature of arbitrary, idiosyncratic word-specific information vs rule-specific linguistic knowledge. Whereas idiosyncratic information must be memorized and stored in a sort of mental lexicon, the rules that underlie the sequence and relationship of lexical items in a sentence are stored as implicit algorithms (Ullman, 2001, 2004, 2005).

So far, the implications of this for L2 acquisition are that novice learners tend to rely more on their declarative learning systems, since memorization is more effective in the short-term. However, evidence suggests that sustained experience with the L2 leads to increased procedural learning, balancing out the co-operation of the two systems. In consequence, Ullman's proposal is consistent with the declarative-to-procedural shift suggested by several skill acquisition and automatization theories.

3. Proceduralization/automatization in SLA

Originally proposed by exponents of behaviorism and the discredited audiolingual method, the notion of L2 automatization has seen a revival in the last decade as several studies have addressed it from a cognitive and psycholinguistic perspective. (See DeKeyser 2001, Ellis 2008, Segalowitz and Hulstijn 2005).

However, in the field of applied linguistics, automatization was greatly discussed under the disguise of "fluency", a concept that refers to those aspects of language ability closely connected to 'fluidity of performance' (Segalowitz 2007:181). Although the literature on the matter has been rich, the concept of fluency had not been linked to automatization until recently.

By now, the significance of skill learning theory and automatization has been well documented in SLA, but few actual empirical studies have been developed in the area. The available findings suggest that L2 automatization follows the same patterns documented in cognitive psychology when it comes to the learning of grammar rules. This entails that the improvement of the performance rate can be characterized by the power law of practice.

All of this has obvious methodological implications, especially, regarding grammar teaching approaches and methods. DeKeyser, for instance, proposes that one main problem in language teaching is the unknowing neglect of the stages in the skill acquisition sequence because of insufficient understanding of theory.

Another theoretical point that may have undesired classroom results is the narrow domain-specificity of cognitive skill training (Dörney, 2009). The more fine-tuned the production rules become, the more skill-specific they are. This means that highly automatized skills are not very transferrable, which entails, in practice, that for most structures and most learners, explicitly learnt rules are not fully automatic (DeKeyser and Juffs 2005).

This study aims at contributing to the methodological discussion on proceduralization by testing the effectiveness of a strategy that factors in these theoretical considerations; namely, the stages of skill acquisition and its narrow domain-specificity.

4. Practice and repetition in SLA

As pointed out above, practice is a crucial factor in skill learning theory. This should be pleasing to read for many foreign language teachers who probably deem this a key aspect their teaching methodology. Yet, for a long time, the field of applied linguistics seemed to have no theoretical justification for it (Larsen-Freeman 2003). This scenario is changing due to recent cognitive theories of automatization and proceduralization of language that place significant importance to the role of practice in the learning process, something that probably rings true already to most ELT practitioners.

One observation that has brought along a great deal of research into skill learning is the one known as the “power law of practice”, the recognition that the developmental pattern of all skills shows a remarkable regularity that can be described by a mathematical power function. The diagram in Figure 1 shows a typical learning curve: the practice effects are largest at the initial stages and then gradually decrease, a type of improvement that has been observed with a great variety of skills (Ritter and Schooler 2001).

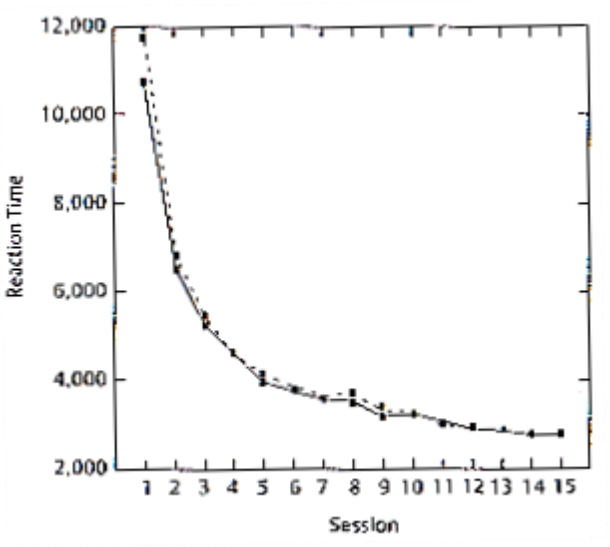

Figure 1. Typical power law curve of reaction time as a function of the number of trials
Source: DeKeyser 1997:205

Dekeyser (2007) explains that the outstanding consistency of the improvement curve across a wide range of tasks suggests that the power law of practice is the reflection of some fundamental underlying mechanisms of skill learning.

One crucial question that arises when it comes to applying these principles to language learning is what kind of practice the students of an EFL course should be presented with. In this respect, there is accumulating evidence that supports that learners need to focus both on meaning and on form when practicing the use of L2 grammatical features (Skehan 1998). Several studies have led Ellis (2002) to the conclusion that "without any focus on form…formal accuracy is unlikely to result" (p.175). On the other hand, a considerable amount of research indicates that form-focused instruction works best when the L2 learner has a change to use the form in meaningful interaction. (See Muranoi 2000, for example.)

In addition, research evidence indicates that second language curricula should be derived from needs analysis. If curricula are designed taking needs-based language use situations as the starting point, they will foster the idea in learners that what they learn in the classroom will be useful in the real world (Dekeyser, 2007).

5. Form-meaning mappings

By deriving course contents from needs analysis, relevant form-function mappings will be established: L2 students will be presented with meaningful, communicative tasks that require the use of particular linguistic forms (Loschky & Bley-Vroman, 1993). In that sense, we can assert that form follows function and that linguistic forms should be focused upon and practice

not as a goal in their own right but because they are naturally necessitated for functional language use.

Some theoretical models are particularly relevant for the purpose of establishing appropriate form-meaning mappings. Skehan (1998), for example, emphasizes that:

> Learners need to be led to engage in cycles of analysis and synthesis. In other words, if meaning primacy and communicational pressure make for exemplar-based learning, it is important that there should be continual pressure on learners to analyze the linguistic units they are using, so that they can access this same material as a rule-base system. Equally, it is important that when the material does become available as such a system, learners should engage in the complementary process of synthesizing such language so that it will then become available in exemplar, memory-based form as well (p.91)

This strongly suggests that L2 classrooms that provide learners with a good mix of focus on meaning and focus on form constitute a very powerful environment for the learning of a foreign language.

There are reasons to believe that proceduralization contributes to the reinforcement of underlying form-meaning mappings that have been pre-established in the form of declarative knowledge. Progressively, though, this form-function knowledge develops into procedural knowledge, eventually becoming fully automated.

6. Error Analysis

As described in Chapter 3, the methodology of this study partially involves processes of error analysis in the investigation of some of its specific hypotheses.

Originally used in the 1960s and 1970s with the intention of providing comprehensive accounts of learners' idiosyncratic forms, Error Analysis is now more likely to serve as a means of investigating specific research questions.

Although much has been written on EA, we consider the contribution made by Lennon (1991) to be particularly useful for our purposes. Lennon pointed out that most 'erroneous forms are, in fact, in themselves not erroneous at all, but become erroneous in the context of the larger linguistic unit in which they occur' (1991:189). Based on this assertion, he proposed to dimensions of error: domain and extent. Domain refers to the context (word, phrase, clause, or discourse) and needs to be considered for determining if an error has been made. Extent is referred to the size of the unit (morpheme, word, phrase, clause, sentence) that requires deleting, replacing, reordering or supplying. This concepts of domain and extent can be used to distinguish different types of grammatical errors.

Error identification, a narrower application of EA, has been used to obtain a measure of accuracy in studies that have researched the effects of tasks on learner production. Foster and Skehan (1996) calculated the percentage of error-free clauses as a general measure of accuracy in their study of tasks. Mehnert (1998) calculated the number of error per 100 words. Crookes (1989) computed the percentage of target-like use of plurals. Similarly, this study entails the identification of errors to provide measures of accuracy within a limited response time, which has been established as the operational variable of proceduralization.

Chapter 3

Methodology of the investigation

1. Investigation type

The present study falls into the broad umbrella-category of action research – also known as classroom research, given that it used the classroom as its primary research site.

Also, this study has an empiric-analytic orientation and can be primarily characterized as quantitative in nature, since it involved data collection procedures that resulted in numerical data which was then analyzed primarily by statistical methods. Nonetheless, the process of data systematization partially involved processes of qualitative assessment.

2. Design of the investigation

This study follows an experimental design involving a control group and an experimental group. While the experimental group received a special treatment, another similar group, received standard instruction. Then, both groups were tested using the same instrument. In other words, by controlling the target variable while keeping other variables constant, it was intended to measure the independent variable's effect on the dependent one. In consequence, the graphic design of the study is as follows:

EG --- X --- 01

EC --- 01

EG: Experimental group

EC: Control group

X: Communicative drilling technique

01: Post-Test

In both groups, participants studied three (3) hours per day, five (5) times per week, adding up to a total of 72 instructional hours. All imparted contents and methodology were the same for both groups except for the strategy being investigated, which was only implemented in the experimental group. (for a detailed description of the course contents, please see Appendix 1).

2.1. Procedures**.** The procedures for this investigation were conducted according to the following timetable:

Activity	Period
Preparation of lessons and teaching materials	March – April 2017
Preparation of evaluation instruments	April – May 2017
Course implementation – Control group	June 2017
Course implementation – Experimental group	September 2017
Data systematization	October 2017
Data analysis and evaluation of results	November 2017

3. Nature of the Language Program

This study was implemented within the general EFL Program of Instituto Cultural Peruano Norteamericano – ICPNA, located in the city of Lima, Peru.

ICPNA's EFL program comprises three levels: Basic, Intermediate and Advanced, each of which is made up of twelve (12) courses or modules. Each of these modules has a duration of 36 hours and can be delivered in a variety of frequencies: daily, inter-daily, accelerated, or weekly. Students with previous knowledge are requested to take a placement test and are classified in the appropriate course based on their results. Students with no previous knowledge are registered in the first course of the program. (Basic 01)

The core contents of each course follow a multi-syllabus that is manly founded on the interplay of three organizing principles: functions, language and topics. In each unit, the selection of language items is determined by the communicative needs that relate to a main topic. In terms of grading and sequencing, the criteria are linguistic complexity frequency and utility. All units of the course book are multi-skill incorporating sections that focus on the development of each of the four communicative skills, as well as grammar, vocabulary and pronunciation.

The methodological approach used in the program is mostly based on CLT notions of the "weak" kind[2], involving both communicative tasks and explicit language instruction. Instruction is carried out solely in the L2 from the beginning levels.

One of the pedagogical foundations of the program methodology is student-centeredness. The approach places students at the center of the learning process with teachers acting as facilitators for creating an active classroom context, applying an interactive and collaborative approach, and monitoring students´ learning for the effective use of classroom time. Teachers

[2] A version of CLT that allows for a focus on structure while stressing the importance of providing learners with opportunities to use their English for communicative purposes. (Howatt 1984)

use a variety of instructional strategies for building rapport with students and maximizing student interaction and responsiveness promoting learning opportunities at individual, pair, small group and whole class level allowing room for individual growth and peer support.

Also, ICPNA's EFL methodology incorporates the use of scaffolded instruction, which takes into consideration the L2 acquisition stages that learners naturally go through. To this end, teachers model tasks and activities in small achievable steps to help students learn concepts and strategies more effectively. Teachers aim at maximizing students´ responsiveness (student class participation at the individual, pair and small and large group levels; Student-Talk-Time-STT; and Student-to-Student Interactions-STSI).

Teachers use Error Correction strategies for providing constructive feedback to students to ease the learning process. Error correction strategies are used by the teacher to create a positive classroom context conducive to learning and building rapport with students, based on 4 criteria: (1) the strategy used depends on the lesson stage, (2) the strategy used depends on the course level, (3) the teacher's feedback considers students´ affective factors, and (4) teacher provides feedback at individual and group levels.

The program places a strong emphasis on the use of technology, integrating a series of online digital tools that host interactive practice and reinforcement activities that students can work on outside of class. The in-class instruction relies heavily on the use of technology as well, incorporating multi-media resources which are regularly presented to students during class.

4. Population

The population of this investigation are the students at the beginning stage (CEFR A1 Level) of the EFL program at Instituto Cultural Peruano Norteamericano (ICPNA), studying in the accelerated or intensive frequency. Among the general characteristics of the population, the following were identified:

- Little to no background knowledge of English
- Young adults with and average age of 24 (*SD = 7.55*)
- Completed secondary education
- Spanish as their first language

4.1. Study Sample. Given the nature of the study, it was necessary to work with convenience samples. Three classes of students taking the first two courses of ICPNA's EFL program in the accelerated frequency were randomly chosen to conform the study sample. Prior to the beginning of the instruction, one of such classes, comprising twenty-two (22) students, was

randomly designated as the control group, while the other two classes, adding up to a total of twenty-seven (27) students, were selected to conform the experimental group. Not all of the students, however, could be considered in the study sample as some dropped out of the course and others were not present at the time of the post-test. Hence, the final number of participants in the control group was twenty (20) students, whereas the experimental group comprised twenty-four (24) participants.

4.1.1. ***Age and Gender.*** As for the demographic characteristics of each group, the ages in the control group ranged from 18 to 43, with a mean of 27.05, (*SD* = 6.52), while in the experimental group, the ages ranged from 17 to 41, with a mean of 25.75, (*SD* = 6.20).

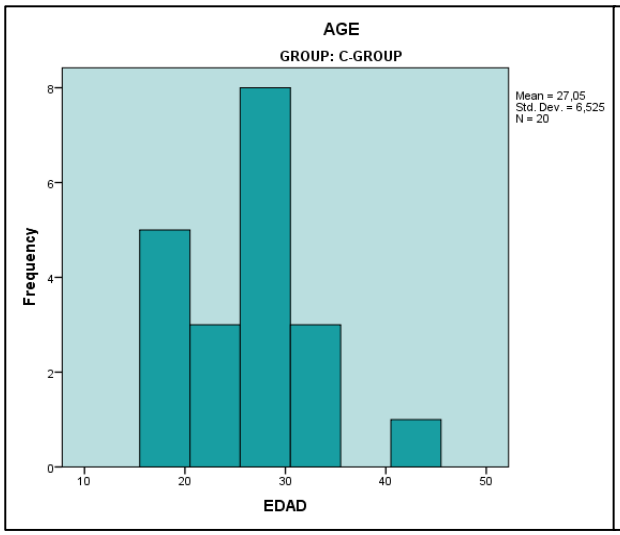

Figure 2. Histograms of ages in control group
Source: Own elaboration

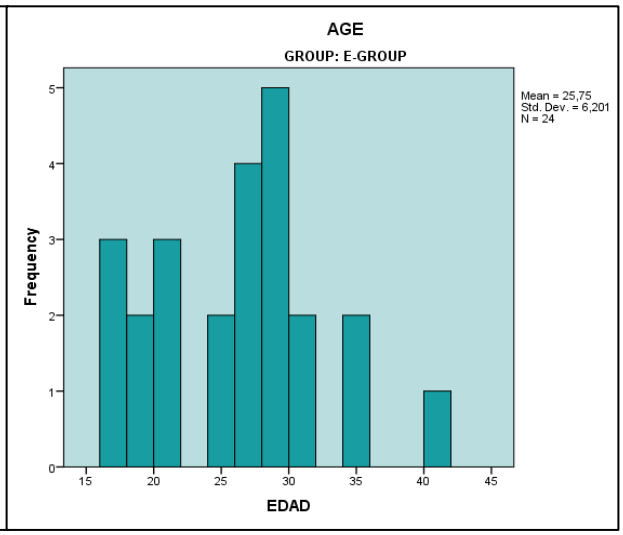

Figure 3. Histograms of ages in exp. group
Source: Own elaboration

Regarding gender ratios, the control group was composed of 55% females and 45% males, while the experimental group was made up of 50% females and 50% males, as it is shown in figures 4 and 5.

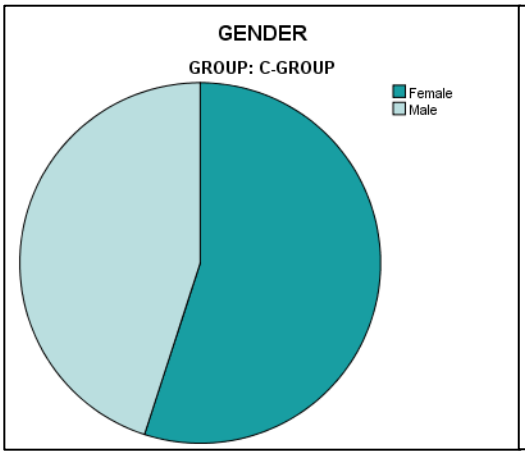

Figure 4. Gender in control group
Source: Own elaboration.

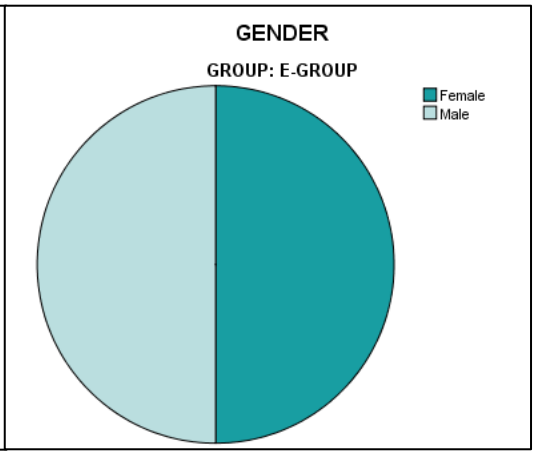

Figure 5. Gender in experimental group
Source: Own elaboration.

4.1.2. *Educational background and L2 Level*. The students who were chosen for the study fall into the following category of the Common European Framework of Reference for Languages (CEFR):

CEFR Band:	Band A - Basic User
CEFR Level:	A1 Breakthrough
Classroom Hours:	Less than 80

In the specific teaching context of the study the participants in both groups belonged to the Basic 01 - Basic 02 Accelerated Course.

5. Variables

5.1 Independent variable: communicative drilling. The independent variable in this study is the application of the technique known as *communicative drilling*.

Drilling - or drills - is a technique commonly used in language teaching for practicing sentence patterns in a language. A distinction between the different types of drills is made according to the degree of control the drill makes over the response produced by the student. A *communicative drill* is "one in which the type of response is controlled but the student provides his or her own content or information." (Richards, Platt, and Platt, 1992)

In order to apply this technique, a set of ten activities was prepared and implemented in the grammar lessons delivered to the classes composing the experimental group (See Appendix 2). Each of these pair-work activities complied with two general principles: 1. They fostered communication and 2. They involved the repetitive use of a specific grammar structure. In other words, there was always an information gap that needed to be filled by one of the interlocutors

and this communication process, which required restricted output involving the use of a specific grammatical structure, was conducted repeatedly by both speakers in each of the activities implemented.

In some cases, students had to provide their own content using background information or their own opinion in response to a visual stimulus. In another case, they had to ask and answer questions to obtain certain unknown information (jigsaw puzzle). In most cases, however, the information gap was artificially created by having one of the students in the pair face the back of the classroom and try to guess an image being shown to their partners facing the screen in the front. In some cases, they had to rely on information provided to them by their partners while in others they had to ask questions and consider their partner's' response in order to make a guess. For this purpose, the students had to use the target language repeatedly. They were assisted with prompts including the target grammatical structures as wells as cards containing a set of labelled images that they had to guess from.

Each of these activities was conducted for a period of twenty (20) to twenty-five (25) minutes. Their implementation followed the use of conventional instructional strategies for the presentation of the target language. That is, the target structure was presented in context with an emphasis on its meaning. After that, the form of the structure was clarified, and students were asked to work on controlled-practice exercises. Later, the activities for proceduralization described above were implemented in the classes comprised in the experimental group, whereas in the control group, the students worked on more of the conventional exercises presented in the course materials (meaningful practice). See Appendix 3 for sample lesson plans.

5.2. Dependent variable: proceduralization of morphosyntactic features of English. The dependent variable in this study was *proceduralization* understood as the process by which a learner gains procedural knowledge. Procedural knowledge is defined as the knowledge exercised in the performance of a task (Stadler 1989), and in this study, the task was the use of morphosyntactic features of the English language.

The level of procedural knowledge attained by the participants was measured as lack of errors under a condition of limited response time, in simple and controlled tasks involving the use of the morphosyntactic features selected for this investigation.

The specific morphosyntactic features chosen for the study are shown in Table 1. While the chosen grammar categories are the ones usually found in the beginning stages of most EFL programs, the specific grammar items or forms selected are the ones suspected to be troublesome for the beginning students of this specific EFL program. In our view, this might

be associated with a lack of communicative practice for these specific grammar items in the course materials, which could be explained by two factors. On one hand, while the *meaningful* practice found in the textbook does cover all the grammatical items/forms pertaining the target structures, such practice does not foster real communication. On the other hand, most of the activities that are, indeed, communicative tend to focus on the first and second person- a possible by-product of the *personalization*[3] concept.

Table 1. Target grammatical categories and items

Target grammatical category	Target grammatical items
The Present Simple -affirmative sentences (Verb be)	3rd person singular of be / 3rd person plural of be / sentence syntax
Possessive adjectives / Present Simple of Be	3rd sing. poss. adj. (male/female) / 3rd sing. of be / 3rd plural poss. adj. / 3rd plural of be / sentence syntax
Descriptive adjectives and nouns / Pres. Simple of Be	Adj. + noun / 3rd sing. of be / indef. article 'a' / sentence syntax
Descriptive adjectives and demonstratives	3rd sing. of be / indef. article 'a' / sentence syntax
The Present Simple -yes/no questions (Verb be)	3rd singular of be / 3rd plural of be / question syntax
The Present Simple - Information questions (Verb be)	3rd sing. pronoun (male/female) / 3rd singular of be / 3rd plural. pronoun / 3rd plural of be / question syntax
The Present Continuous – yes/no questions	3rd sing. of be / 3rd sing. pron. (male/female) / 3rd plural of be / 3rd plural. pronoun / present participle / question syntax
The Present Simple – yes/no questions	Aux. verb / 3rd sing. pronoun (male/female) /Aux. verb / 3rd sing. plural / 3rd sing. verb / question syntax
The Present Continuous – affirmative sentences	3rd sing. pron. (male/female) / 3rd sing. of be / 3rd plural. pronoun / 3rd plural of be / present participle / sentence syntax
The Present Continuous – short answers	3rd sing. pronoun (male/female) / 3rd sing. of be / 3rd plural. pronoun / 3rd plural. of be / short answer syntax
The Present Simple – short answers	3rd sing. pronoun (male/female) / 3rd sing. of aux verb / 3rd plural pronoun male / 3rd plural of aux. verb / short answer syntax
The Present Simple – complete answers	3rd sing. pronoun (male/female) / 3rd sing. of verb / 3rd plural. pronoun / 3rd plural of be / sentence syntax

Source: Own elaboration.

6. Techniques and instruments for gathering data

6.1. Post-test. The degree of proceduralization of morphosyntactic features was measured at the end of the course by means of an elicitation device specifically designed for this purpose:

[3] The notion that learners should share personal information, experiences, opinions in order to make the learning more meaningful.

an interactive test comprising 32 timed items that required discrete language production (See Appendix 4).

Each item of the test was carefully designed to trigger an intuitive use of the target grammatical category being tested. Given the construct that was intended to be measured, students were given a limited amount of time to write each response (between 12 and 15 seconds). Students were instructed of this condition before the test and they were asked to write down the "first response they could think of". Instructions were read in the students' native language in order to assure that they were well understood. To minimize stress-related issues, the participants were informed that the test was not a graded evaluation.

For each item of the test, the students were presented with a slide containing a picture and a written prompt or question. The words and images on each slide were carefully selected to assist the student in the production of the target grammar structure.

Multiple task types were used in order to verify stability of performance (Larsen-freeman 1991) Thus, the test comprised three sets of items with differentiated instructions. The items in the first set (10) contained prompts in the form of individual words that had to be used to produce sentences based on the visual stimulus provided. These items were slightly more open and simpler to respond since no measure of reading comprehension was required. The 2nd set was made up of twelve (12) fill-in-the-blank items, and the 3rd set of items included ten (10) question-and-answer tasks (with stimulus). These last two sets of items required a low degree of reading comprehension incorporating this receptive skill to the constructs being measured.

All of the test items involved the use of lexis that students were familiar with; nonetheless, in order to ensure that lack of vocabulary would not be an interfering issue, lexical items were provided in the form of prompts whenever they were needed to produce a response. Moreover, the same lexical items were used repeatedly throughout the test to provide students with some scaffolding that would lower the number of cognitive resources needed to complete the tasks as these became more complex.

6.2. Test scoring and data analysis. Two rubrics were devised for systematizing the data collected with the described instrument: one was developed for the data intended to test the general hypothesis and a second one for the data to be used to test the specific hypotheses. The tests were scored by two different raters, the investigator and another qualified rater. See samples of scored tests in Appendix 5.

The following rubric (Rubric 1) was devised to discriminate correct answers from incorrect ones, in order to obtain a general score with the purpose of testing the general hypothesis.

Correct answers received the value of one (1) while incorrect answers were given the value of zero (0). The total test score was, therefore, equivalent to the total number of correct answers. (See values in Appendix 7)

Table 2. Rubric 1

Score	Criteria
1 - Correct	- The response is logical and consistent with the prompts given. - The response contains the target grammatical items specified in the answer key. (Appendix 6) - The target language is used in a fully grammatical way*. *Mechanics and spelling mistakes are not considered.
0 – Incorrect	- The response is not logical or consistent with the prompts given - The response does not contain the target grammatical items specified in the answer key. (Appendix 6) - The target language is not used in a fully grammatical way*. *Mechanics and spelling mistakes are not considered.

Source: Own elaboration.

To test the specific hypotheses, it was necessary to identify the number and type of mistakes made by each student. Given that empty or invalid responses provide no way of discerning the type of mistake(s) made by the student, such answers were not considered in the error analysis stage. Thus, incorrect answers were separated into valid and invalid based on the criteria described in Rubric 2a.

Table 3. Scoring Rubric 2a

Score	***Criteria***
Valid Answer	– Consistent with the prompts given. – Attempting to use the target grammatical structure.
Invalid Answer:	– Empty or inconsistent with the prompts given – No discernable attempt to use the target grammatical structure.

Source: Own elaboration.

Then the errors found in valid answers that were present in the target grammatical structure tested by the item and that were discernable in their type were categorized as follows:

Table 4. Scoring Rubric 2b

Category	Type	Abbreviation
Sintax	Wrong word order	WO
	Extra word	EW
	Missing word	MW
Morphology	Wrong form	WF

Source: Own elaboration.

In order to calculate the error rate for the morphology category, a number of possible errors was established for each test item, which was equivalent to the number of targeted morphological items in said test item. The values corresponding to the valid answers provided by each participant were then added to obtain the total number of possible errors for a given participant. Finally, this value was contrasted with the actual number of errors made by the participant, resulting in the test's total error rate for the morphology category. (See values in Appendix 8)

For the syntax category, the treatment was slightly different. Given that the number of possible extra words is undetermined, the number of possible errors for each test item was set as one (1) in the syntax category. Consequently, the number of valid answers provided by each participant was equivalent to the total number of possible errors. Accordingly, all of the values obtained for this category as a result of the error analysis process were relativized to one (1) in each test item. Next, the total number of errors was contrasted with the total number of valid answers in order to obtain the test's error rate for the syntax category. (See values in Appendix 9)

6.3. Validity. In order to verify the construct validity of the described instruments we relied on the opinion of experts. Three (3) field specialists reviewed the instrument and scored ten (10) validity indicators in reference to the test items and scoring rubrics; namely, pertinence, coherence, unity, sufficiency, objectivity, consistency, organization, clarity, format and structure. The average validity coefficient obtained was 0.96. In other words, all the judges agreed that the items in each dimension of the test measured what it was intended to measure.

6.4. Reliability. The reliability was measured for each scoring method as follows:

6.4.1 ***Post-test scored with Rubric 1.*** Given that the systematization of the data in correct/incorrect values resulted in a set of dichotomous variables equivalent to the test items, the reliability of the instrument using Rubric 1 was tested by means of the Kuder-Richardson 20 internal consistency analysis. The result of said analysis was a coefficient of 0.94, which signifies that the test is very reliable in the sense that all items measure the same construct. Item and item-total statistics are shown in tables 5 and 4.

Table 5. KR20 Internal Consistency Analysis – Item statistics

	Mean	Std. Deviation	N
I1	,64	,487	44
I2	,86	,347	44
I3	,70	,462	44
I4	,55	,504	44
I5	,59	,497	44
I6	,41	,497	44
I7	,55	,504	44
I8	,52	,505	44
I9	,57	,501	44
I10	,52	,505	44
I11	,59	,497	44
I12	,64	,487	44
I13	,61	,493	44
I14	,45	,504	44
I15	,48	,505	44
I16	,41	,497	44
I17	,23	,424	44
I18	,25	,438	44
I19	,48	,505	44
I20	,48	,505	44
I21	,52	,505	44
I22	,48	,505	44
I23	,61	,493	44
I24	,68	,471	44
I25	,57	,501	44
I26	,55	,504	44
I27	,64	,487	44
I28	,64	,487	44
I29	,48	,505	44
I30	,39	,493	44
I31	,43	,501	44
I32	,50	,506	44

Source: Own elaboration.

Table 6. KR20 Internal Consistency Analysis – Item-total statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I1	16,36	84,097	,489	.	,942
I2	16,14	86,074	,389	.	,943
I3	16,30	83,934	,538	.	,942
I4	16,45	83,649	,520	.	,942
I5	16,41	83,829	,507	.	,942
I6	16,59	83,271	,571	.	,941
I7	16,45	81,928	,715	.	,940
I8	16,48	82,395	,659	.	,941
I9	16,43	83,646	,524	.	,942
I10	16,48	82,441	,654	.	,941
I11	16,41	84,712	,408	.	,943
I12	16,36	84,097	,489	.	,942
I13	16,39	85,452	,330	.	,944
I14	16,55	82,207	,683	.	,940
I15	16,52	82,720	,623	.	,941
I16	16,59	82,294	,682	.	,940
I17	16,77	84,040	,576	.	,941
I18	16,75	85,355	,389	.	,943
I19	16,52	82,627	,633	.	,941
I20	16,52	83,790	,503	.	,942
I21	16,48	82,069	,696	.	,940
I22	16,52	82,720	,623	.	,941
I23	16,39	82,847	,625	.	,941
I24	16,32	83,431	,586	.	,941
I25	16,43	83,646	,524	.	,942
I26	16,45	82,672	,630	.	,941
I27	16,36	83,307	,580	.	,941
I28	16,36	84,283	,468	.	,942
I29	16,52	82,534	,644	.	,941
I30	16,61	82,894	,620	.	,941
I31	16,57	82,530	,650	.	,941
I32	16,50	83,093	,580	.	,941

Source: Own elaboration.

6.4.2. *Post-test scored with Rubric 2.* Since error analysis can be considered a more subjective process, and given that such process resulted in an overall error ratio per participant, the selected method to test the reliability of the scoring process was the inter-rater reliability analysis. The investigator and another qualified rater identified and classified the errors in the tests using Rubric 2. The total error counts provided by each rater for each category were then correlated. As shown in Table 7, the scores for the morphology category were positively

correlated, Pearson's r (44) = .94, p < .0001, as well as those for the syntax category, Pearson's r (44) = .94 , p < .0001 (Table 7).

Table 7. Correlations – Inter-rater Reliability - Morphology

		Error Rate1	Error Rate2
Error rate1	Pearson Correlation	1	,949**
	Sig. (2-tailed)		,000
	N	44	44
Error rate2	Pearson Correlation	,949**	1
	Sig. (2-tailed)	,000	
	N	44	44

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Own elaboration.

Table 8. Correlations – Inter-rater Reliability - Syntax

		Error Rate1	Error Rate2
Error rate1	Pearson Correlation	1	,949**
	Sig. (2-tailed)		,000
	N	44	44
Error rate2	Pearson Correlation	,949**	1
	Sig. (2-tailed)	,000	
	N	44	44

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Own elaboration.

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Chapter 4

Results and discussion

To test whether the results for each group showed a statistically significant difference, we used various methods of statistical analysis according to the type of data collected for each research question. Therefore, the results are presented and discussed separately for each question. The criterion for significance for all tests was $\alpha = 0.05$, which entails a confidence level of 95%. All data was computed in SPSS.

1. General research question

The general research question proposed for this study was "Does communicative drilling contribute to the learning of grammar features of English, specifically, through aiding the process of proceduralization as described by skill learning theory?"

For the purpose of this general question, the operational definition of the dependent variable (communicative drilling) was the scores obtained in the Post-test. The average score of the students in the control group (C-group) was 13.5 (*SD* = 9.16), while for the experimental group (E-group) the average score was 19.75 (*SD* = 8.89). In order to determine if this difference in the scores was statistically significant, we first looked at their distribution. Figures 6 and 7 show the distribution of scores in the control and experimental groups, respectively.

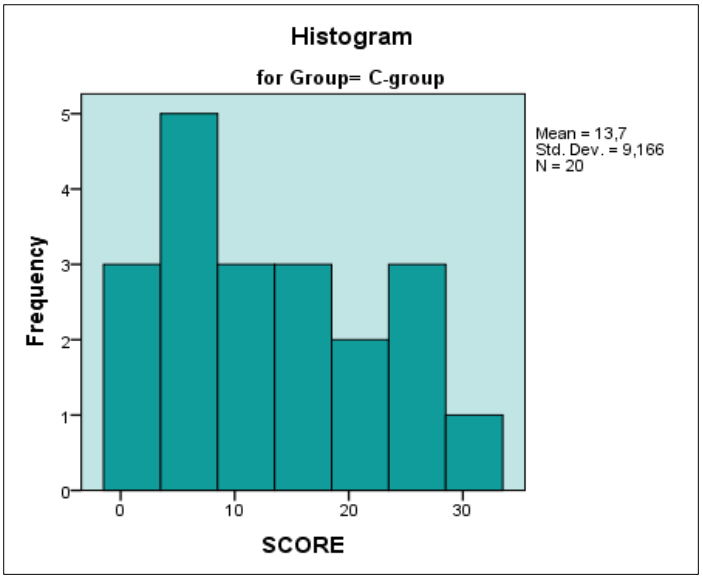

Figure 6. Histograms for scores of Post-test (scored with Rubric 1) for control group
Source: Own elaboration.

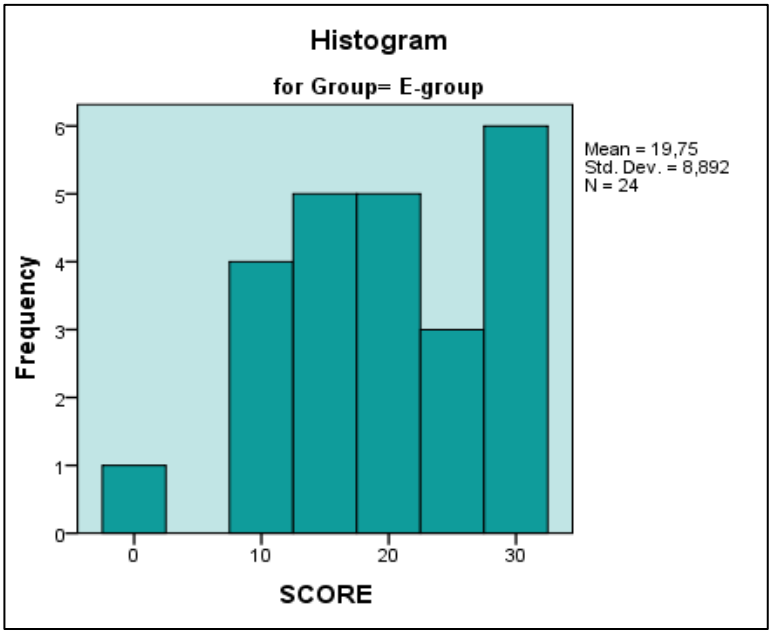

Figure 7. Histograms for scores of Post-test (scored with Rubric 1) for experimental group
Source: Own elaboration.

Then, a visual examination of the Q-Q plots of the scores indicated that their distributions were most likely normal.

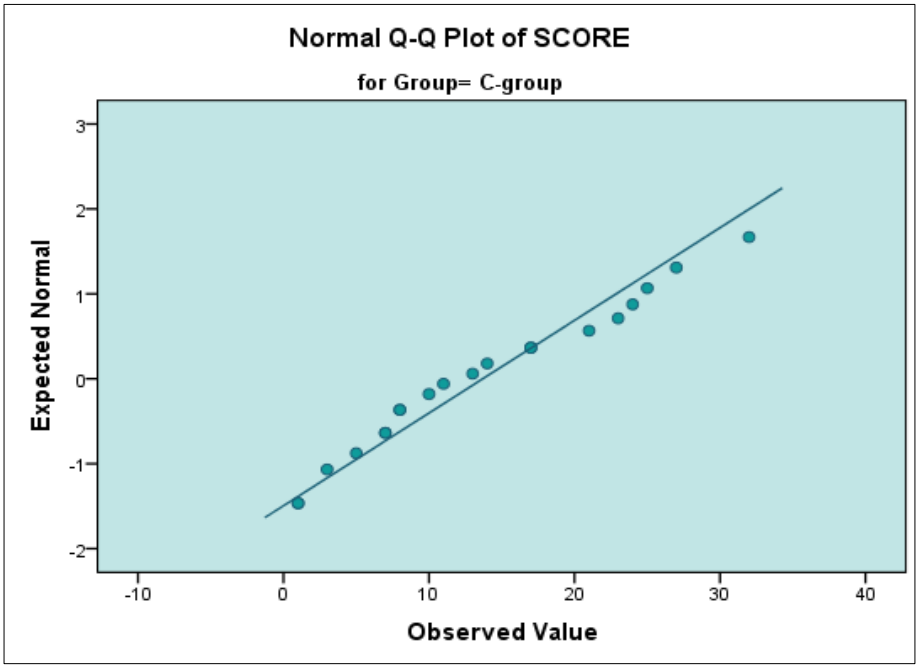

Figure 8. Q-Q Plots for scores of Post-test (scored with Rubric)1 for control group
Source: Own elaboration.

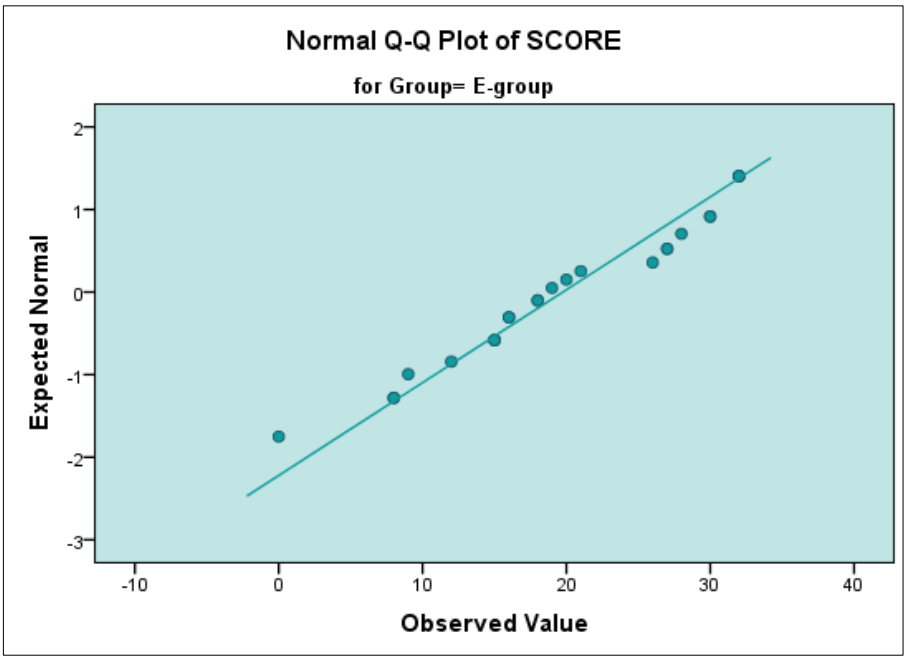

Figure 9. Q-Q Plots for scores of Post-test (scored with Rubric)1 for experimental group
Source: Own elaboration.

Moreover, Kormogorov-Smirnow and Shapiro-Wilk normality tests confirmed that the observations in the two samples were, in fact, distributed normally, as shown in Table 9.

Table 9. Normality tests for scores of Post-test (scored with Rubric 1) for each group

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
COD_Group		Statistic	df	Sig.	Statistic	df	Sig.
SCORE	C-group	0.133	20	,200*	0.950	20	0.368
	E-group	0.134	24	,200*	0.946	24	0.217

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction
Source: Own elaboration.

Given that the data was normally distributed in both samples, an independent-samples *t* test was performed to determine the statistical significance of the reported mean difference. The test showed that the scores on the Post-test scored with Rubric 1 were significantly higher for the students in the experimental group (M=19.75 *SD* = 8.89) than for the students in the control group (M = 13.5, *SD* = 9.16), $t(42) = -2.21$, $p = .032$.

Table 10. Independent samples test

		Levene's Test		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Score	*	0.061	0.806	-2.216	42	0.032	-6.050	2.730	-11.559	-0.541
	**			-2.210	40.109	0.033	-6.050	2.738	-11.583	-0.517

*Equal variances assumed
** Equal variances not assumed
Source: Own elaboration.

2. Specific research questions

To answer the specific questions, the data was systematized using Rubric 2. In this case, the operational definitions of the dependent variable were the error rates obtained from the Post-test after using rubric 2. The results for each category were analyzed separately.

2.1. Morphology. The average error rate in the control group (C-group) was 15.82% (*SD* = 9.92%) for this eroor category, while in the experimental group (E-group) the average error rate was 10.24% (*SD* = 9.05%). The histograms of the observations in each group are shown in Figure 10 and 11.

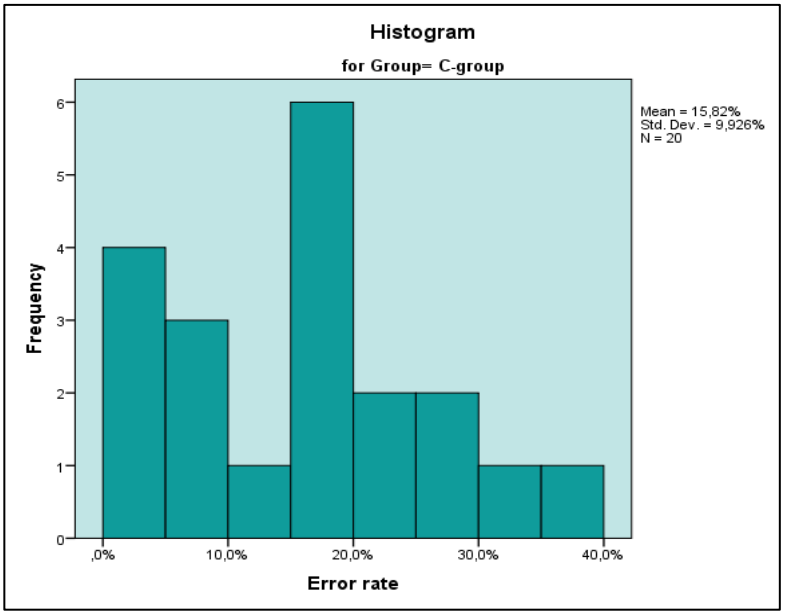

Figure 10. Error rates in the Post-test (scored with Rubric 2) for control group – Morphology
Source: Own elaboration.

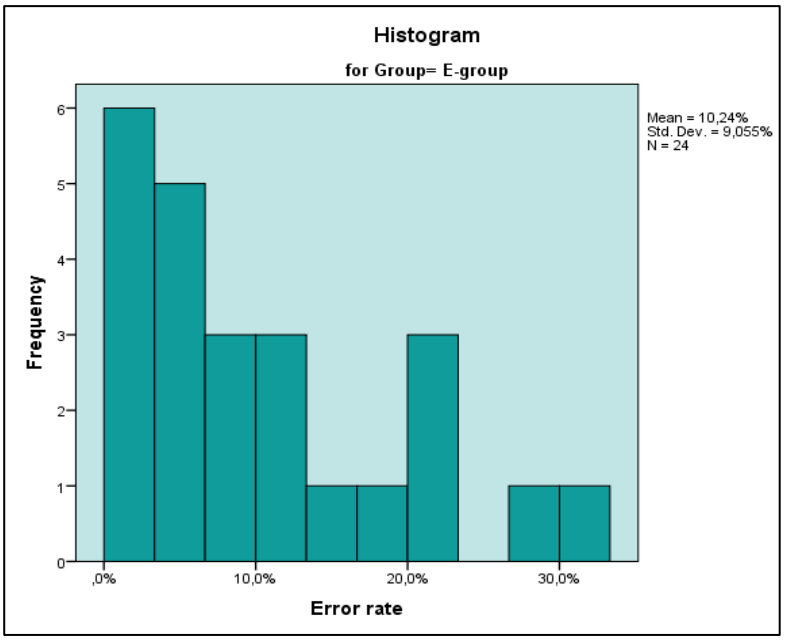

Figure 11. Error rates in the Post-test (scored with Rubric 2) for experimental group – Morphology
Source: Own elaboration.

A visual examination of the histograms and Q-Q plots of the error rates (Figures 12 and 13) indicated that the distribution of the observations for the experimental group was possibly non-normal.

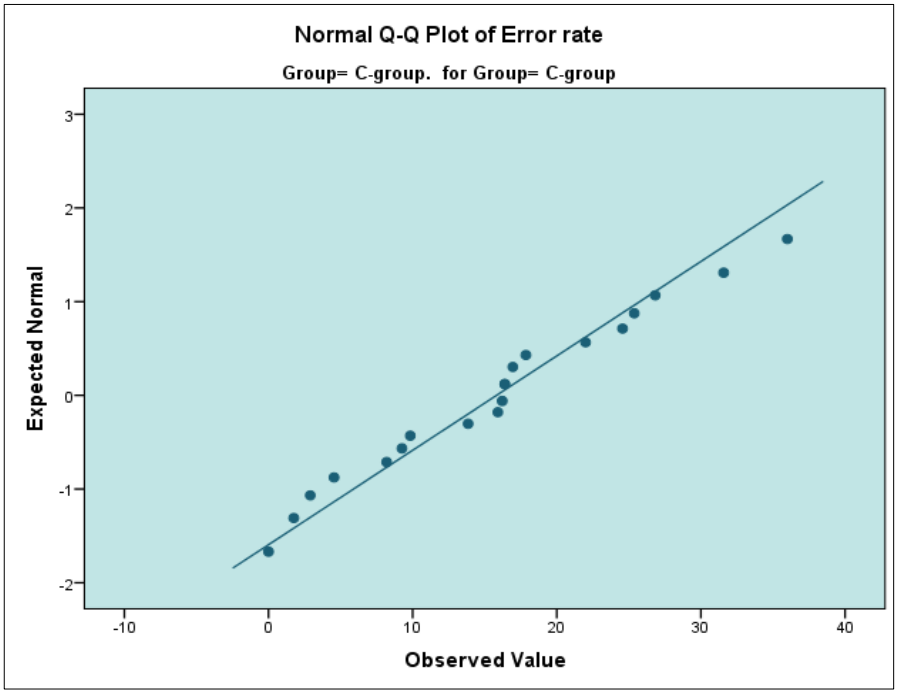

Figure 12. Q-Q Plots for error rates in the Post-test (scored with Rubric 2) for the control group – Morphology
Source: Own elaboration.

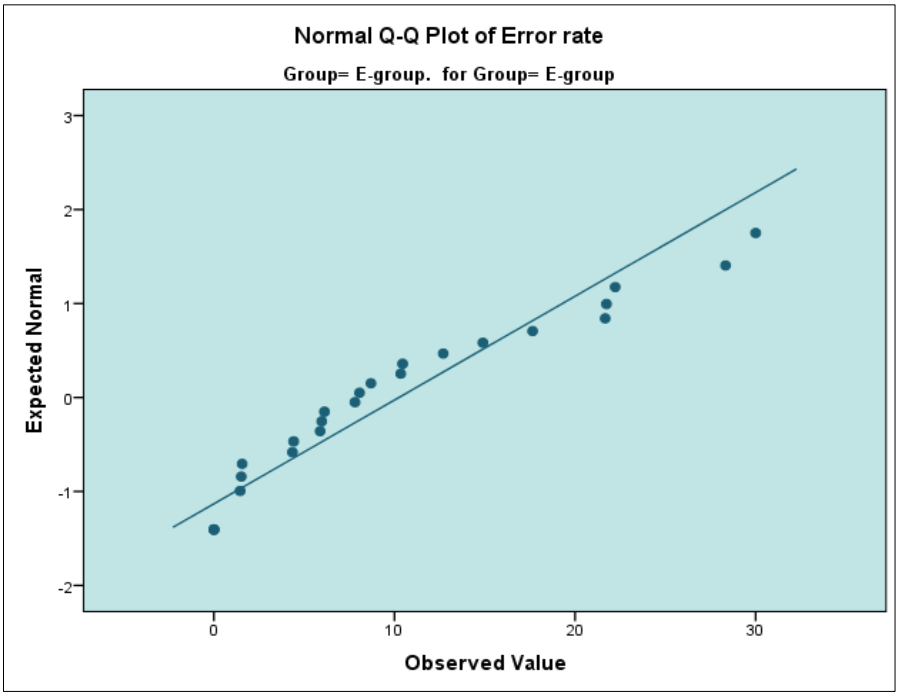

Figure 13. Q-Q Plots for error rates in the Post-test (scored with Rubric 2) for the experimental group – Morphology
Source: Own elaboration.

Moreover, the Shapiro-Wilk normality test revealed that, in fact, the observations in the experimental group were not distributed normally, as shown in Table 11. (These results were preferred over those of the Kolmogorov-Smirnov test since the Shapiro-Wilk test has been proven to be more powerful.)

Table 11. Normality tests for error rates in the Post-test for each group - Morphology

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
COD_Group		Statistic	df	Sig.	Statistic	df	Sig.
SCORE	C-group	0.119	20	,200*	0.970	20	0.756
	E-group	0.158	24	0.127	0.900	24	0.021

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction
Source: Own elaboration.

Given that the data was not normally distributed in both samples, a Mann-Whitney Test was used to examine if there was a statistically significant difference in the error rates. The results of the test showed that students in the experimental group obtained a significantly smaller error rate for morphology (Mdn = 7.93) than students in the control group (Mdn = 16.30), U = 156.5, p = .049.

Table 12. Mann-Whitney Test for error rates in the Post-test - Morphology

Ranks

	Group	N	Mean Rank	Sum of Ranks
Error rate	C-group	20	26.68	533.50
	E-group	24	19.02	456.50
	Total	44		

Test Statistics[a]

	Error rate
Mann-Whitney U	156.500
Wilcoxon W	456.500
Z	-1.969
Asymp. Sig. (2-tailed)	0.049

a. Grouping Variable: Group

Source: Own elaboration.

2.2. Syntax. The average error rate of students in the control group (C-group), for this category, was 27.83% (*SD* = 20.49%), while the average error rate for the experimental group (E-group) was 15.41% (*SD* = 14.03). The distributions of the observations are shown in Figure 14 and 15.

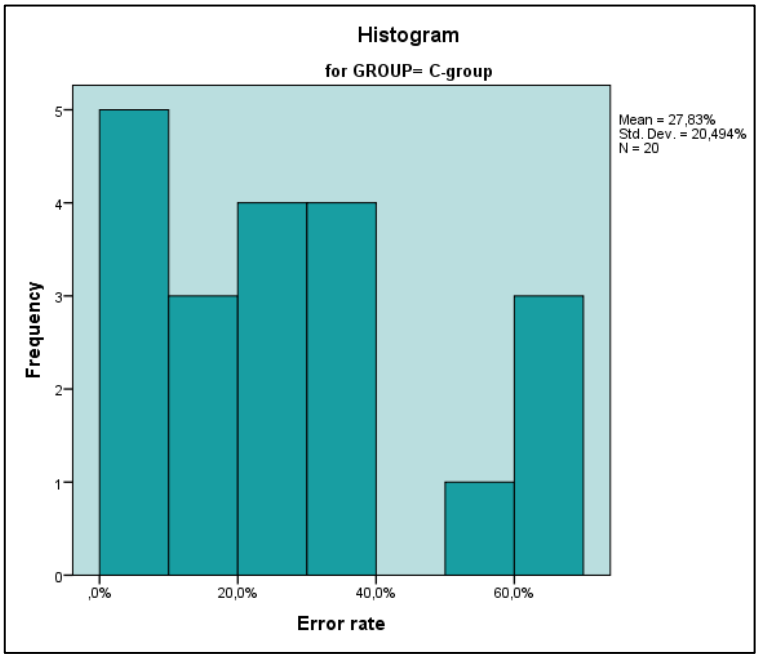

Figure 14. Error rates in the Post-test (scored with Rubric 2) for control group – Syntax
Source: Own elaboration.

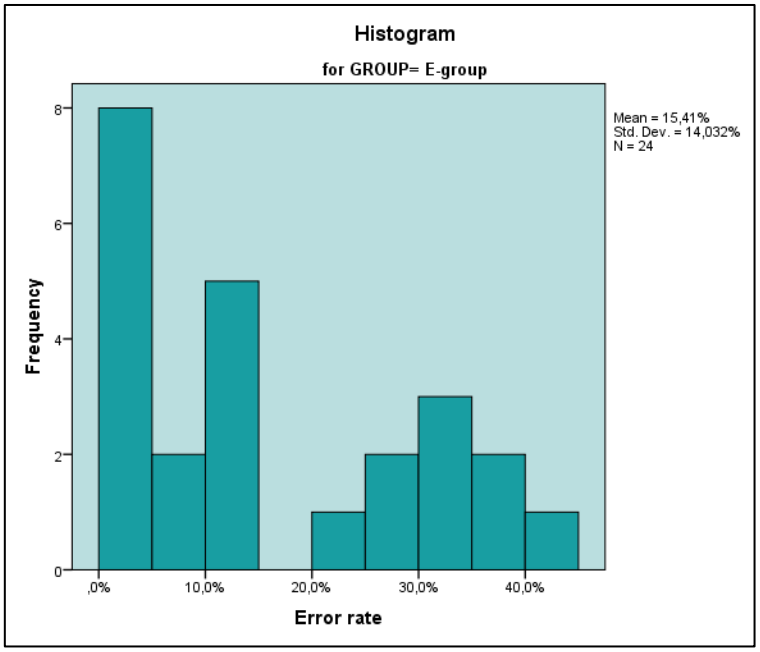

Figure 15. Error rates in the Post-test (scored with Rubric 2) for experimental group – Syntax
Source: Own elaboration.

A visual examination of the Q-Q plots of the error rates indicated that normal distributions were dubious in both cases.

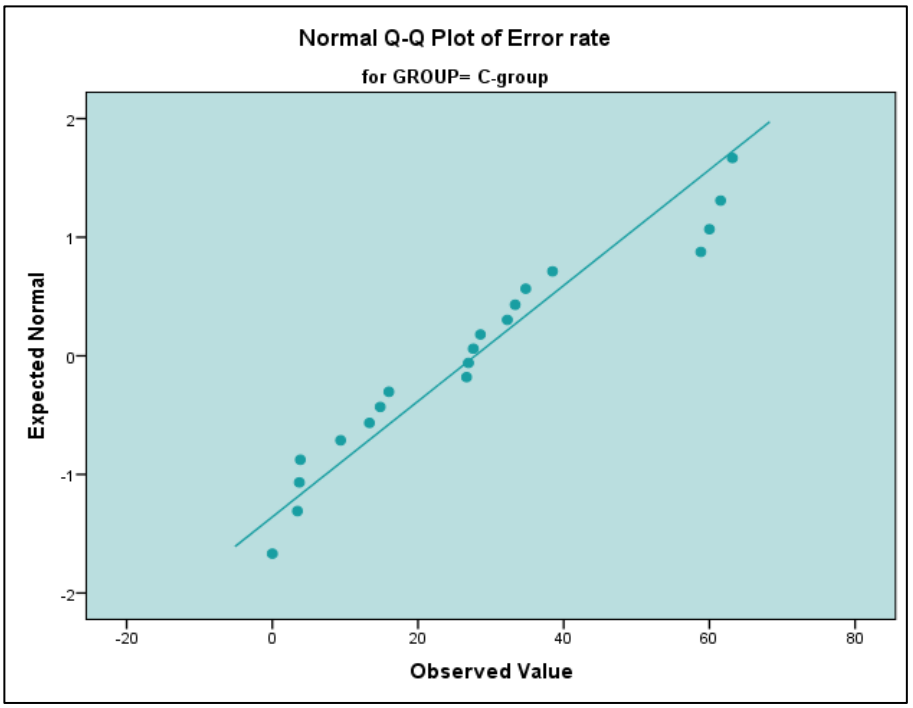

Figure 16. Q-Q Plots for error rates in the Post-test with Rubric 2 for control group – Syntax
Source: Own elaboration.

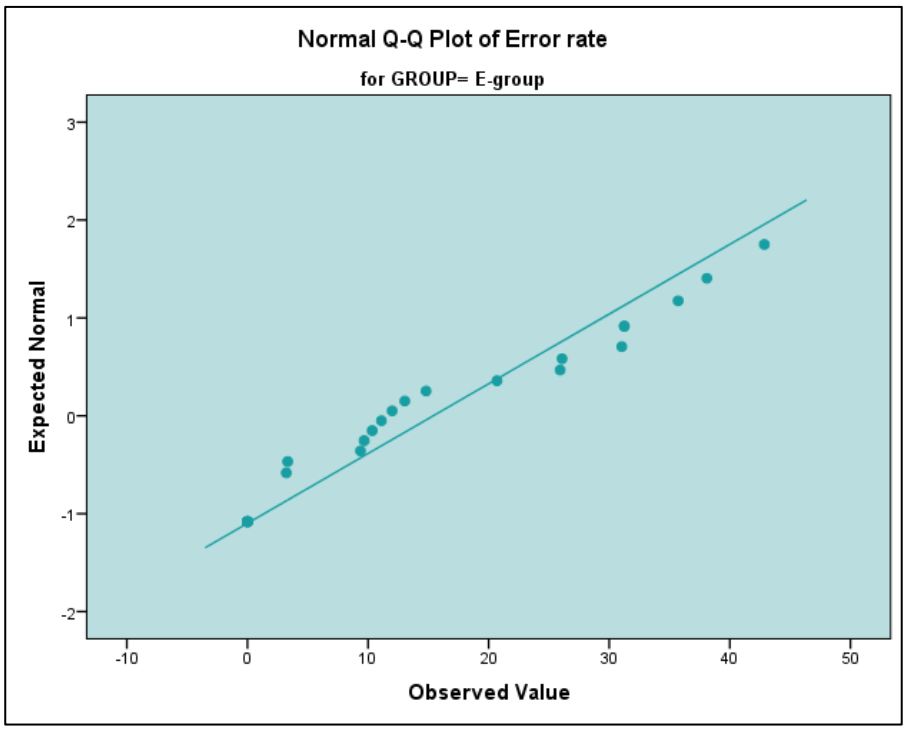

Figure 17. Q-Q Plots for error rates in the Post-test with Rubric 2 for Experimental group – Syntax
Source: Own elaboration.

Furthermore, the Shapiro-Wilk normality test indicated that the distribution of the observations for the experimental group were non-normal, as shown in Table 13.

Table 13. Normality tests for error rates in the Post-test for each group - Syntax

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
COD_Group		Statistic	df	Sig.	Statistic	df	Sig.
Score	C-group	0.135	20	,200*	0.912	20	0.071
	E-group	0.150	24	0.127	0.893	24	0.015

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction
Source: Own elaboration.

Then, a Mann-Whitney Test was used to examine if there was a statistically significant difference in the error rates. The results of the test indicated that students in the experimental group obtained significantly smaller error rates for syntax (Mdn = 15.41%) than students in the control group (Mdn = 27.41%), U = 147.000, p = .028.

Table 14. Mann-Whitney Test for error rates in the Post-test - Syntax

Ranks

Group		N	Mean Rank	Sum of Ranks
Error rate	C-group	20	27.15	543.50
	E-group	24	18.63	447.50
	Total	44		

Test Statistics[a]

	Error rate
Mann-Whitney U	147.000
Wilcoxon W	447.000
Z	-2.197
Asymp. Sig. (2-tailed)	0.028

a. Grouping Variable: Group

Source: Own elaboration.

2.3. High-performing vs. Low-performing students. An additional analysis was conducted to determine if the effectiveness of the technique relates to the level of performance of students. For this analysis, the students of each group (experimental and control) were divided into two categories, high-performance and low-performance: the test scores, in each group, were ranked and those students with scores lower than the median were put in the low-performance category. In turn, those students with scores higher than the median were put in the high-performance category. It was observed that the mean score was higher for the experimental group in both categories. The descriptive statistics per category per sub sample are shown below.

Table 15. Statistics per category per sub sample

Category		COD_Group	N	Mean	Std. Deviation	Std. Error Mean
High-performance	SCORE	C-group	10	6,10	3,510	1,110
		E-group	12	12,50	5,334	1,540
Low-performance	SCORE	C-group	10	21,30	6,056	1,915
		E-group	12	27,00	4,710	1,360

Source: Own elaboration.

Normality tests were conducted in order to determine if the scores within the categories were normally distributed. For both categories, the Shapiro-Wilk normality test confirmed that the observations in the two sub samples were distributed normally, as shown in tables 16 and 17.

Table 16. Normality tests for Post-test scores for each group – High-performance category

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
COD_Group		Statistic	df	Sig.	Statistic	df	Sig.
Score	C-group	,201	10	,200*	,927	10	,417
	E-group	,264	12	,021	,864	12	,055

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Source: Own elaboration.

Table 17. Normality tests for Post-test scores for each group – Low-performance category

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
COD_Group		Statistic	df	Sig.	Statistic	df	Sig.
Score	C-group	,201	10	,200*	,927	10	,417
	E-group	,264	12	,021	,864	12	,055

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction
Source: Own elaboration.

Given this condition of the data, a parametric method was chosen to compare the means of both sub samples within the defined categories. It was found that the mean difference was statistically significant in both cases, which entails that the implemented strategy had a positive effect on the level of proceduralization regardless of the student's performance level. See Table 18.

It was also observed that the mean difference was slightly higher for the high-performance category, and that the confidence interval was slightly narrower. This could mean that the effectiveness of the strategy increases when the performance level is higher. However, further research is needed for this to be concluded.

Table 18. Independent samples test – High-performance and Low-performance categories

		Levene's Test		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Score	*	1,648	,214	-3,247	20	,004	-6,400	1,971	-10,512	-2,288
High-performance	**			-3,371	19,099	,003	-6,400	1,898	-10,372	-2,428
Score	*	,961	,339	-2,485	20	,022	-5,700	2,294	-10,485	-,915
Low-performance	**			-2,427	16,855	,027	-5,700	2,349	-10,659	-,741

Source: Own elaboration.

Conclusions

As for the general hypothesis of this study, the results presented above show that the strategy implemented in the experimental group had a positive effect on the proceduralization of the selected grammar features that was significantly higher than that of the conventional strategies, which was evidenced by the test scores obtained by both groups. Thus, it can be asserted to a 97% level of confidence that communicative drilling contributes to the proceduralization of morphosyntactic features of the English language at the beginning stages of language learning in the context of the EFL classroom – without excluding the possibility of a similar effect at other stages as well. Another important consideration for the interpretation of these results is that the present study was conducted with adult learners, and therefore, it can only be claimed that the strategy at hand has been proven to be effective with learners of such ages – without excluding the possibility of a similar effect at other ages as well. This consideration also applies to the interpretation of the results presented in the following section.

Regarding the first specific hypothesis, the results show that the strategy implemented in the experimental group had a positive effect on the proceduralization of the selected morphological features that was significantly higher than that of the conventional strategies, which was evidenced by the error rates obtained in both groups. Therefore, it can be asserted to a level of confidence of 95% that communicative drilling contributes to the proceduralization of morphology at the beginning stages of English language learning in the context of the EFL classroom.

Regarding the second specific hypothesis, the results of the study show that the strategy implemented in the experimental group had a positive effect on the proceduralization of the syntax of the selected grammar features that was significantly higher than that of the conventional strategies, which was evidenced by the error rates obtained in both groups.

Therefore, it was confirmed to a level of confidence of 97% that communicative drilling is conducive to the proceduralization of syntax at the beginning stages of English language learning in the context of the EFL classroom.

It is important to clarify that the measures of the syntax category are not comparable to those of morphology given the methodological constraints that did not allow for the use of equivalent scales. Both results stand on their own and independently shed additional light for the interpretation of the results obtained when testing the general hypothesis.

In short, from the results obtained, it was possible to establish a cause-effect relationship between the two variables in question, i.e. communicative drilling is conducive to the proceduralization of English grammar in the EFL context. Furthermore, it was possible to determine that CD contributes to the proceduralization of, both, morphology and syntax.

Also, this investigation has verified that proceduralization strategies can be useful from the beginning stages of language learning. Although it is clear that the initial representations of language tend to happen in the form of declarative knowledge, proceduralization should not be seen as something to be taken care of "later" in the long-term process of language learning. Rather, while respecting the natural sequence of skill development when presenting students with new language, the proceduralization of the newly-presented grammar can be expected to begin shortly after if the appropriate practice techniques are applied.

In practical terms, this means confronting students with both aspects of grammar: function and form – form following function – and letting them process these aspects in terms of declarative knowledge. Then students are ready for narrow or discrete communicative practice which is expected to "jump-start" the proceduralization process. This could all happen in a matter of days or weeks for any given language feature that the instructor decides to focus on. There is no need to wait for increased overall language competence to start working on proceduralization. As a matter of fact, not providing students with opportunities for practice that aims at proceduralization early enough might lead to problems such as fossilization of grammatical mistakes or gaps in the students' communicative competence.

In the grand scheme of things, the results of this study contribute to reinforce the general idea that skill learning theory and cognitive psychology have crucial applications to second language acquisition theory, as well as key implications for EFL teaching methodology and practice.

Recommendations

In recent years, the psycholinguistics and neurolinguistics fields have seen great advancements derived from important developments in skill acquisition theory. Anderson's ACT-R model and the distinction between declarative and procedural knowledge, along with its SLA applications by Ullman and others, have made an enormous contribution to the cognitive branch of L2 acquisition theory. All of this has laid a solid theoretical foundation for the reestablishment of the crucial role of practice in SLA, a notion that had been unfairly labeled as "behavioristic" in the past because of a lack of theory to support it otherwise.

It can be derived from the conclusions of this study that grammar practice aimed at proceduralization should gain a predominant role in the development of new grammar teaching methodologies. In terms of curriculum and course design, it is decisive to incorporate instances for proceduralization practice as part of the grammar syllabus. Such instances, however, should not replace the initial stage of grammar presentation and meaningful practice, which allow for the construction of declarative knowledge and relevant form-function mappings. In terms of classroom practice, it is crucial that EFL practitioners integrate cognitive notions when working on the development of linguistic and communicative competence. In this regard, the abandonment of the traditional distinction of fluency and accuracy, as two separate aims, is suggested.

The notions addressed in this study have paramount, yet scarcely acknowledged, methodological implications for the TEFL field. From the apparent existence of natural stages in the skill acquisition sequence to the narrow domain-specificity of cognitive skill training, much remains to be researched in terms of applications to classroom practice.

Further research on practice strategies targeted at promoting the proceduralization of grammar features is needed as CD is only one of the several strategies that could be implemented for this purpose. Moreover, precisions are to be made in terms of the optimal timing for proceduralization practice within the learning sequence, as well as the ideal amount of practice required for each target grammatical form.

Also, additional research on proceduralization strategies is to be conducted at various competence levels in order to determine possible variations in their effectiveness as learners become more proficient.

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Appendices

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	Grammar	Vocabulary	Speaking (Communicative Functions)	Listening strategies	Reading Strategies	Writing
B01	Verb be in affirmative sentences and yes/no questions Subject pronouns Possessive adjectives Questions with who and where Adjectives with verb be Plurals of nouns Demonstrative adjectives	Personal information Things people like Countries and cities Adjectives for describing cities Personal items	Introducing yourself Asking where someone is from Giving and replying to thanks	Listen for details Listen for gist Make predictions Check predictions Listen for sequence	Read for details Scan for information Infer information	Write about favorites Describe a favorite Place Read and describe a product review
B02	Present continuous tense (affirmative, negative statements and questions) Simple present (affirmative, negative statements) Simple present (Yes/No questions) Possessive nouns Possession: *have/has*	Everyday activities School subjects and majors Foods and drinks Health-related expressions Family members Relationships	Greeting people and asking how they are Talking about likes and dislikes Asking and answering questions about family	Listen for details Listen for gist Make predictions Check predictions Distinguish speakers Listen for sequence	Identify main ideas Infer meaning Find key details Scan for information Read for details Make predictions	Answer interview questions Write about favorite food Write about your family

Appendix 2: Sample Communicative Drilling Activities

Activity 1: U1-Lesson A-Their names are…

Slide 1

Teacher Notes:

1. Go over the slides with the whole class and try to elicit the names of the people/characters. Present the names for each group.

2. Have students work in pairs and take turns trying to remember the names.

* It is very important that students use the complete sentence "Their names are…"

Slide 2

Their names are…

Slide 3

Their names are…

Jennifer, Meryl, Ellen, Bradly, Julia, Kevin, Brad and Angelina

Slide 4

Their names are…

Marc-André, Javier, Jordi, Luis, Andrés, Gerard, Lionel and Neymar

Slide 5

Their names are…

Koky, Alejo, Tito, Grace, Joel, Charo,
Pepe, Teresa and Gilberto

Slide 6

Their names are…

Joel, Fernanda, Nicolas, Isabella, Bruno,
Francesca, Peter and Monserrat

Slide 7

Their names are…

Maggie, Marge, Lisa, Homer and Bart

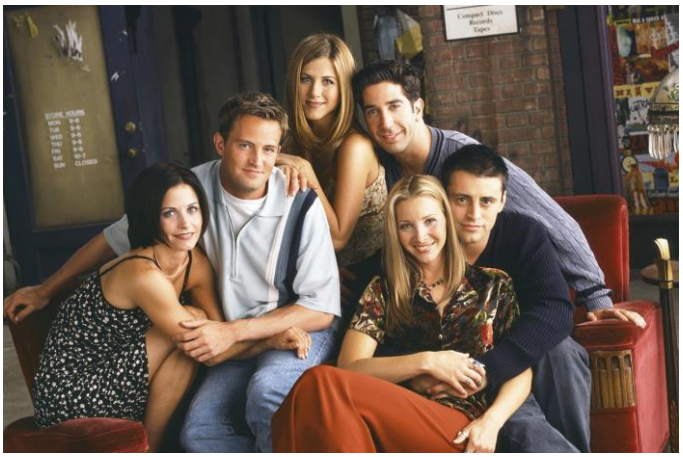
Slide 8

Their names are…

Moe, Flanders, Skinner, Mr. Burns and Milhouse

Slide 9

Their names are…



Monica, Chandler, Rachel, Ross,
Phoebe, and Joey.

Slide 10

Their names are…

John, Paul, George and Ringo.

Activity 2: Unit 1-Lesson B-Is he/she…?

Slide 1

Teacher Notes

1. Have students sit in pairs. One student should be facing the back of the room while the other should be facing the front (screen).

2. Distribute the cards to the students facing the back of the classroom.

First stage:

The student facing the front reads the information on each slide and their partner guessess which person it is by asking "Is he/she…?"

Use the first slide to model the activity.

Have students change positions by the middle of the activity. (slide 8)

Second stage:

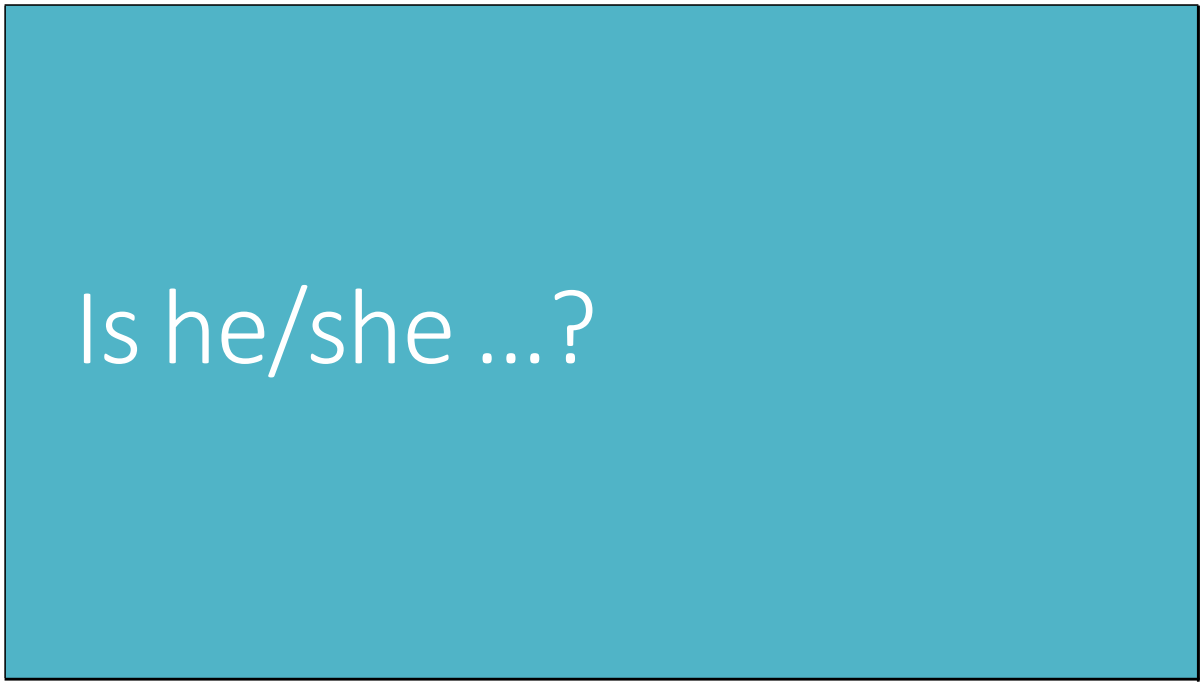
Once all of the slides have been used, have students do the activity again, but this time they should not read the information to their partners. Instead, the student facing the back should ask the questions. Eg. Is he an actor? Is he American?

Use the first slide to model the activity.

Have students change positions by the middle of the activity. (slide 8)

Please, emphasize that students should use the complete question "Is he/she…?"

Slide 2



Slide 3

EXAMPLE

Leonardo DiCaprio

- He's an actor.
- He's American.
- He has an Oscar.
- His movies are Titanic, Gangs of New York, Inception, The Wolf of Wall Street, etc.

Slide 4

Adele

- She's a singer.
- She's English.
- She has 15 Grammys.
- Her songs are Rollling in the Deep, Someone Like You, Hello, etc.

Slide 5

Chris Martin

- He's a singer.
- He's English.
- He sings in the band Cold Play.
- His songs are Yello, The Scientist, Clocks, Hymn for the Weekend, etc.

Slide 6

Katy Perry

- She's a singer.
- She's American.
- She has five albums.
- Her songs are Last Friday Night, California Gurls, Firework, Roar, Dark Horse, etc.

Slide 7

Bruno Mars

- He's a singer.
- He's American.
- He has five Grammys.
- His songs are Billionaire, The Lazy Song, When I Was Your Man, Uptown Funk, etc.

Slide 8

Scarlette Johansson

- She's an actress.
- She's American.
- She is 32 years old.
- Her movies are Iron Man II, The Avengers , Lucy, Avengers: Age of Ultron, Captain America: Civil War, etc.

Slide 9

Cristiano Ronaldo

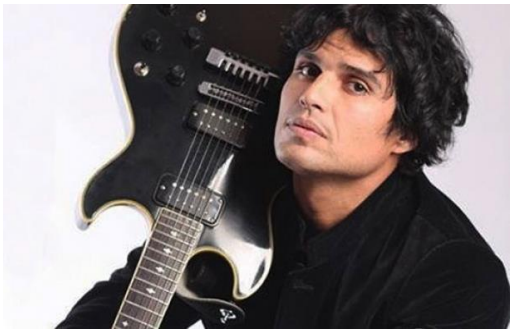
- He's a sports player.
- He's from Portugal.
- He has four FIFA Ballon. d'Or awards.
- He plays in Real Madrid FC.

Slide 10

Brad Pitt

- He's an actor.
- He's American.
- He is 53 years old.
- His movies are Fight Club, Mr. And Mrs. Smith, Troy, The Curious Case of Benjamin Button, Inglourious Basterds, etc.

Slide 11



Pedro Suarez Vertiz

- He's a singer.
- He's Peruvian.
- He's 48 years old.
- His songs are Cuentame, Cuando Pienses en Volver, Me estoy Enamorando, Un Vino una Cerveza, etc.

Slide 12

Roger Federer

- He's a sports player.
- He's from Switzerland.
- He has 19 grand slam titles.
- He's 35 years old.

Slide 13

Monica Sanchez

- She's an actress.
- She's Peruvian.
- She's 48 years old.
- She was in the TV Series Al Fondo Hay Sitio.

Slide 14

Gianella Neira

- She's an actress.
- She's Peruvian.
- She's 40 years old.
- Her movies are A Los Cuarenta, El y Ella, Locos de Amor, etc.

Slide 15

Gian Marco

- He's a singer and songwritter.
- He's Peruvian.
- He has three Latin Grammys.
- His songs are Dos Historias, Se me Olvido, Hoy, Te Mentiría, Sentirme Vivo, etc.

Slide 16

Lionel Messi

- He's a sports player.
- He's from Argentina.
- He has five FIFA Ballon d'Or awards.
- He plays in Barcelona FC.

Slide 17

Chris Hemsworth

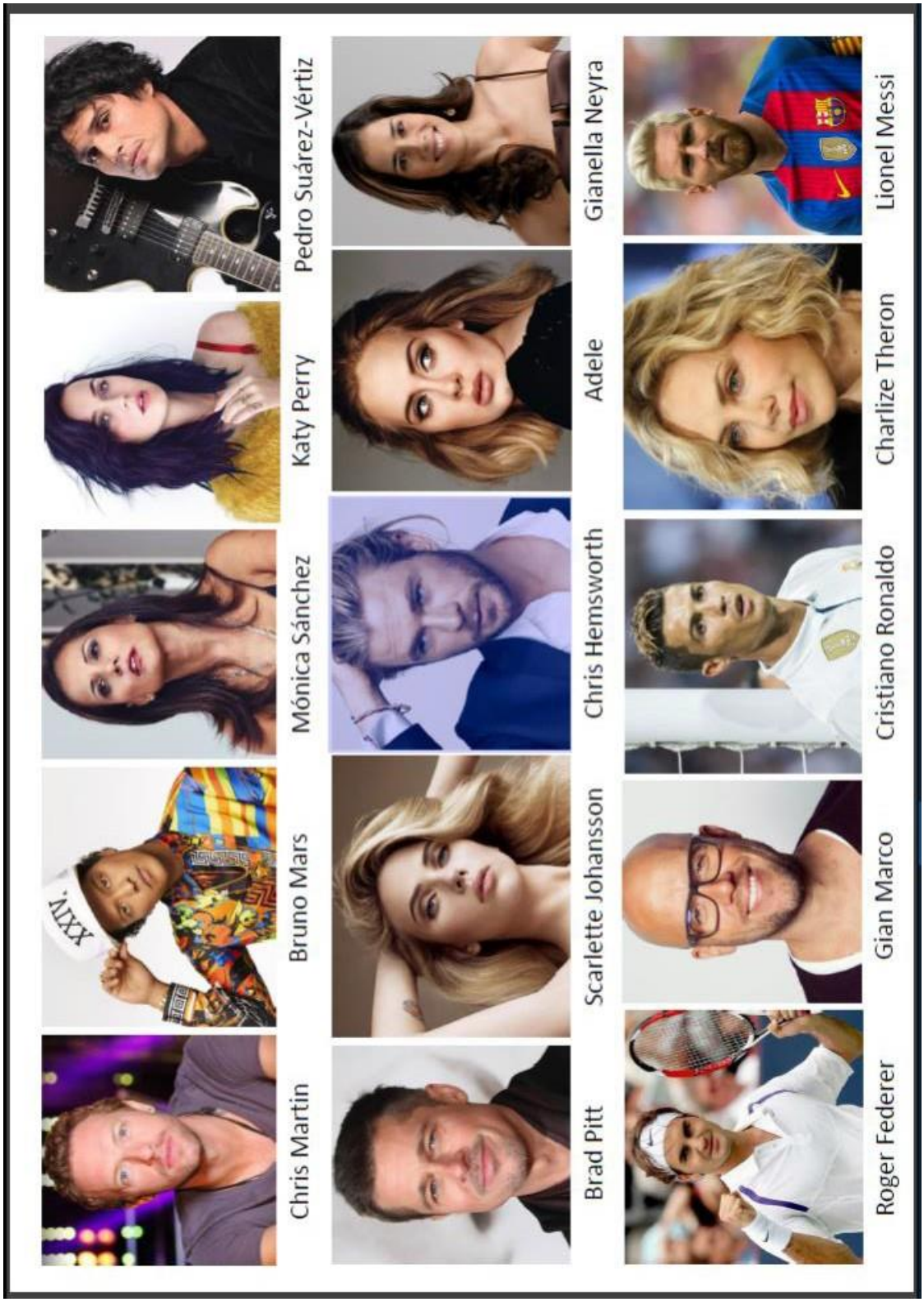
- He's an actor.
- He's from Australia.
- He is 33 years old.
- His movies are, Thor, The Avengers, The Huntsman: Winter's War, Thor: The Dark World, etc.

Slide 18

Charlize Theron

- She's an actress.
- She's from South Africa.
- She is 41 years old.
- Her movies are Hancock, Prometheus, Snow White and the Huntsman, Mad Max, The Huntsman: Winter's War etc.

Activity 2: Hand-out



Activity 4: U2-Lesson B-That is a.../Those are…

Slide 1

Teacher Notes:

1. Go over the vocabulary studied in the previous lesson and elicit examples to check for meaning comprehension. Review the correct pronunciations if necessary.

2. Have students sit in pairs and take turns completing the sentences with the appropriate words, as you show the slides. (sometimes the adjective will depend on their opinion).

* It is very important that students say the complete sentences and not just the adjective.

Slide 2

That is a …./Those are…

Slide 3

That is a_____beach.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 4

That is a_____park.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 5

That is a_____street.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 6

That is a/an_____party.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 7

Those are_____buildings.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 8

That is a_____band.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 9

That is a/an_____concert.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 10

Those are_____people.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 11

That is a _____.

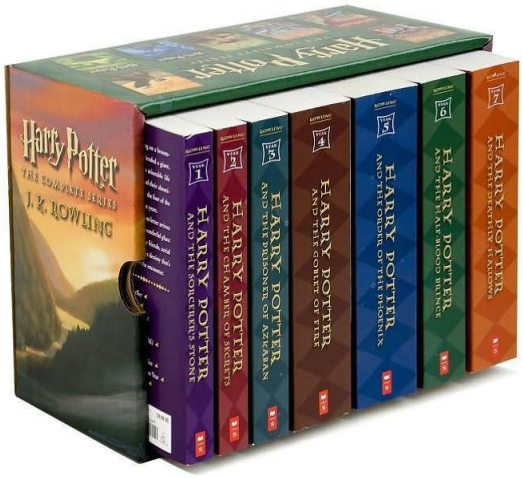
Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 12

That is a/an _____.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 13



Those are _____.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 14

That is a _____.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 15

That is a _____.

Adjectives:
large
old
beautiful
exciting
friendly
crowded
busy
relaxing
popular
big
tall
wonderful
interesting
fun

Slide 16

Those are _____ _____.

Adjectives:
big
small
old
wonderful
interesting
boring
popular
cool
great
expensive
beautiful
nice
perfect
blue/red/
black, etc.

Activity 10: U5 - Lesson A&B_Simple Present-Interrogative (Student A)

Adele

Facts

- She is from London, The U.K.
- She lives in England.
- She likes to cook and to listen to music.

Brad Pitt

Facts

- He is from _____
- He lives in _____
- He likes _____

_____

Chris Martin

Facts

- He is from Devon, The U.K.
- He lives in Los Angeles.
- He likes the bands Travis, U2 and Radiohead.

Scarlette

Facts

- She is from _____
- She lives in _____
- She likes _____

_____

Gian Marco

Facts

- He is from Lima, Peru.
- He lives in Los Angeles.
- She likes soccer, surfing and drawing.

Bruno Mars

Facts

- He is from _____
- He lives in _____
- He likes _____

_____

Gianella Neyra

Facts

- She is from Arequipa, Peru.
- She lives in Lima.
- She likes to play video games.

Katty Perry

Facts

- She is from _____
- She lives in _____
- She likes _____

_____

Chris Hemsworth

Facts

- He is from Melbourne, Australia.
- He lives in Byron Bay (Australia).
- He likes surfing, music and sports.

Cristiano Ronaldo

Facts

- He is from _____
- He lives in _____
- He likes _____

_____

Lionel Messi

Facts

- He is from Rosario, Argentina.
- He lives in Barcelona, Spain.
- He likes video games, music and sleeping.

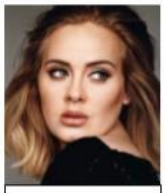
Mónica Sánchez

Facts

- She is from _____
- She lives in _____
- She likes _____

_____

Activity 10: U5 - Lesson A&B_Simple Present-Interrogative (Student B)



Adele

Facts

- She is from _____
- She lives in _____
- She likes _____

_____

Brad Pitt

Facts

- He is from Oklahoma, The US.
- He lives in Los Angeles and France.
- He likes art, reading and sports.

Chris Martin

Facts

- He is from _____
- He lives in _____
- He likes _____

_____

Scarlette

Facts

- She is from New York, The US.
- She lives in Manhattan, New York.
- She likes acting, shopping and music

Gian Marco

Facts

- He is from _____
- He lives in _____
- She likes _____

_____

Bruno Mars

Facts

- He is from Hawaii, The US.
- He lives in Los Angeles.
- He likes music, football, and chicken adobo.

Gianella Neyra

Facts

- She is from _____
- She lives in _____
- She likes _____

_____

Katty Perry

Facts

- She is from Santa Barbara, The US.
- She lives in Beverly Hills.
- She likes antiques, crochet and nail art.

Chris Hemsworth

Facts

- He is from _____
- He lives in _____
- He likes _____

_____

Cristiano Ronaldo

Facts

- He is from Madeira, Portugal.
- He lives in Madrid, Spain.
- He likes collecting cars, music and fashion.

Lionel Messi

Facts

- He is from _____
- He lives in _____
- He likes _____

_____

Mónica Sánchez

Facts

- She is from Lima, Peru.
- She lives in Lima.
- She likes acting and political activism.

Appendix 3: Sample Lesson Plans

LESSON PLAN – EXPERIMENTAL GROUP

Basic 02> World Link INTRO>**Unit 5**>**Lesson B (Part 2)**
Pages 74-75

I. SPECIFIC LEARNING OUTCOMES

- Students can ask and answer questions about facts, habits and routines using the simple present tense
- Students can write about their favorite foods.

II. LESSON DEVELOPMENT

A. Warm-up/ Lead-in (5 min)

- Review names of foods and write them on the board.
- Ask: *Do you like….?* And elicit some answers.
- Have Ss ask each other this question with different foods.

B. Conduction of the learning process

1. GRAMMAR (40 minutes)

- Write the question that Ss were asking on the board and the possible short answers. Explain how the structures are formed. Review the chart and the grammar notes with students.
  Have students read the instructions for Act. B and complete the questions and answers with the correct verb forms. Remind them that they can refer to the chart as necessary. Do a class check using the CPT.
- Ask Ss to read the instructions and the sentences in Act. C Have them write one more sentence. Provide examples as necessary. Check answers with the class.
- Point out the tittle of the chart (Act. C). Explain to Ss that they need to *find* one classmate for each question and that they should write their classmate's name only if the answer is affirmative. Model the activity with a couple of students for the class to see. Have students move around the class asking the questions. Tell them to sit down when they have completed the chart. Remind them that they need eight different names.
- Have Ss read the instruction for Act. E and model the exercise with one student. Remind them to use the correct simple present form for *he* and *she*. Call on different students to tell you about someone in the class.

EXTRA Proceduralization Activity:

- Have students work on a jig-saw puzzle about some popular celebrities in order to practice the third person singular conjugation of the simple

present tense. Hand out the worksheets (Unit 5_Lesson B) and give directions. Ss Should ask each question with the form *…does he/she…? And …is he/she…?* In order to fill out the blank spaces. Model the questions and answers for the first person with one student. Write prompts on the board. Have Ss work in pairs for 15 to 20 minutes.

2. **WRITING (20 minutes)**
   - Have Ss read the instructions for Act. A and the questions. Clarify any unfamiliar words. Have Ss think about their favorite food and give them a few minutes think about their answers to the questions and take notes.
   - Have Ss look at the photo and read the sample paragraph. Have Ss write a paragraph about their favorite. Help them with the names of ingredients as necessary and write them on the board so other Ss can use the words too.

3. **COMMUNICATION (20 minutes)**
   - Have Ss read the instructions for Act. A. Have Ss use their notes from Writing A and practice their presentation and then with a partner.
   - Assign Ss to a group of four. Make a table on the board:

Name	Food	From	What's in it	When you eat it	Good or Bad for you

   - Tell Ss to copy the chart on their notebooks. Have them give and listen to their presentations and take notes.

C. <u>Wrap-up (5 min)</u>
   - Have a few volunteer Ss present about one of the foods that was described in their groups to the class.

D. <u>Possible problems and solutions</u>
   - Ss don't understand the instructions
     - Have students read the instructions, do comprehension checks and model the tasks
   - Ss find producing language difficult.
     - Write useful expressions on the board as prompts.

E. <u>Material Needed</u>
   - Classroom Presentation Tool
   - Writing paper
   - Worksheets: Unit 5_Lesson B (13 Student A & 13 Student B)

LESSON PLAN – CONTROL GROUP

Basic 02> World Link INTRO>**Unit 5**>**Lesson B (Part 2)**
Pages 74-75

III. SPECIFIC LEARNING OUTCOMES

- Students can ask and answer questions about facts, habits and routines using the simple present tense
- Students can write about their favorite foods.

IV. LESSON DEVELOPMENT

F. Warm-up/ Lead-in (5 min)

- Review names of foods and write them on the board.
- Ask: *Do you like….?* And elicit some answers.
- Have Ss ask each other this question with different foods.

G. Conduction of the learning process

4. GRAMMAR (40 minutes)

- Write the question that Ss were asking on the board and the possible short answers. Explain how the structures are formed. Review the chart and the grammar notes with students.
  Have students read the instructions for Act. B and complete the questions and answers with the correct verb forms. Remind them that they can refer to the chart as necessary. Do a class check using the CPT.
- Direct Ss to the extra activities on page 204 and have them complete the sentences using the present tense. Have Ss compare their answers and then check answers with the class. Have Ss rewrite the information so it is true for them. Elicit examples from several students.
- Ask Ss to read the instructions and the sentences in Act. C Have them write one more sentence. Provide examples as necessary. Check answers with the class.
- Point out the tittle of the chart. Explain to Ss that they need to *find* one classmate for each question and that they should write their classmate's name only if the answer is affirmative. Model the activity with a couple of students for the class to see. Have students move around the class asking the questions. Tell them to sit down when they have completed the chart. Remind them that they need eight different names.
- Have Ss read the instruction for Act. E and model the exercise with one student. Remind them to use the correct simple present form for *he* and *she*. Call on different students to tell you about someone in the class.

5. **WRITING (20 minutes)**
   - Have Ss read the instructions for Act. A and the questions. Clarify any unfamiliar words. Have Ss think about their favorite food and give them a few minutes think about their answers to the questions and take notes.
   - Have Ss look at the photo and read the sample paragraph. Have Ss write a paragraph about their favorite. Help them with the names of ingredients as necessary and write them on the board so other Ss can use the words too.

6. **COMMUNICATION (20 minutes)**
   - Have Ss read the instructions for Act. A. Have Ss use their notes from Writing A and practice their presentation and then with a partner.
   - Assign Ss to a group of four. Make a table on the board:

Name	Food	From	What's in it	When you eat it	Good or Bad for you

   - Tell Ss to copy the chart on their notebooks. Have them give and listen to their presentations and take notes.

H. Wrap-up (5 min)
   - Have a few volunteer Ss present about one of the foods that was described in their groups to the class.

I. Possible problems and solutions
   - Ss don't understand the instructions
     - Have students read the instructions, do comprehension checks and model the tasks
   - Ss find producing language difficult.
     - Write useful expressions on the board as prompts.

J. Material Needed
   - Classroom Presentation Tool
   - Writing paper
   - Worksheets: Unit 5_Lesson B (13 Student A & 13 Student B)

Appendix 4: Interactive Post-test

Slide 1

QUIZ

- Verás unas palabras en cada diapositiva. Escribe una oración completa usando las palabras dadas.
- Solo tendrás unos segundos para escribir cada oración. Responde lo mas rápido que puedas.
- No se permiten preguntas durante el quiz.

Slide 2

soccer player

Slide 3

2

singer

Slide 4

3

actors

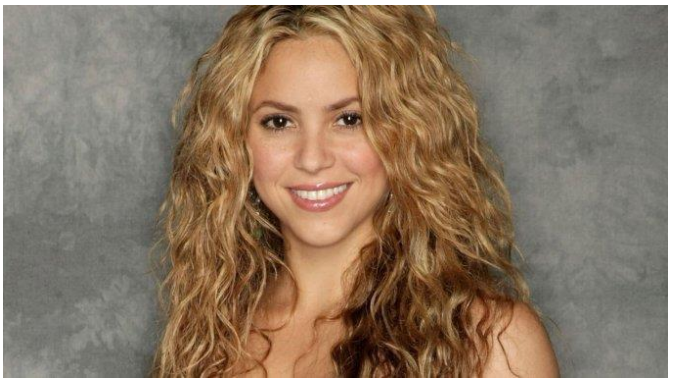
Slide 5

4

Name / Lionel Messi

Slide 6

5



Name / Shakira

Slide 7

6

Names / Brad and Angelina

Slide 8

7

Lima / city/ big

Slide 9

8

Tokyo / city/ crowded

Slide 10

9

That / cell phone / small

Slide 11

10

Those / sunglasses / cool

Slide 12

QUIZ

- Ahora verás unas respuestas y deberás escribir las preguntas. Escribe una pregunta completa. En algunos casos tendrás una ayuda en paréntesis.
- Solo tendrás unos segundos para escribir cada pregunta. Responde lo mas rápido que puedas.
- No se permite hacer preguntas durante el quiz.

Slide 13

11

A:_____an actor?
B: No, he isn't.

Slide 14

12

A:_____a singer?
B: Yes, she is.

Slide 15

13

A:_____actors?
B: Yes, they are.

Slide 16

14

A:_____from?
B: Argentina.

Slide 17

15

A: Where_____?
B: Colombia.

Slide 18

16

A:_____?
B: The USA.

Slide 19

17

A:_____now?

B: Yes, he is.

(listen to music)

Slide 20

18

A:_____now?

B: Yes, they are.

(watch TV)

Slide 21

19

A:_____?

B: No, she doesn't.

(like hamburguers)

Slide 22

20

A:_____?

B: Yes, they do.

(like salad)

Slide 23

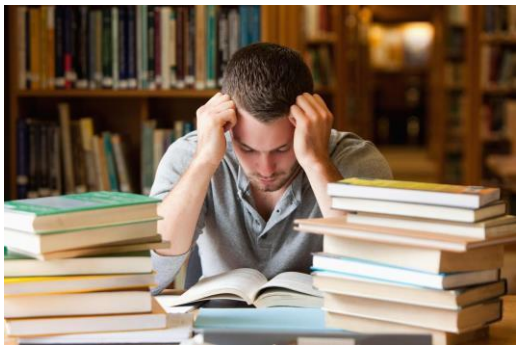
QUIZ

- Ahora responde a las preguntas de acuerdo a las imágenes. En algunos casos tendrás una ayuda en paréntesis. Usa oraciones completas o respuestas cortas (de acuerdo a la pregunta).
  - Solo tendrás unos segundos para escribir cada respuesta. Responde lo mas rápido que puedas.
- No se permite hacer preguntas durante el quiz.

Slide 24

21

What is he doing?



(study)

Slide 25

22

What is she doing?

(watch TV)

Slide 26

23

What are they doing?

(eat)

Slide 27

24

Is she talking on the phone?

Slide 28

25

Are they exercising?

Slide 29

26

Is he studying?

Slide 30

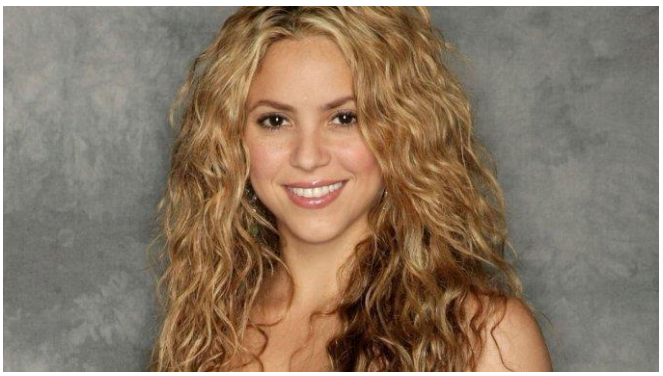
27

Does he like vegetables?

Slide 31

28

Does she live in Lima?



Slide 32

29

Do they work in a hospital?

Slide 33

30

What does he like?

(soccer)

Slide 34

31

Where does she live?

(in New York)

Slide 35

32

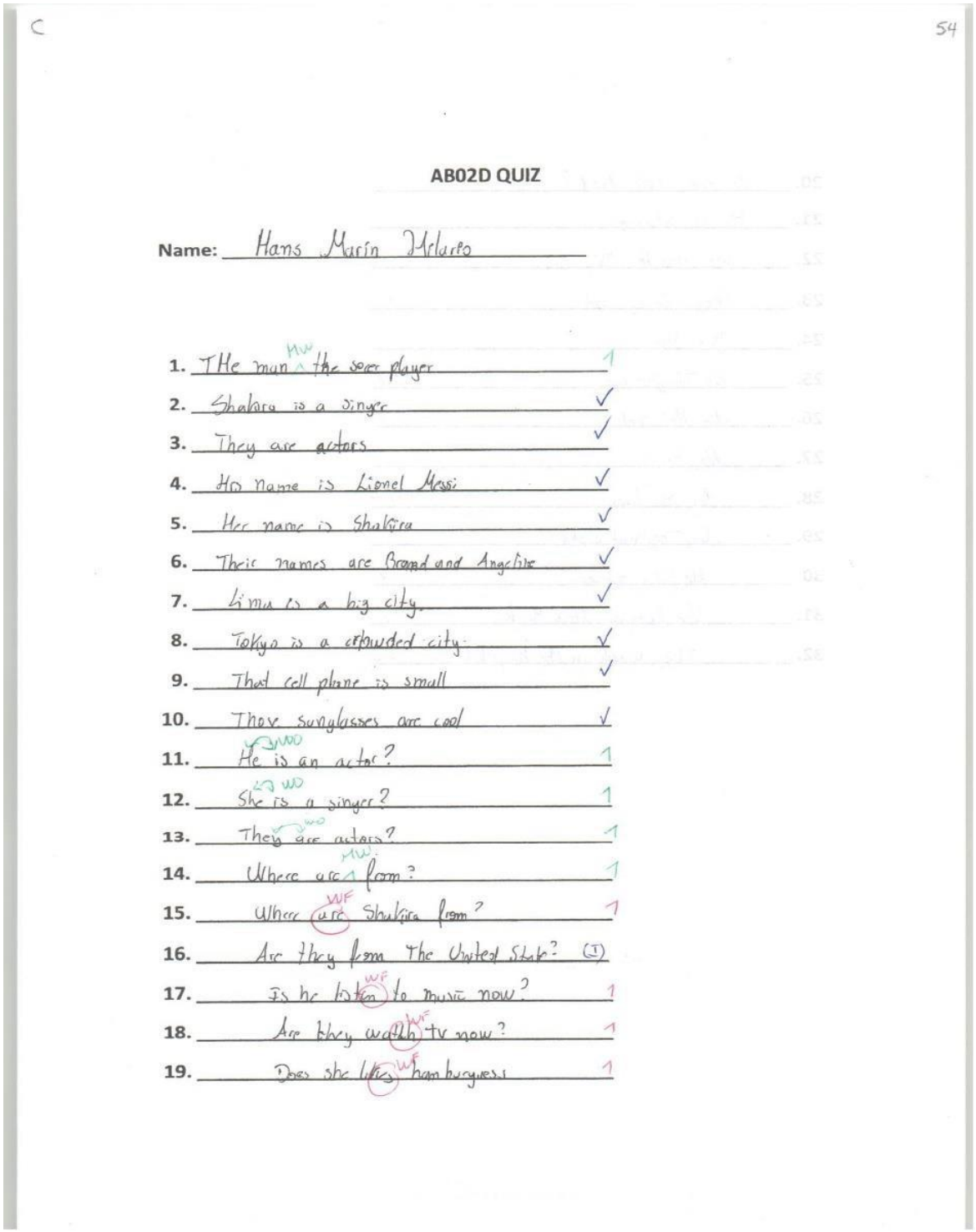
Where do they work?

(in a hospital)

Appendix 5: Sample Scored Tests

RATER 1 (The Researcher)

S4-A



C 54

AB02D QUIZ

Name: Hans Marín Hilario

1. THe man HW the soccer player 1
2. Shakira is a singer ✓
3. They are actors ✓
4. His name is Lionel Messi ✓
5. Her name is Shakira ✓
6. Their names are Brand and Angelina ✓
7. Lima is a big city. ✓
8. Tokyo is a crowded city. ✓
9. That cell phone is small ✓
10. Thos sunglasses are cool ✓
11. He is an actor? WO 1
12. She is a singer? WO 1
13. They are actors? WO 1
14. Where are HW from? 1
15. Where are WF Shakira from? 1
16. Are they from The United State? (I)
17. Is he listen WF to music now? 1
18. Are they watch WF tv now? 1
19. Does she likes WF hamburgues 1

S4-B

20. Do they like food ? ✓
21. He is studing. ✓
22. She watch TV. 1 1
23. They doing eat 1 2
24. Yes, She is ✓
25. No. They're not ✓
26. No, He's not ✓
27. No, he 1
28. Yes, She lives (I)
29. No, They not work 1
30. He likes soccer ✓
31. She lives in New York ✓
32. They work in the hospital ✓

S5-A

C

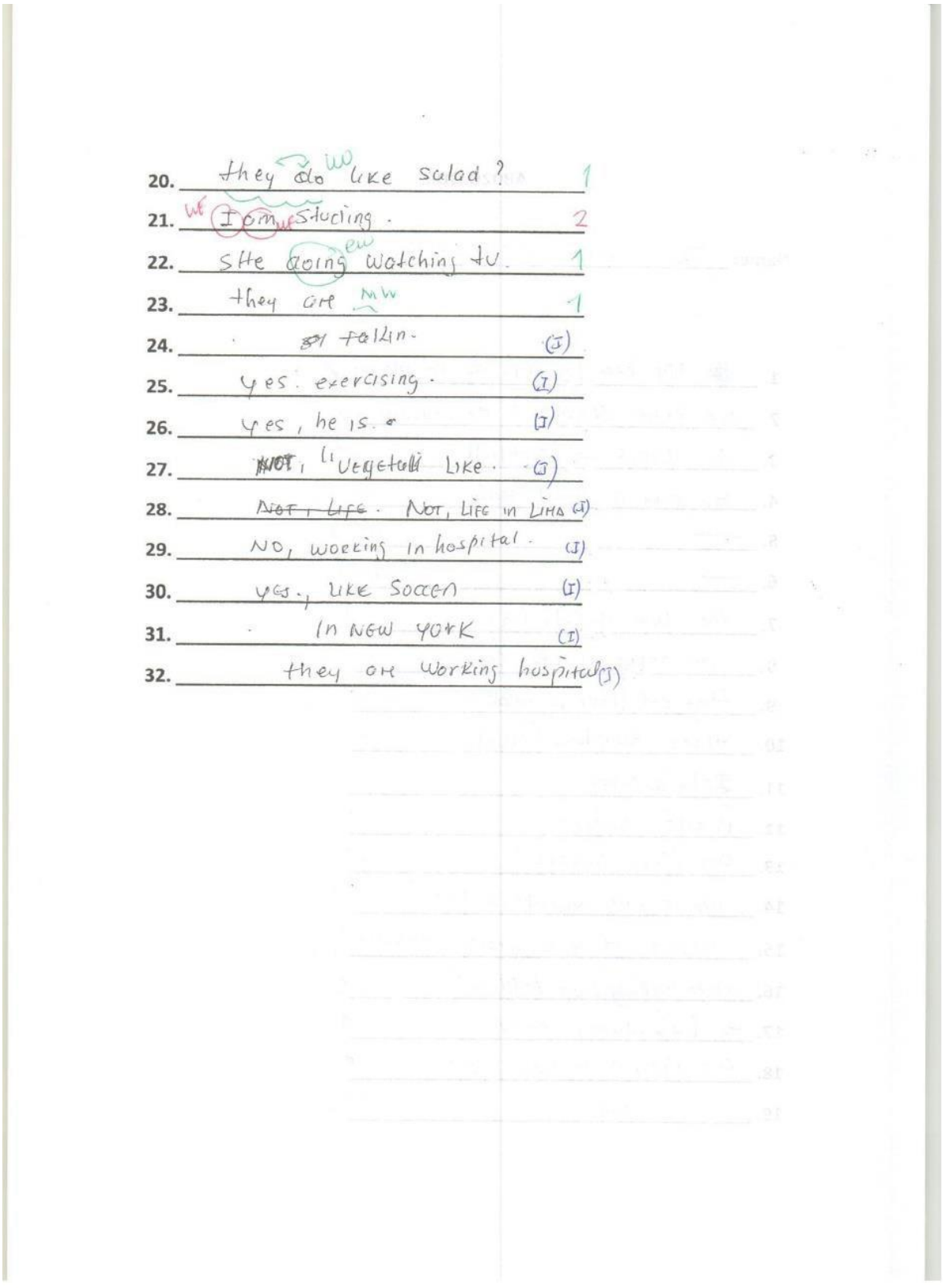
S5

AB02D QUIZ

Name: TAFUR GORAY, LISSETT KATIA.

1. ~~the~~ My best friend is soccer player ✓
2. the singer Shakira is my favorite. ✓
3. the actors are beautifull. ✓
4. My name is Lionel Messi. 1
5. . (I)
6. — (I)
7. the Lima is city big. 2
8. the tokyo is city crowded. 2
9. that cell phone is small. ✓
10. those sunglass scool 1
11. Is he a actor. 1
12. is she singer? 1
13. are they actors? ✓
14. Where are you from Messi? 1 2
15. Where are you from Shakira? 1 2
16. Where are you from Angelina? 2
17. Is he musica now? 1
18. are they now watch tv? 1 1
19. Like (I)

S5-B


20. they do like salad ? 1
21. I am studing . 2
22. She doing watching tv. 1
23. they are 1
24. ~~I~~ talkin. (I)
25. yes. exercising. (I)
26. yes, he is. (I)
27. ~~NOT~~, I vegetalli like. (I)
28. ~~Not, life~~. Not, life in LIHA (I)
29. NO, working in hospital. (I)
30. yes., like Soccer (I)
31. In NEW YORK (I)
32. they are working hospital (I)

S17-A

C

S17

AB02D QUIZ

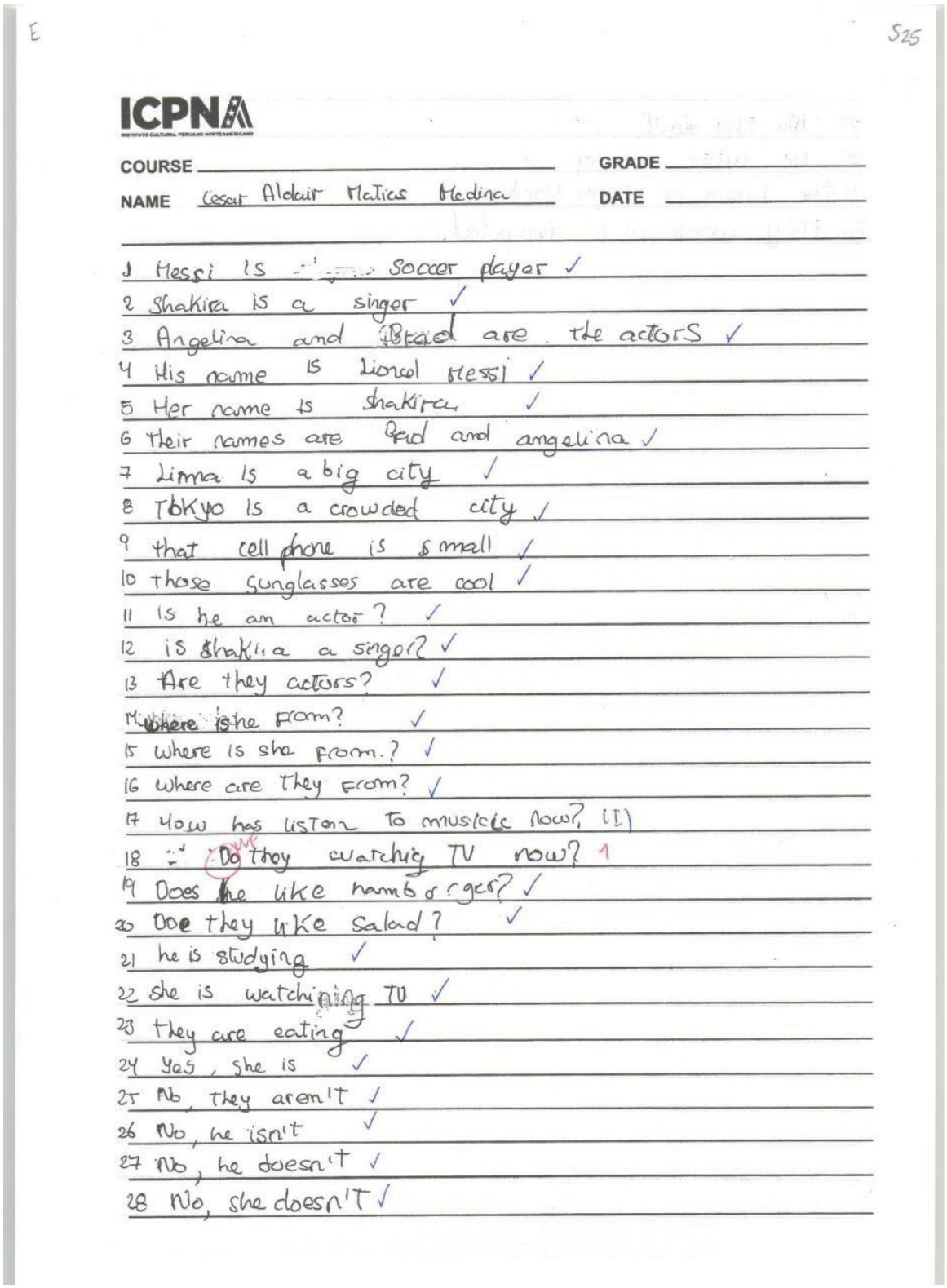
Name: Vivian Consuelo Y. Mates Alvarado.

1. He is a soccer player. ✓
2. She is a singer. ✓
3. They are aactors. ✓
4. His name is Lionel Messi ✓
5. Her name is Shakira. ✓
6. Their names are Brad and Angelina ✓.
7. Lima is a big city. ✓
8. Tokio is a crowded city. ✓
9. / — (I)
10. Those are a (ew) cool sunglasses. 1
11. Is he an actor? ✓
12. Is she a singer? ✓
13. Are they actors? ✓
14. Where is Lionel from? ✓
15. Where is Shakira from? ✓
16. Where are They from? ✓
17. Is he listening to music now? ✓
18. Are They wadht (wf) tv now? 1 — 19. — (I)
20 ~~19.~~ Are (wf) They like salad? 1

S17-B

20. He is studing. ✓
21. She is watching Tv. ✓
22. They are eating. ✓
23. Yes, she dues. ✓
24. No, they are WF 1
25. No, He doesn't WF 1
26. No, he deesn't. ✓
27. No, she doesn't. ✓
28. ~~FF~~ Yes, They do. (I)
29. He likes soccer. ✓
30. She live WF in New York 1
31. They work in a hospital. ✓
32.

S25-A



E S25

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INSTITUTO CULTURAL PERUANO NORTEAMERICANO

COURSE _____ GRADE _____

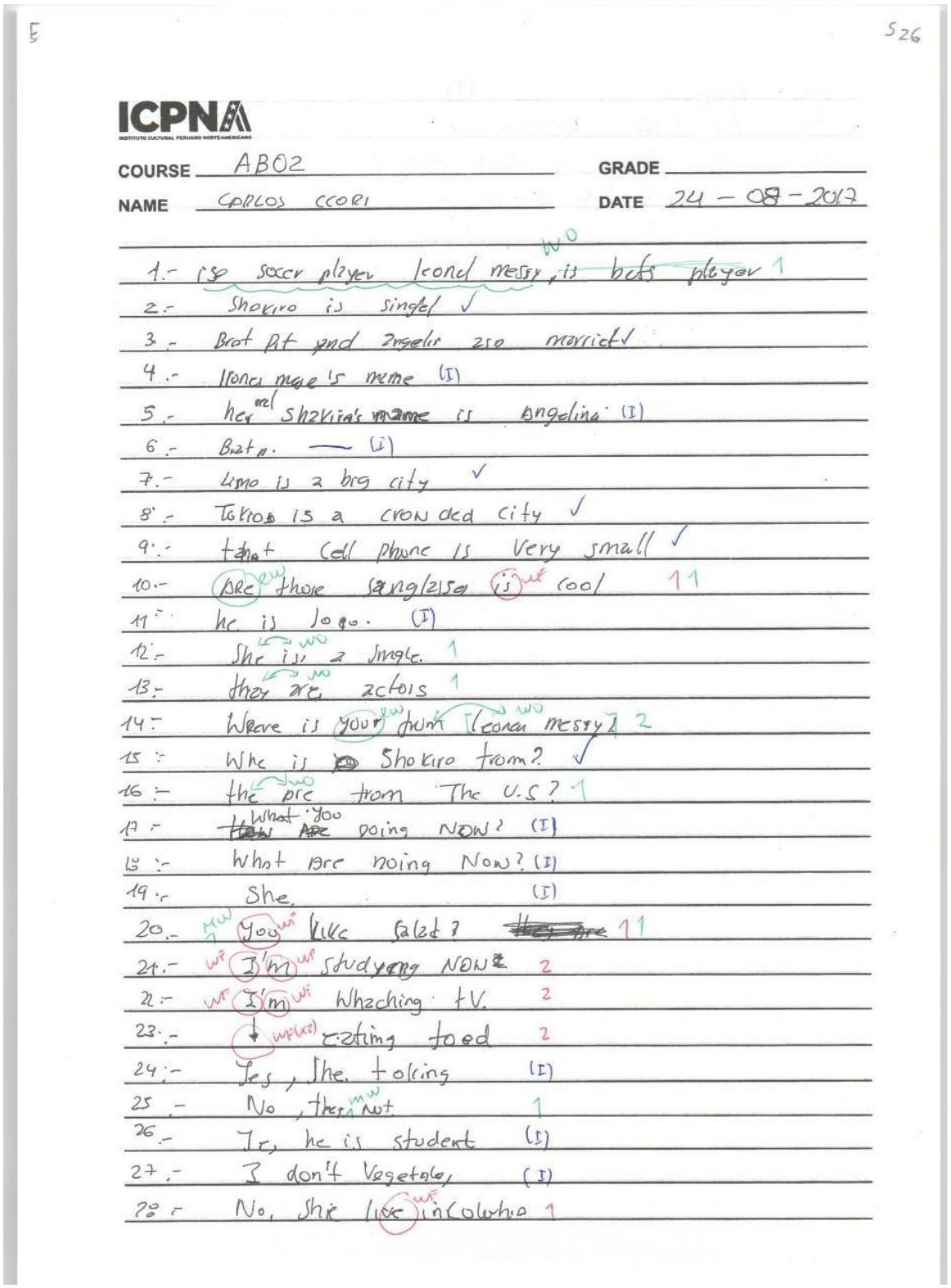
NAME Cesar Aldair Matias Medina DATE _____

1 Messi is a soccer player ✓
2 Shakira is a singer ✓
3 Angelina and Brad are the actors ✓
4 His name is Lionel Messi ✓
5 Her name is Shakira ✓
6 Their names are Brad and angelina ✓
7 Lima is a big city ✓
8 Tokyo is a crowded city ✓
9 that cell phone is small ✓
10 those sunglasses are cool ✓
11 Is he an actor? ✓
12 is Shakira a singer? ✓
13 Are they actors? ✓
14 Where is he from? ✓
15 where is she from.? ✓
16 where are they from? ✓
17 How has listen to musicis now? (1)
18 Do they watching TV now? 1
19 Does he like hamburgers? ✓
20 Doe they like Salad? ✓
21 he is studying ✓
22 she is watching TV ✓
23 they are eating ✓
24 Yes, she is ✓
25 No, they aren't ✓
26 No, he isn't ✓
27 No, he doesn't ✓
28 No, she doesn'T ✓

S25-B

29 No, they don't ✓
30 he likes soccer ✓
31 She lives in New York ✓
32 they work in a hospital ✓

S26-A



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COURSE AB02 GRADE
NAME CARLOS CCORI DATE 24 - 08 - 2017

1.- (S) soccer player Iconel messy, is bests player 1
2.- Shakira is single ✓
3.- Brat Pt and Angelis zso married ✓
4.- Iconel mge's meme (I)
5.- her Shakira's name is Angelina (I)
6.- Brat p. — (I)
7.- Lima is a big city ✓
8.- Tokios is a crowded city ✓
9.- that cell phone is very small ✓
10.- are there Sanglelsa is cool 1 1
11.- he is Jogo. (I)
12.- She is a single. 1
13.- they are actors 1
14.- Where is your phone Iconel messy? 2
15.- Whe is Shakiro from? ✓
16.- the are from The U.S? 1
17.- ~~How~~ What you ~~are~~ doing NOW? (I)
18.- What are doing Now? (I)
19.- She. (I)
20.- You like salad? ~~They are~~ 1 1
21.- I'm studying NOW 2
22.- I'm Whaching tV. 2
23.- ↓ eating food 2
24.- Yes, She. taking (I)
25.- No, there not 1
26.- Ir, he is student (I)
27.- I don't Vegetale, (I)
28.- No, She live in Colombia 1

S26-B

29 - No, (I)
30.. he likes soccer ✓
31.. She lives in New York. ✓
32.- ~~they~~ Working wf in an Hospital 1

S33-A

E

533

ICPNA
INSTITUTO CULTURAL PERUANO NORTEAMERICANO

COURSE _____ GRADE _____

NAME Kennedy Pacheco DATE Augusth 24th

1) the soccer play is intersting (I)
2) ~~the~~ Shakira is singer ✓
3) the actors are famous ✓
4) Your name is Lionel messi 1
5) Your name is Shakira 1
6) Their names are Angelina and Brad ✓
7) Lima is big city 1
8) Tokyo is crowded city 1
9) the cellphone is small ✓
10) Those sunglasses are cool ✓
11) ~~He~~ ~~like~~ an actor? ✓
12) Is She a singer? ✓
13) Are they actors? ✓
14) Where is He from? ✓
15) Where is She from? ✓
16) Where are they from? ✓
17) Who is do, now? (I)
18) Are they now? 1
19) does she doing? (I)
20) they do like salad? 1
21) I my studying 2
22) She's watching TV. ✓
23) they are eating ✓
24) Yes, She Is. ✓
25) No, they aren't ✓
26) No, He isn't ✓
27) No, He doesn't like. ew 1
28) No, She doesn't ✓

S33-B

29) no, they don't ✓
30) He does like soccer. 11
31) She lives in NY. ✓
32) they work at the Hospital ✓

S44-A

E

S44

ICPNA
INSTITUTO CULTURAL PERUANO NORTEAMERICANO

COURSE _____ GRADE _____

NAME Padilla Ramos Alejandra DATE _____

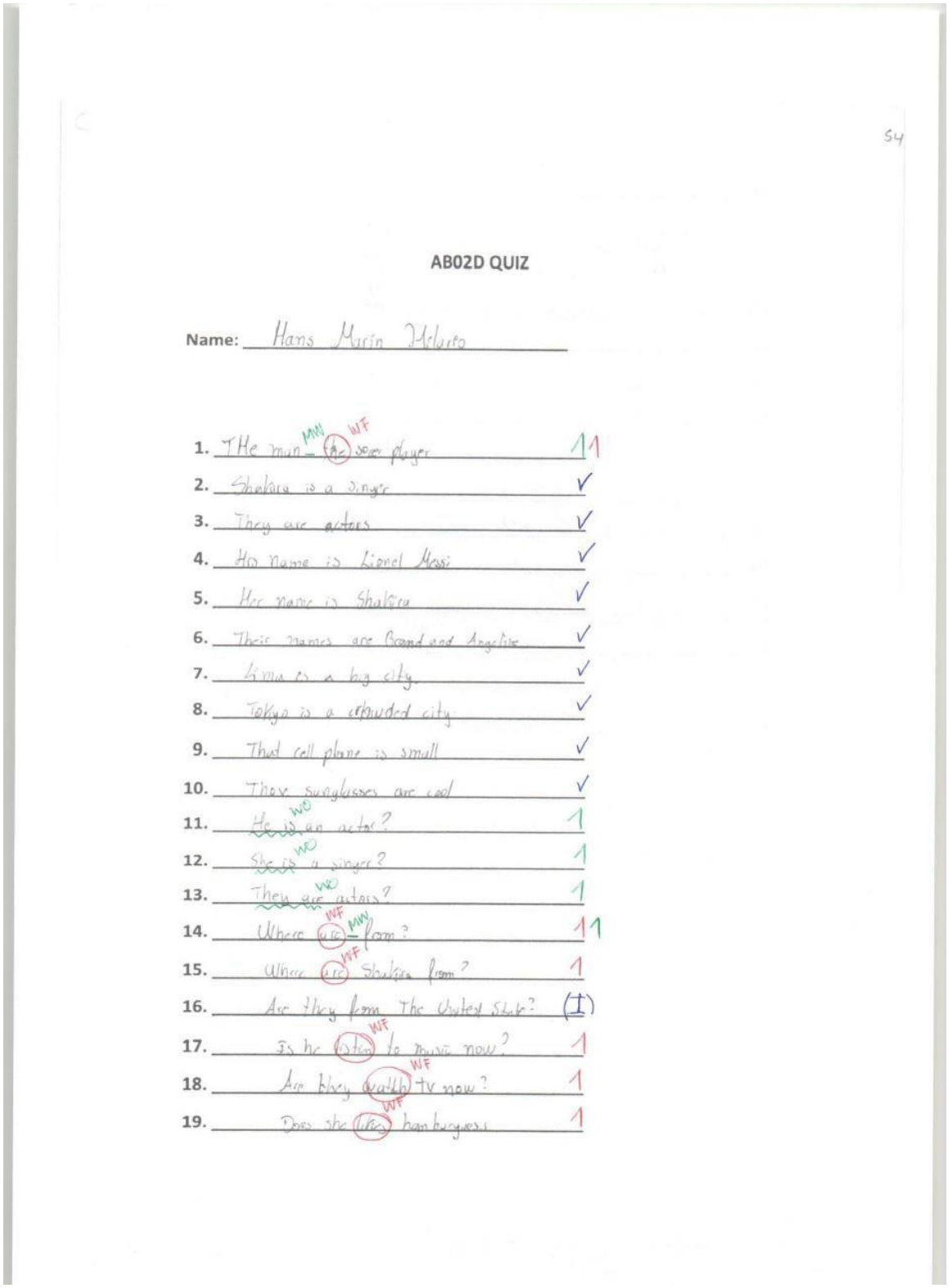
1 He is a soccer player ✓
2. Shakira is a singer ✓
3 they all actors ✓
4 His name is Lionel Messi ✓
5 Her name is Shakira ✓
6 their names all Brad and Angelina ✓
7 Lima is a big city ✓
8 tokyo is a crowded city ✓
9 that cellphone is small ✓
10 those sunglasses are cool ✓
11. Is he an actor? ✓
12 Is she a singer? ✓
13 Are they actors? ✓
14 where is he from? ✓
15 where is she from? ✓
16 where are they from? ✓
17 Is she listening to music now? ✓
18 Are they watching tv now? ✓
19 Does she like hamburgers? ✓
20 DO they like salad? ✓
21 he is studying ✓
22 she is watching tv ✓
23 they are eating ✓
24 yes, she is ✓
25. NO, they arent ✓ they are texting
26 NO, he isn't. ✓
27 NO, he doesn't ✓
28. NO, she doesn't ✓ ~~she~~ It

S44-B

29. No, they don't ✓.
30 He likes soccer ✓.
31 She lives in new york ✓
32. They work in a hospital ✓

RATER 2

S4-A



S4

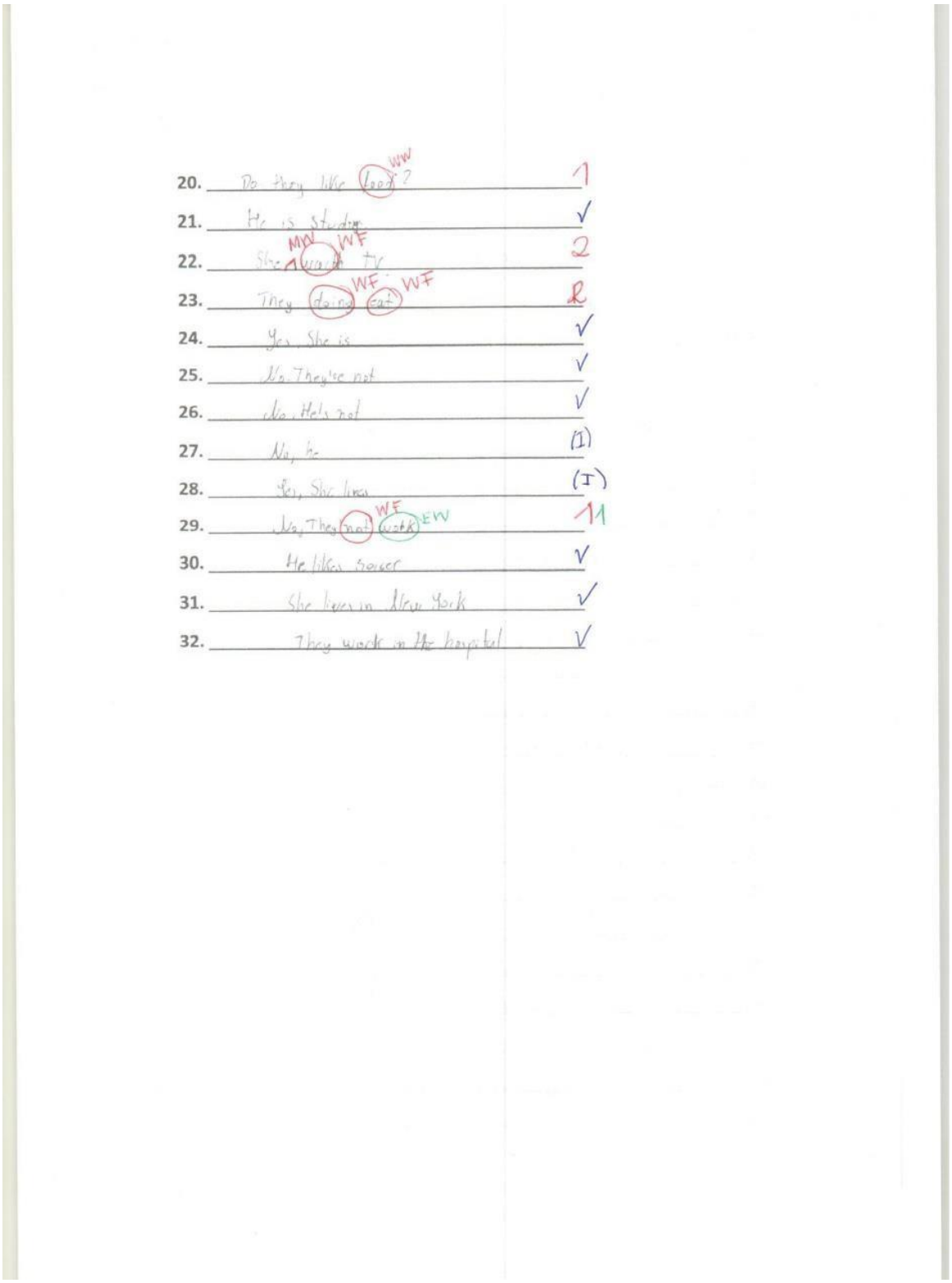
AB02D QUIZ

Name: Hans Marin Hilario

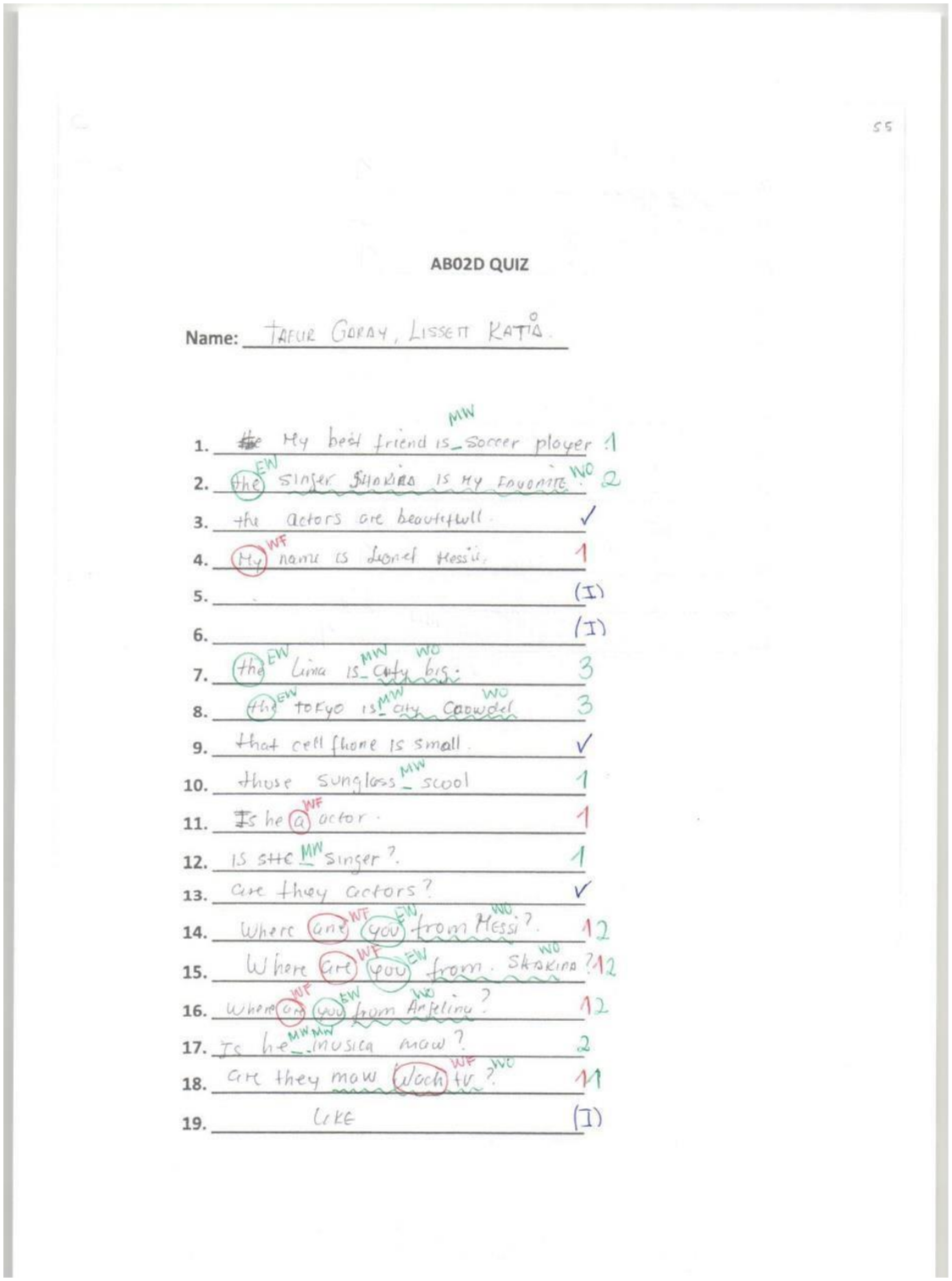
1. THe man – the soccer player MW WF 1 1
2. Shakira is a singer ✓
3. They are actors ✓
4. His name is Lionel Messi ✓
5. Her name is Shakira ✓
6. Their names are Brand and Angeline ✓
7. Lima is a big city ✓
8. Tokyo is a crowded city ✓
9. That cell plane is small ✓
10. Those sunglasses are cool ✓
11. He is an actor? WO 1
12. She is a singer? WO 1
13. They are actors? WO 1
14. Where are – from? WF MW 1 1
15. Where are Shakira from? WF 1
16. Are they from The United State? (I)
17. Is he listen to music now? WF 1
18. Are they watch tv now? WF 1
19. Does she likes hamburgers WF 1

S4-B

20. Do they like Lood? WW 1
21. He is studying ✓
22. She ^ WF watch TV MW 2
23. They doing WF eat WF 2
24. Yes, She is ✓
25. No. They're not ✓
26. No, He's not ✓
27. No, he (I)
28. Yes, She lives (I)
29. No, They not WF work EW 11
30. He likes soccer ✓
31. She lives in New York ✓
32. They work in the hospital ✓



S5-A



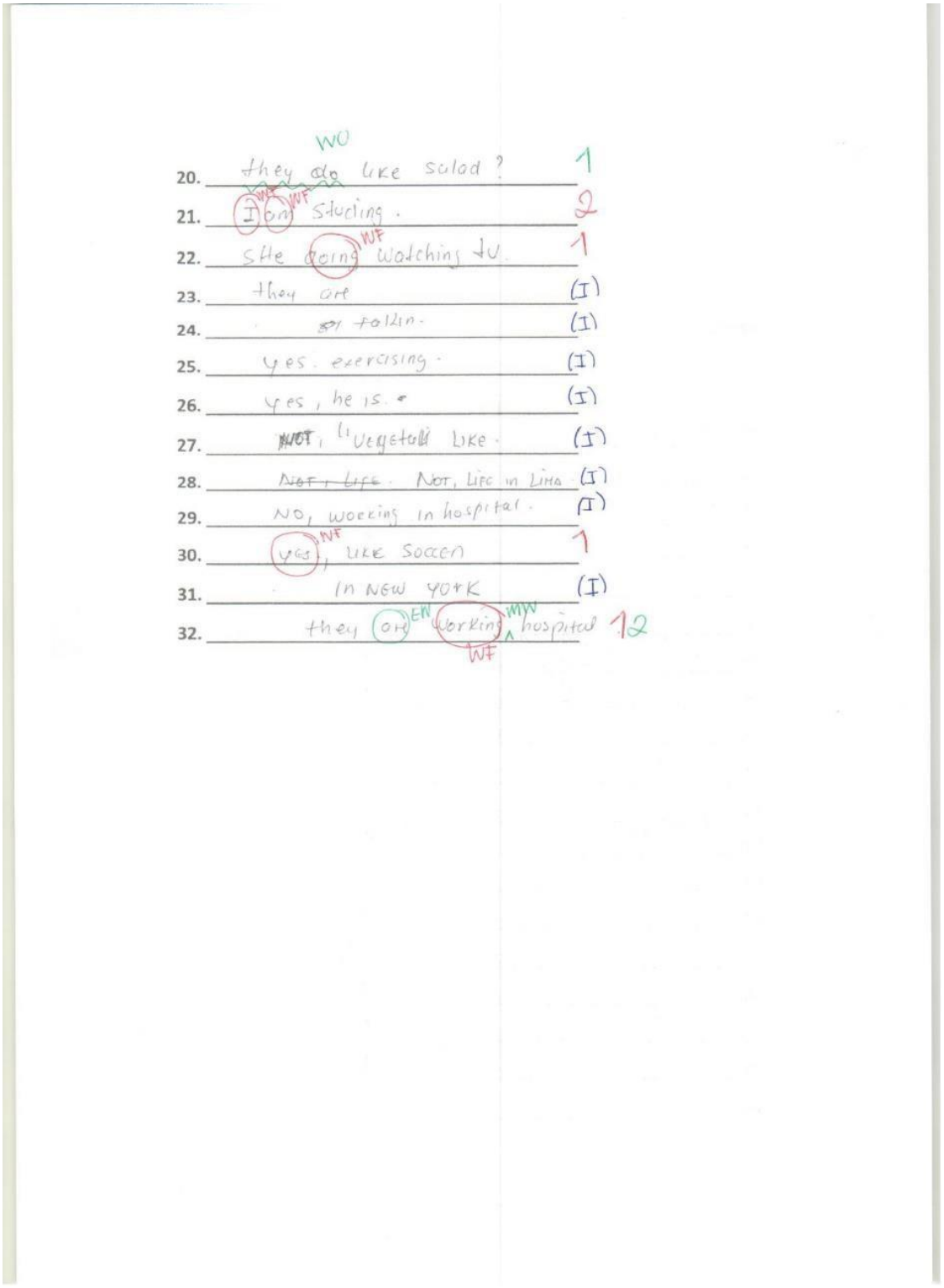
S5

AB02D QUIZ

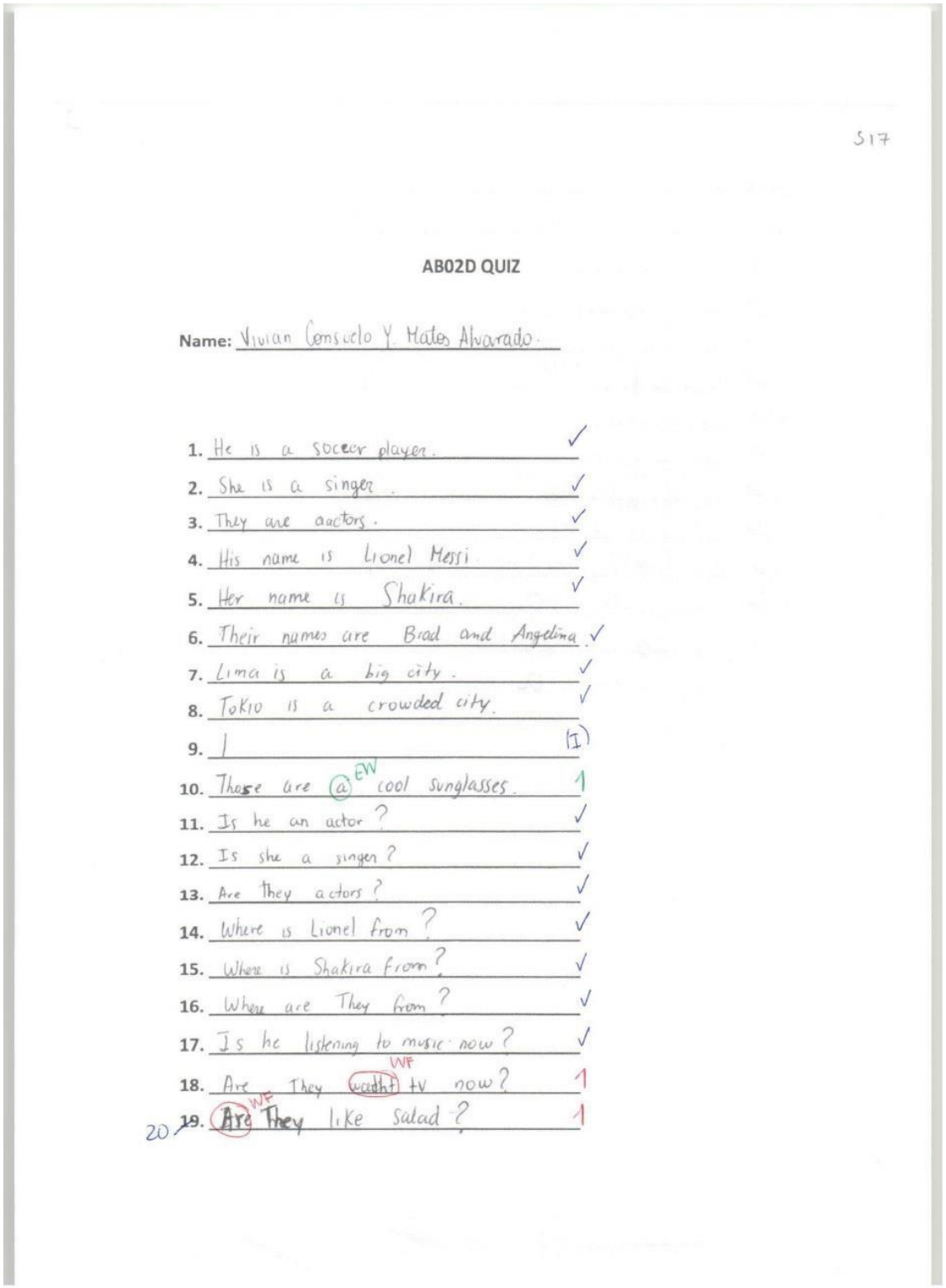
Name: TAFUR GARAY, LISSETT KATIA.

1. ~~the~~ My best friend is MW soccer player 1
2. the EW singer Shakira is my favorite WO 2
3. the actors are beautifull ✓
4. My WF name is Lionel Messi. 1
5. (I)
6. (I)
7. the EW Lima is MW city WO big. 3
8. the EW tokyo is MW city WO Crowdel 3
9. that cell phone is small. ✓
10. those sunglass MW scool 1
11. Is he a WF actor. 1
12. is she MW singer? 1
13. are they actors? ✓
14. Where are WF you EW from Messi WO? 12
15. Where are WF you EW from Shakira WO? 12
16. Where are WF you EW from Angelina WO? 12
17. Is he MW MW musica maw? 2
18. are they maw Wach WF tv WO? 11
19. like (I)

S5-B


20. they do like salad ? 1
21. I am studing . 2
22. She doing watching tv. 1
23. they are (I)
24. ~~am~~ talkin. (I)
25. yes. exercising. (I)
26. yes, he is. (I)
27. ~~NOT~~, li Vegetalli like. (I)
28. ~~Not, life~~. Not, Life in Lima (I)
29. No, working in hospital. (I)
30. yes, like soccer 1
31. In New York (I)
32. they are working hospital 12

S17-A



S17

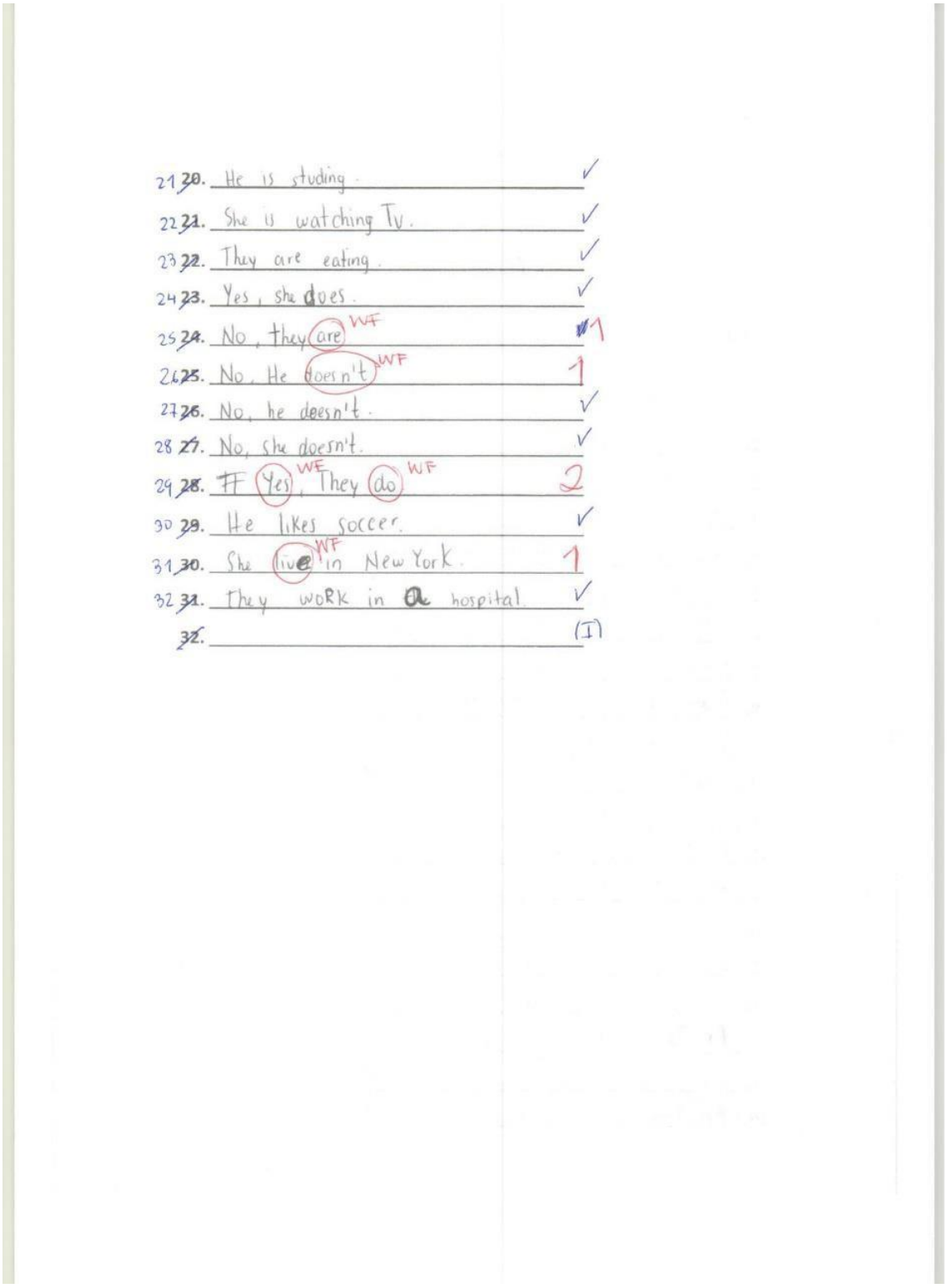
AB02D QUIZ

Name: Vivian Consuelo Y. Mateo Alvarado.

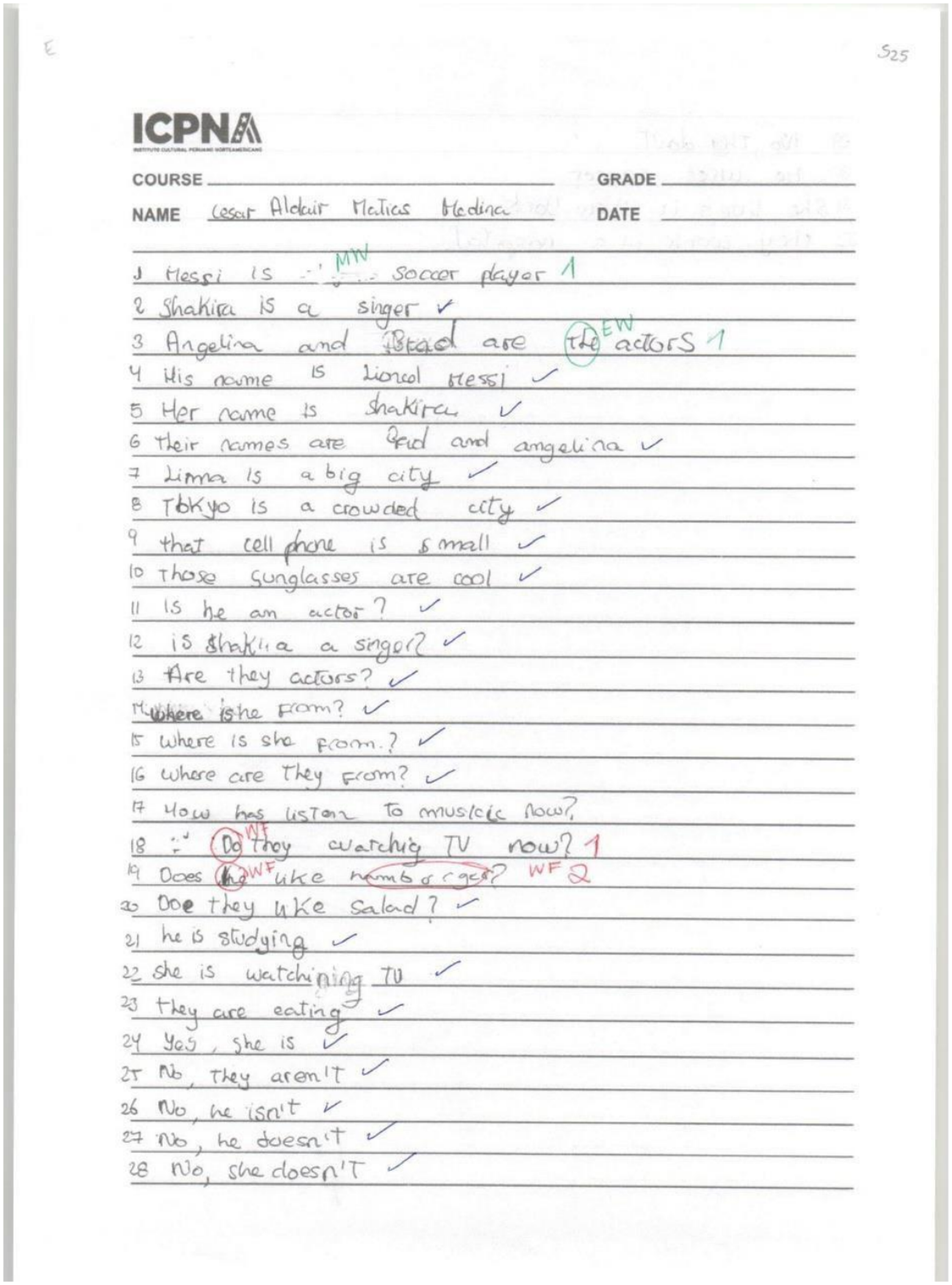
1. He is a soccer player. ✓
2. She is a singer. ✓
3. They are aactors. ✓
4. His name is Lionel Messi. ✓
5. Her name is Shakira. ✓
6. Their names are Brad and Angelina ✓
7. Lima is a big city. ✓
8. Tokio is a crowded city. ✓
9. I (I)
10. Those are (a) EW cool sunglasses. 1
11. Is he an actor? ✓
12. Is she a singer? ✓
13. Are they actors? ✓
14. Where is Lionel from? ✓
15. Where is Shakira from? ✓
16. Where are They from? ✓
17. Is he listening to music now? ✓
18. Are They (watch) WF tv now? 1
19. ~~Are~~ (Are) WF They like salad? 1

20/

S17-B


21 20. He is studing. ✓
22 21. She is watching Tv. ✓
23 22. They are eating. ✓
24 23. Yes, she does. ✓
25 24. No, they care WF 1
26 25. No, He doesn't WF 1
27 26. No, he doesn't. ✓
28 27. No, she doesn't. ✓
29 28. FF Yes WF, They do WF 2
30 29. He likes soccer. ✓
31 30. She live WF in New York. 1
32 31. They work in a hospital. ✓
32. (I)

S25-A



S25

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INSTITUTO CULTURAL PERUANO NORTEAMERICANO

COURSE _____ GRADE _____

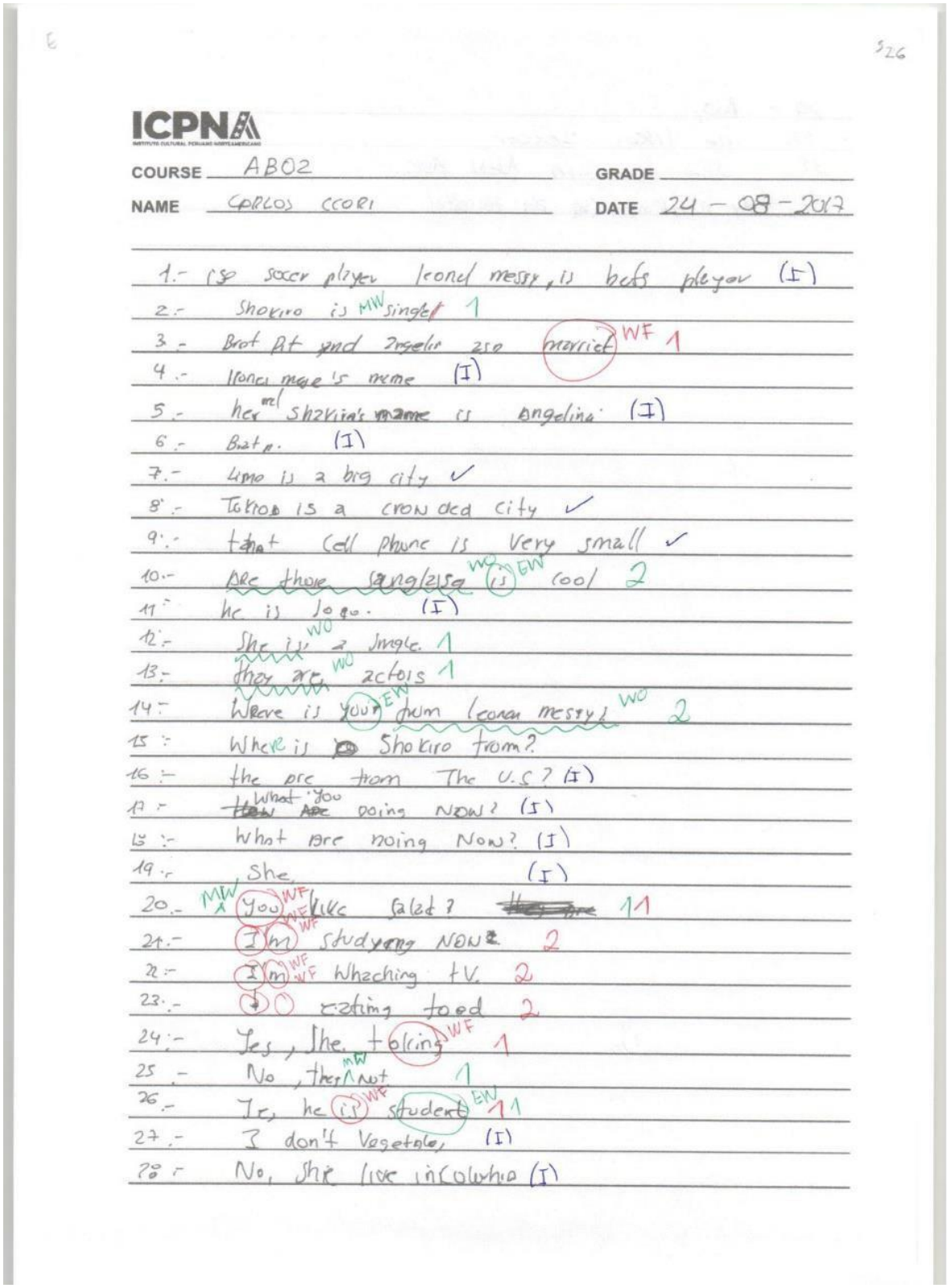
NAME Cesar Aldair Matias Medina DATE _____

1 Messi is a MW soccer player 1
2 Shakira is a singer ✓
3 Angelina and Brad are the EW actors 1
4 His name is Lionel Messi ✓
5 Her name is Shakira ✓
6 their names are Brad and angelina ✓
7 Lima is a big city ✓
8 Tokyo is a crowded city ✓
9 that cell phone is small ✓
10 Those sunglasses are cool ✓
11 Is he an actor? ✓
12 is Shakira a singer? ✓
13 Are they actors? ✓
14 ~~Where is~~ she From? ✓
15 Where is she from.? ✓
16 Where are they From? ✓
17 How has listen to musick now?
18 Do they WF watching TV now? 1
19 Does he WF like numbers? WF 2
20 Doe they like salad? ✓
21 he is studying ✓
22 she is watching TV ✓
23 they are eating ✓
24 Yes, she is ✓
25 No, they aren't ✓
26 No, he isn't ✓
27 No, he doesn't ✓
28 No, she doesn't ✓

S25-B

29 No, they don't ✓
30 He likes soccer ✓
31 She lives in New York ✓
32 they work in a hospital ✓

S26-A



S26

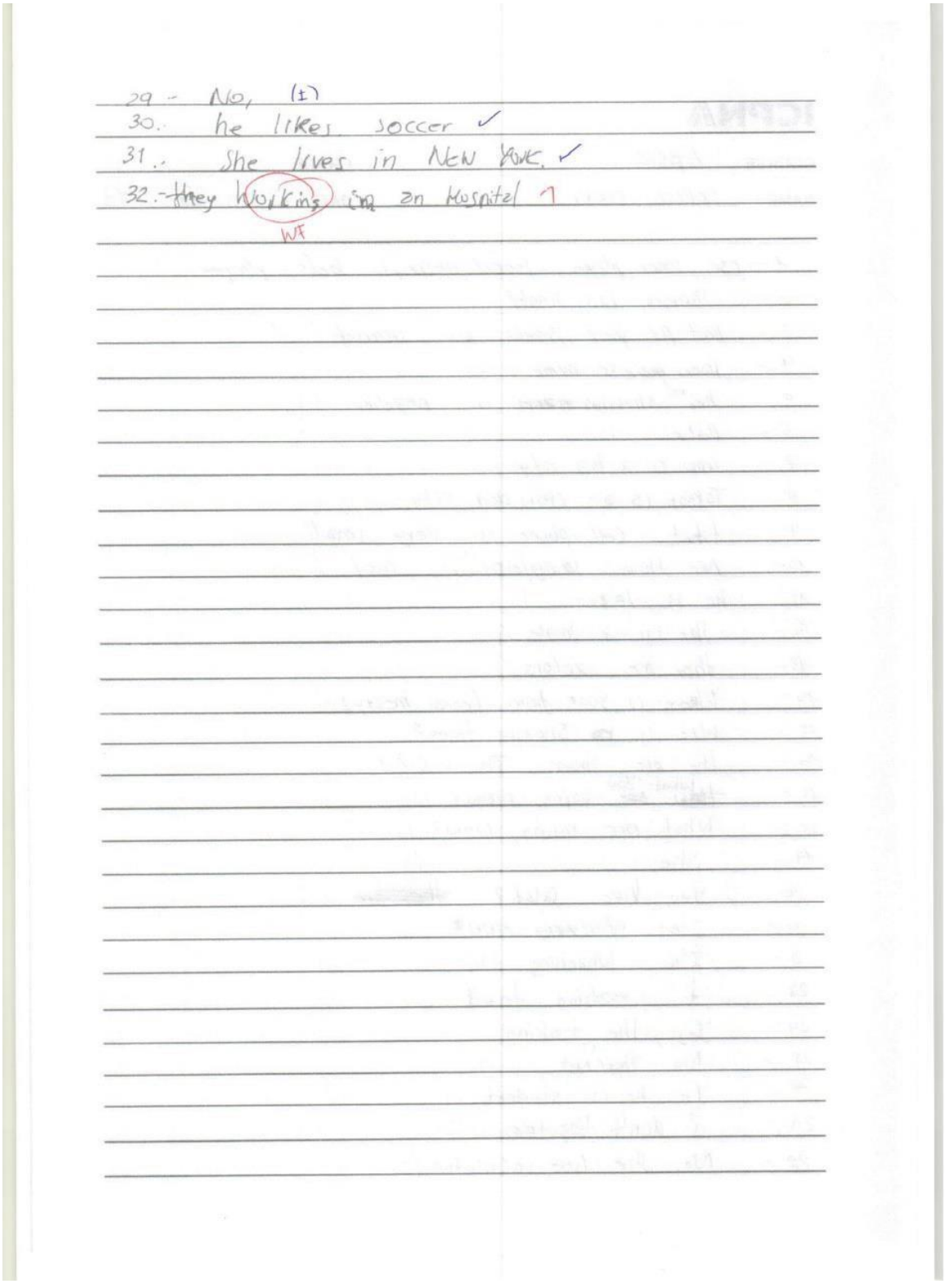
ICPNA

COURSE AB02 GRADE

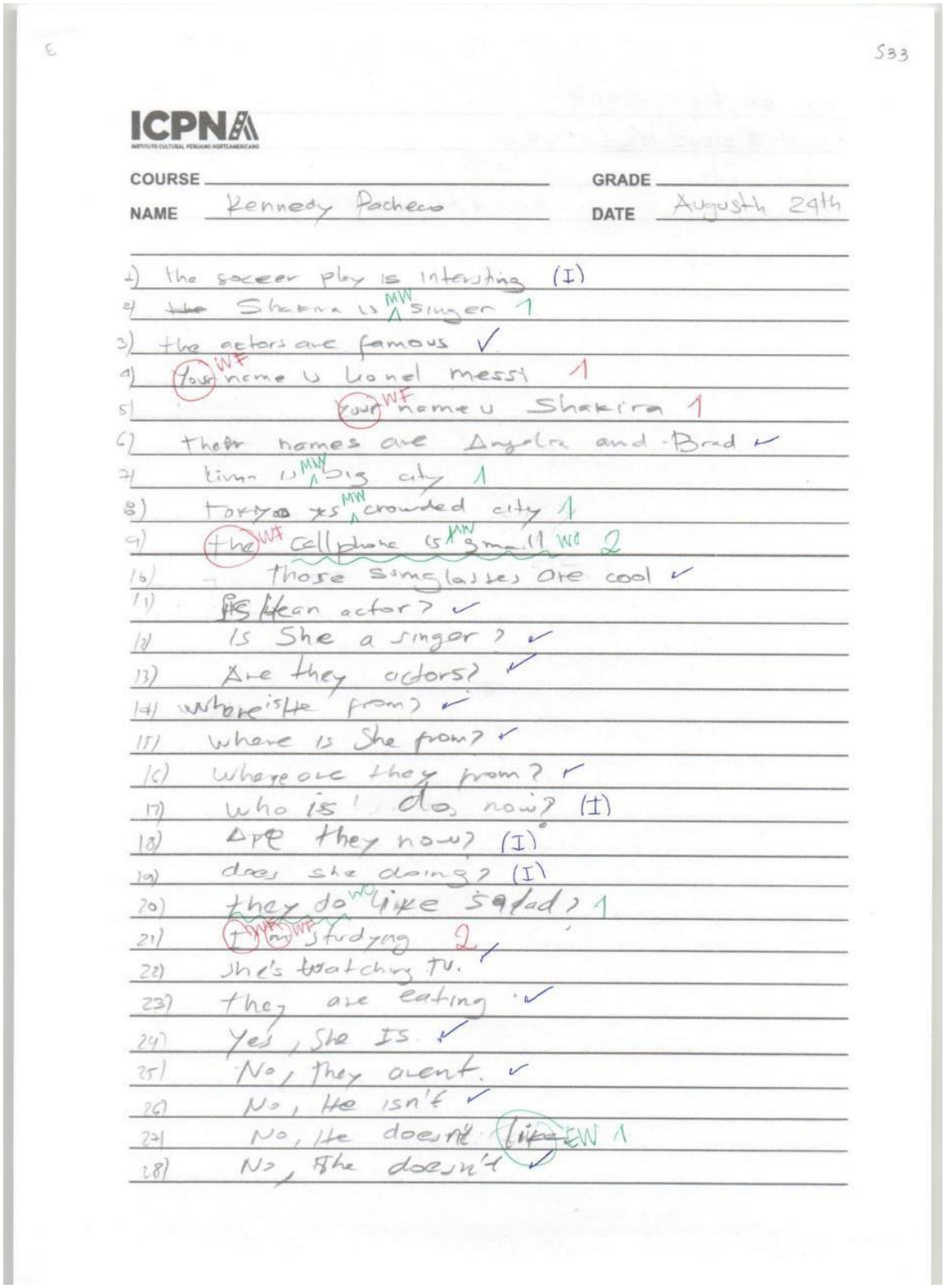
NAME CARLOS CCORI DATE 24 - 08 - 2017

1.- iso soccer player leonel messy, is bets player (I)
2.- Shokiro is MW singlet 1
3.- Brot Pit and Angelin aso married WF 1
4.- Ikones mage's meme (I)
5.- her mel Shakira's ~~name~~ is Angelina (I)
6.- Bratp. (I)
7.- Limo is a big city ✓
8.- Tokio is a crowded city ✓
9.- that cell phone is very small ✓
10.- Are those sanglasa WO is EW cool 2
11.- he is Jogo. (I)
12.- She is WO a single. 1
13.- they are WO actors 1
14.- Where is your EW from leonen messy? WO 2
15.- Where is Shokiro from?
16.- the are from The U.S? (I)
17.- ~~How Are~~ What you doing Now? (I)
18.- What are doing Now? (I)
19.- She (I)
20.- MW You WF like salad? ~~they are~~ 11
21.- I m WF WF studying NOW 2
22.- I m WF WF Whaching tV. 2
23.- I O eating food 2
24.- Yes, She tolking WF 1
25.- No, they MW not 1
26.- Ye, he is WF student EW 11
27.- I don't Vegetable, (I)
28.- No, She live in Colombia (I)

S26-B


29 - No, (±)
30. he likes soccer ✓
31.. She lives in NEW YORK. ✓
32.-they working in an Hospital ?
WT

S33-A



E

S33

ICPNA
INSTITUTO CULTURAL PERUANO NORTEAMERICANO

COURSE _____ GRADE _____

NAME Kennedy Pacheco DATE Augusth 24th

1) the soceer play is intersting (I)
2) ~~the~~ Shakira is MW singer 1
3) the actors are famous ✓
4) Your WF name is Lionel messi 1
5) Your WF name is Shakira 1
6) their names are Angelia and Brad ✓
7) Lima is MW big city 1
8) Tokyo is MW crowded city 1
9) the WF cellphone is MW small WO 2
10) those sunglasses are cool ✓
11) Is Hean actor? ✓
12) Is She a singer? ✓
13) Are they actors? ✓
14) where is He from? ✓
15) where is She from? ✓
16) where are they from? ✓
17) who is do now? (I)
18) Are they now? (I)
19) does she doing? (I)
20) they do WO like salad? 1
21) I WF m WF studying 2 ✓
22) She's watching TV. ✓
23) they are eating ✓
24) Yes, She IS. ✓
25) No, they aren't. ✓
26) No, He isn't ✓
27) No, He doesn't like EW 1
28) No, She doesn't ✓

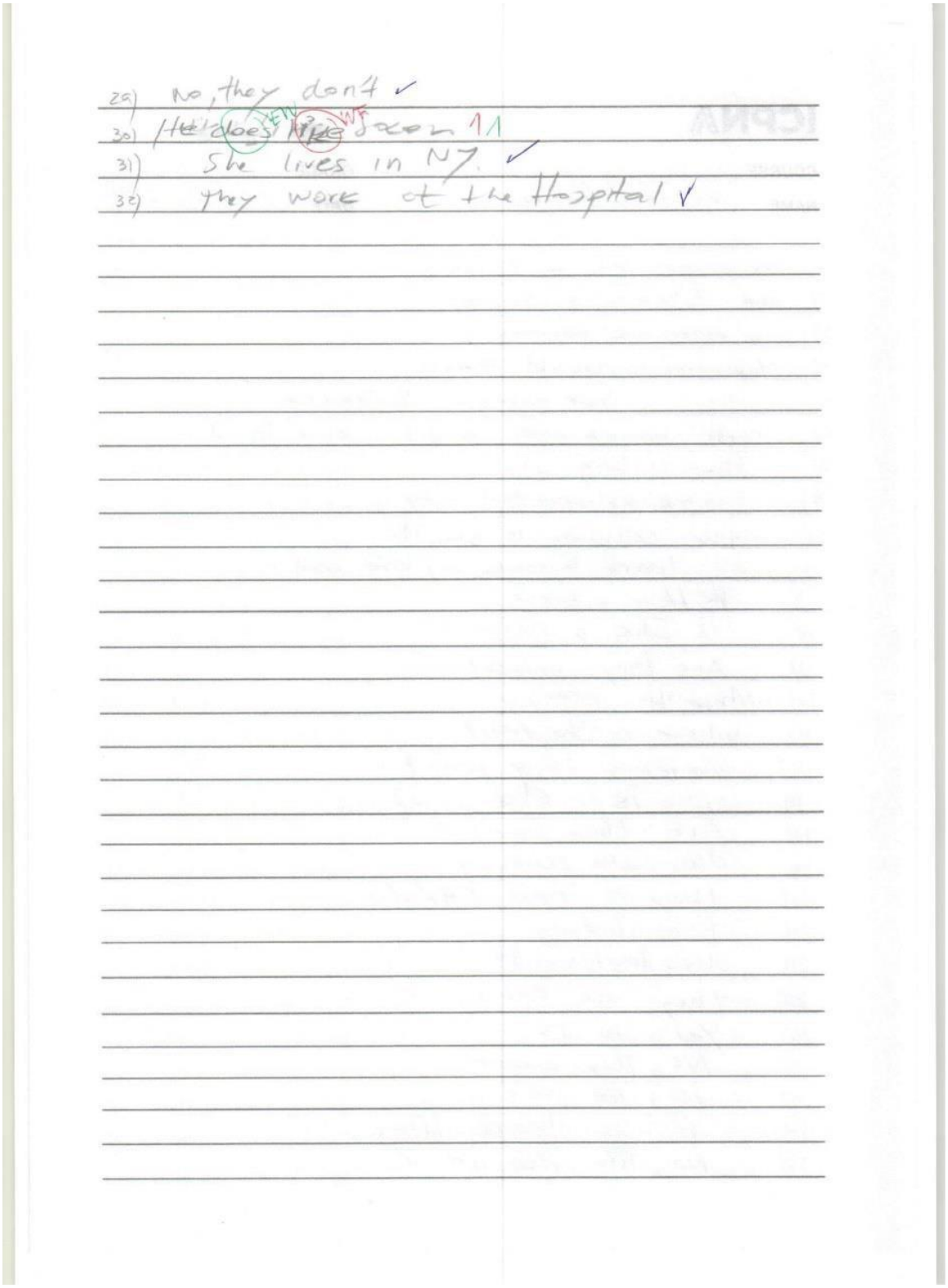
S33-B

29) No, they don't ✓

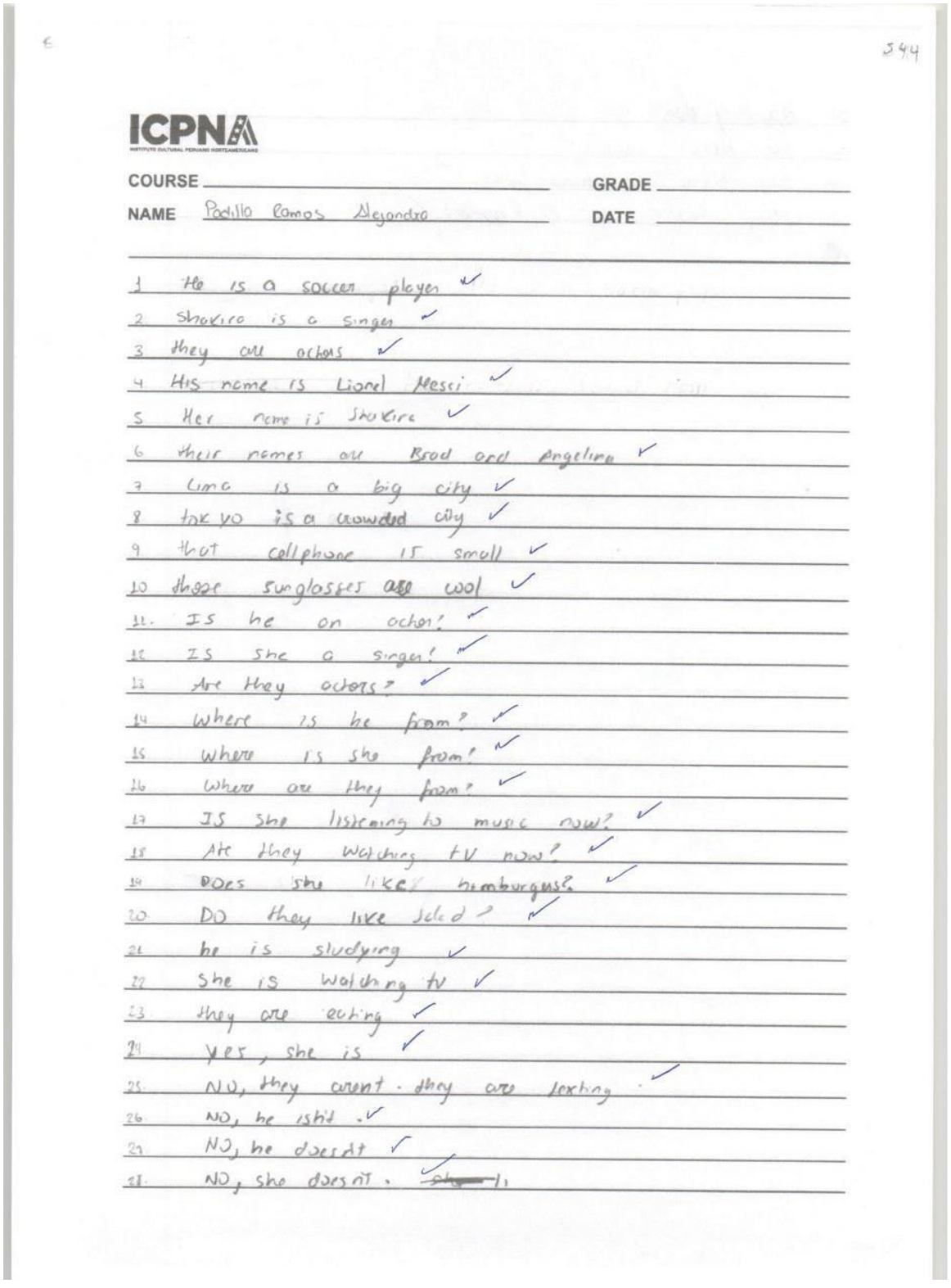
30) He does ~~like~~ soon 11

31) She lives in NY. ✓

32) They work at the Hospital ✓



S44-A



544

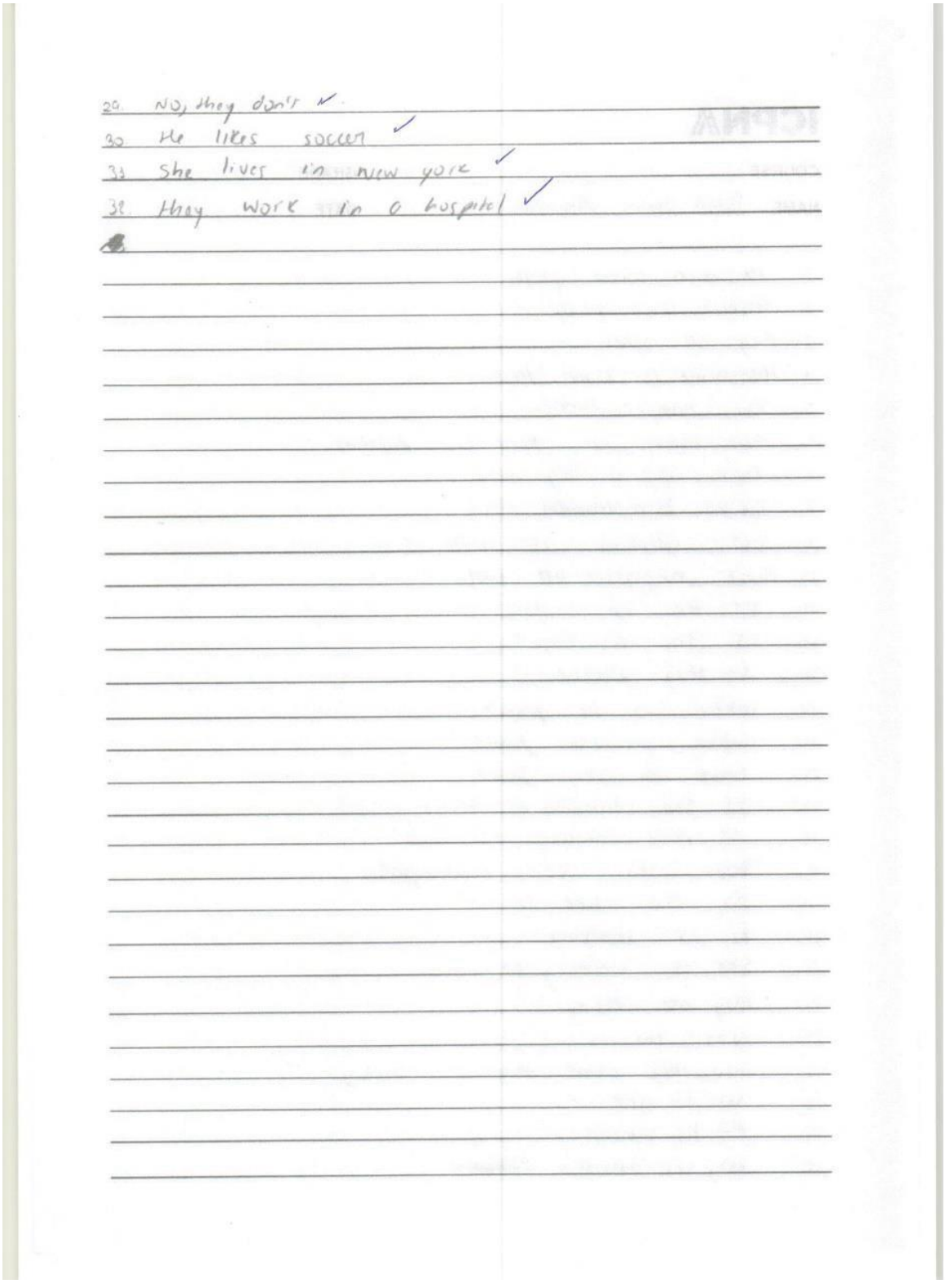
ICPNA
INSTITUTO CULTURAL PERUANO NORTEAMERICANO

COURSE _____ GRADE _____

NAME Padilla Ramos Alejandro DATE _____

1 He is a soccer player ✓
2 Shakira is a singer ✓
3 they are actors ✓
4 His name is Lionel Messi ✓
5 Her name is Shakira ✓
6 their names are Brad and Angelina ✓
7 Lima is a big city ✓
8 tokyo is a crowded city ✓
9 that cellphone is small ✓
10 those sunglasses are cool ✓
11. Is he an actor? ✓
12 Is she a singer? ✓
13 Are they actors? ✓
14 Where is he from? ✓
15 Where is she from? ✓
16 Where are they from? ✓
17 Is she listening to music now? ✓
18 Are they watching tv now? ✓
19 Does she like hamburgers? ✓
20 Do they like Jelo? ✓
21 he is studying ✓
22 She is watching tv ✓
23 they are eating ✓
24 Yes, she is ✓
25 No, they arent. they are texting ✓
26 No, he isn't. ✓
27 No, he doesn't ✓
28 No, she doesn't. ✓

S44-B


20. No, they don't
30. He likes soccer
33. She lives in new york
38. They work in a hospital

Appendix 6: Answer Key w/Target grammatical items

N°	Expected answer	Target Language /grammatical category	Target Grammatical Items
1	He is a soccer player. /Lionel Messi is a soccer player/ etc.*	The Present Simple -affirmative sentences (Verb be)	3rd person singular of be / sentence syntax
2	She is a singer. Shakira is a singer. / etc.*	The Present Simple - affirmative sentences (Verb be)	3rd person singular of be / sentence syntax
3	They are actors / They are good actors / etc.*	The Present Simple - affirmative sentences (Verb be)	3rd person plural of be / sentence syntax
4	His name is Lionel Messi.	Possessive adjectives / Present Simple of Be	3rd sing. poss. adj. (male) / 3rd sing. of be / sent. syntax
5	Her name is Shakira.	Possessive adjectives / Present Simple of Be	3rd sing. poss. adj. (female) / 3rd sing. of be /sent. syntax
6	Their names are Brad and Angelina.	Possessive adjectives / Present Simple of Be	3rd plural poss. adj. / 3rd plural of be / sent. syntax
7	Lima is a big city.	Descriptive adjectives and nouns / Pres. Simple of Be	Adj. + noun / 3rd sing. of be / indef. article 'a' / sent. syntax
8	Tokyo is a crowded city.	Descriptive adjectives and nouns / Pres. Simple of Be	Adj. + noun / 3rd sing. of be / indef. article 'a' / sent. syntax
9	That is a small cellphone. / That cellphone is small.	Descriptive adjectives and demonstratives	3rd sing. of be / indef. article 'a' / sent. syntax
10	Those are cool sunglasses. / Those sunglasses are cool.	Descriptive adjectives and demonstratives	3rd plural of be / indef. article 'a' / sent. syntax
11	Is he an actor? / Is Lionel an actor	The Present Simple -yes/no questions (Verb be)	3rd singular of be / / indef. article 'an' / question syntax
12	Is she a singer? / Is Shakira a singer	The Present Simple -yes/no questions (Verb be)	3rd singular of be / indef. article 'a' / question syntax
13	Are they actors? / Are Brad and Angelina actors?	The Present Simple -yes/no questions (Verb be)	3rd plural of be / question syntax
14	Where is he from? / Where is Lionel from?	The Present Simple - Information questions (Verb be)	3rd sing. pronoun (male) / 3rd singular of be / question syntax
15	Where is she from? / Where is Shakira from?	The Present Simple - Information questions (Verb be)	3rd sing. pronoun (female) / 3rd singular of be / question syntax
16	Where are they from?	The Present Simple - Information questions (Verb be)	3rd plural. pronoun / 3rd singular of be / question syntax

N°	Expected answer	Target Language /grammatical category	Target Grammatical Items
17	Is he listening to music now?	The Present Continuous – yes/no questions	3rd sing. of be / 3rd sing. pron. (male) / present participle / question syntax
18	Are they watching TV now?	The Present Continuous – yes/no questions	3rd plural of be / 3rd plural. pronoun / present participle / question syntax
19	Does she like hamburgers/junk food?	The Present Simple – yes/no questions	Aux. verb / 3rd sing. pronoun (female) / 3rd sing. verb / question syntax
20	Do they like salad/vegetables?	The Present Simple – yes/no questions	Aux. verb / 3rd plural. pronoun / 3rd sing. verb / question syntax
21	He is studying/reading. / He's studying/reading.	The Present Continuous – affirmative sentences	3rd sing. pron. (male) / 3rd sing. of be / pres. participle / sentence syntax
22	She is watching TV. / She's watching TV.	The Present Continuous – affirmative sentences	3rd sing. pron. (female) / 3rd sing. of be / pres. participle / sentence syntax
23	They are eating.	The Present Continuous – affirmative sentences	3rd plural. pronoun / 3rd plural of be / present participle / sentence syntax
24	Yes, she is.	The Present Continuous – short answers	3rd sing. pronoun (female) / 3rd sing. of be / short answer syntax
25	No, they aren't. / No, they're not.	The Present Continuous – short answers	3rd sing. pronoun (male) / 3rd plural of be / short answer syntax
26	No, he isn't. / No, he's not.	The Present Continuous – short answers	3rd plural. pronoun / 3rd sing. of be / short answer syntax
27	No, he doesn't.	The Present Simple – short answers	3rd sing. pronoun (male) / 3rd sing. of aux verb / short answer syntax
28	No, she doesn't.	The Present Simple – short answers	3rd sing. pronoun (female) / 3rd sing. of aux verb / short answer syntax
29	No, they don't.	The Present Simple – short answers	3rd plural pronoun male / 3rd plural of aux. verb / short answer syntax
30	He likes soccer.	The Present Simple – complete answers	3rd sing. pronoun (male) / 3rd sing. of verb / sentence syntax
31	She lives in New York.	The Present Simple – complete answers	3rd sing. pronoun (female) / 3rd sing. of be / sentence syntax
32	They work in a hospital.	The Present Simple – complete answers	3rd plural. pronoun / 3rd plural of be / sentence syntax

* another grammatical sentence containing the target language

Appendix 7: Processed Data – General Hypothesis

General Hypothesis																																	
GROUP	Stude	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	I14	I15	I16	I17	I18	I19	I20	I21	I22	I23	I24	I25	I26	I27	I28	I29	I30	I31	I32	SCORE
C-group	S1	1	1	0	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0	11
C-group	S2	1	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	7
C-group	S3	0	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	8
C-group	S4	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	0	0	0	1	1	1	17
C-group	S5	1	1	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
C-group	S6	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	24
C-group	S7	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	1	1	1	0	17
C-group	S8	1	1	1	1	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	0	0	0	1	13
C-group	S9	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	8
C-group	S10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0	1	1	1	0	0	0	0	0	0	0	21
C-group	S11	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	7
C-group	S12	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	27
C-group	S13	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	10
C-group	S14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
C-group	S15	0	1	1	0	0	0	1	1	0	1	0	1	1	1	0	0	0	0	1	0	0	0	1	1	1	1	1	0	0	0	0	0	14
C-group	S16	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
C-group	S17	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	1	1	0	1	0	1	23
C-group	S18	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	25
C-group	S19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32
C-group	S20	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

E-group	**S21**	1	1	1	0	0	0	1	1	0	1	0	1	1	1	1	0	0	0	1	0	1	1	1	0	0	0	1	0	1	1	1	1	19
E-group	**S22**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E-group	**S23**	0	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	0	1	0	1	1	0	0	0	0	9
E-group	**S24**	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	0	1	1	0	1	1	1	1	1	0	1	1	1	1	26
E-group	**S25**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	30
E-group	**S26**	0	1	1	0	0	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	8
E-group	**S27**	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	18
E-group	**S28**	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	30
E-group	**S29**	0	0	0	0	1	1	0	0	0	0	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0	1	0	1	0	0	0	0	15
E-group	**S30**	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0	27
E-group	**S31**	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	1	1	1	1	1	0	0	0	1	0	0	0	1	1	12
E-group	**S32**	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	27
E-group	**S33**	0	1	1	0	0	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	0	1	1	0	1	1	20
E-group	**S34**	0	1	1	0	0	0	1	1	1	0	1	0	1	1	1	1	0	0	1	0	0	0	1	1	1	1	0	1	0	0	0	0	16
E-group	**S35**	1	1	0	1	1	0	1	1	1	0	1	1	1	1	1	0	0	0	1	0	0	0	0	1	0	0	1	1	1	0	0	1	18
E-group	**S36**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32
E-group	**S37**	1	1	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	21
E-group	**S38**	1	1	1	1	1	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	0	0	0	15
E-group	**S39**	1	1	1	1	1	0	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	28
E-group	**S40**	1	1	1	0	1	0	0	0	0	0	1	1	0	0	0	1	0	0	1	1	0	0	1	1	0	1	1	1	0	0	0	1	15
E-group	**S41**	1	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
E-group	**S42**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32
E-group	**S43**	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	0	0	0	0	1	16
E-group	**S44**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32

1: Correct answer
0: Incorrect/invalid answer

C-group: Control group
E-group: Experimental group
Score: Number of correct answers

Appendix 8: Processed Data – Morphology

Morphology																																				
GROUP	**Student**	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**	**I9**	**I10**	**I11**	**I12**	**I13**	**I14**	**I15**	**I16**	**I17**	**I18**	**I19**	**I20**	**I21**	**I22**	**I23**	**I24**	**I25**	**I26**	**I27**	**I28**	**I29**	**I30**	**I31**	**I32**	**Max.**	**SCORE**	**Error rate**
C-group	**S1**	1	1	x	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	x	2	2	2	2	x	2	2	2	64	14	21.9%
C-group	**S2**	1	1	x	2	2	2	3	3	3	x	1	2	1	2	2	2	x	3	3	x	3	3	3	2	2	2	2	2	2	x	x	x	54	8	14.8%
C-group	**S3**	1	1	1	2	2	2	x	3	x	x	1	2	1	2	2	2	3	3	3	3	x	x	x	2	2	2	2	2	2	x	2	2	50	18	36.0%
C-group	**S4**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	x	3	3	3	3	3	3	3	2	2	2	2	x	2	2	2	2	65	7	10.8%
C-group	**S5**	1	1	1	2	x	x	3	3	3	2	1	2	1	2	2	2	3	3	x	3	3	3	3	x	x	x	x	x	x	x	x	x	44	7	15.9%
C-group	**S6**	1	1	1	2	2	2	3	3	3	2	x	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	x	2	2	66	3	4.5%
C-group	**S7**	1	1	1	2	2	2	3	3	3	2	x	x	x	x	x	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	61	6	9.8%
C-group	**S8**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	x	3	3	3	3	3	3	3	x	2	2	2	2	x	x	2	2	61	13	21.3%
C-group	**S9**	1	x	1	x	x	x	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	x	x	x	2	2	2	2	2	x	x	2	50	11	22.0%
C-group	**S10**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	x	3	2	2	x	x	x	2	x	x	x	54	7	13.0%
C-group	**S11**	x	x	1	2	2	2	3	3	3	2	x	x	x	2	2	2	x	x	x	x	3	3	3	2	x	2	2	2	x	x	x	x	41	12	29.3%
C-group	**S12**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	69	2	2.9%
C-group	**S13**	x	1	1	2	2	2	3	3	3	2	x	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	x	x	x	x	59	10	16.9%
C-group	**S14**	1	1	1	2	2	x	x	x	3	2	1	2	1	2	2	2	x	x	x	x	3	3	3	2	x	x	x	2	x	x	x	x	35	12	34.3%
C-group	**S15**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	x	x	x	3	3	3	3	3	2	2	2	2	2	2	2	2	2	61	10	16.4%
C-group	**S16**	x	1	x	x	x	x	3	3	x	2	1	2	1	x	2	x	x	x	x	3	3	3	3	x	x	x	x	2	2	2	2	2	37	6	16.2%
C-group	**S17**	1	1	1	2	2	2	3	3	x	2	1	2	1	2	2	2	3	3	x	3	3	3	3	2	2	2	2	2	x	2	2	2	61	5	8.2%
C-group	**S18**	1	1	1	x	x	x	3	3	3	2	1	2	1	2	2	2	x	x	3	3	3	3	3	2	2	2	2	2	2	2	2	2	57	1	1.8%
C-group	**S19**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	69	0	0.0%
C-group	**S20**	x	1	x	x	x	x	3	x	x	x	x	2	1	2	2	x	x	x	x	x	3	3	3	2	x	x	x	x	x	2	2	2	28	5	17.9%

Appendix 8: Processed Data – Morphology (continued)

E-group	**S21**	1	1	1	2	2	2	3	3	3	2	x	2	1	2	2	2	x	x	3	3	3	3	3	2	x	2	2	x	2	2	2	2	58	6	10.3%
E-group	**S22**	x	x	x	2	x	2	x	x	3	x	1	2	1	2	2	x	3	3	x	3	x	x	x	x	x	2	2	x	2	x	x	x	30	9	30.0%
E-group	**S23**	1	1	x	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	x	2	x	2	2	x	x	2	2	60	17	28.3%
E-group	**S24**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	69	3	4.3%
E-group	**S25**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	x	3	3	3	3	3	2	2	2	2	2	2	2	2	2	66	1	1.5%
E-group	**S26**	1	1	1	x	x	x	3	3	3	2	x	2	1	2	2	2	x	x	x	3	3	3	3	x	2	x	x	2	x	2	2	2	45	10	22.2%
E-group	**S27**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	69	6	8.7%
E-group	**S28**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	69	1	1.4%
E-group	**S29**	x	1	x	x	2	2	3	x	x	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	x	x	x	x	51	3	5.9%
E-group	**S30**	x	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	68	3	4.4%
E-group	**S31**	x	x	x	2	2	2	3	3	3	2	1	2	1	2	2	x	3	3	3	3	3	3	3	2	x	2	2	2	2	x	2	2	60	13	21.7%
E-group	**S32**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	x	2	2	2	2	2	2	2	67	4	6.0%
E-group	**S33**	x	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	x	3	x	3	3	3	3	2	2	2	2	2	2	2	2	2	62	5	8.1%
E-group	**S34**	x	1	1	2	x	x	3	3	3	2	1	x	1	2	2	2	3	3	3	x	x	x	3	2	2	2	x	2	x	2	2	2	49	3	6.1%
E-group	**S35**	1	1	x	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	x	3	2	2	2	2	2	2	2	x	2	63	8	12.7%
E-group	**S36**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	69	0	0.0%
E-group	**S37**	1	1	1	2	2	x	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	67	7	10.4%
E-group	**S38**	1	1	1	2	2	2	3	x	3	2	1	2	1	x	2	x	3	3	3	3	x	x	x	2	x	2	2	2	2	2	2	2	51	9	17.6%
E-group	**S39**	1	1	1	2	2	2	3	3	x	x	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	64	1	1.6%
E-group	**S40**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	69	15	21.7%
E-group	**S41**	1	1	1	x	x	x	3	3	3	2	1	2	1	x	2	2	3	3	3	3	3	3	3	x	x	x	x	x	x	x	2	2	47	7	14.9%
E-group	**S42**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	69	0	0.0%
E-group	**S43**	1	1	1	2	2	2	3	3	3	2	x	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	x	2	x	2	2	64	5	7.8%
E-group	**S44**	1	1	1	2	2	2	3	3	3	2	1	2	1	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	69	0	0.0%

*The data shows the possible number of errors per item. Invalid answers are marked with and X and receive no value.

C-group: Control group
E-group: Experimental
Score: Number of error
Max.: Maximum score possible
Error rate: (Score÷Max)100

Appendix 9: Processed Data – Syntax

Syntax																																			
GROUP	Student	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	I14	I15	I16	I17	I18	I19	I20	I21	I22	I23	I24	I25	I26	I27	I28	I29	I30	I31	I32	Max.	SCORE	Error rate
C-group	S1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	1	1	1	31	10	32.3%
C-group	S2	1	1	x	1	1	1	1	1	1	x	1	1	1	1	1	1	x	1	1	1	1	1	1	1	1	1	1	1	1	x	x	x	26	10	38.5%
C-group	S3	1	1	1	1	1	1	x	1	x	x	1	1	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	x	1	1	25	4	16.0%
C-group	S4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	1	1	1	1	1	1	1	1	1	1	1	x	1	1	1	1	30	8	26.7%
C-group	S5	1	1	1	1	x	x	1	1	1	1	1	1	1	1	1	1	1	1	x	1	1	1	1	x	x	x	x	x	x	x	x	x	20	12	60.0%
C-group	S6	1	1	1	1	1	1	1	1	1	1	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	1	1	30	4	13.3%
C-group	S7	1	1	1	1	1	1	1	1	1	1	x	x	x	x	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	27	4	14.8%
C-group	S8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	1	1	1	1	1	1	1	x	1	1	1	1	x	x	1	1	28	8	28.6%
C-group	S9	1	x	1	x	x	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	x	x	1	23	8	34.8%
C-group	S10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	1	1	1	1	x	x	1	x	x	x	26	1	3.8%
C-group	S11	x	x	1	1	1	1	1	1	1	1	x	x	x	1	1	1	x	x	x	x	1	1	1	1	x	1	1	1	x	x	x	x	18	6	33.3%
C-group	S12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	3	9.4%
C-group	S13	x	1	1	1	1	1	1	1	1	1	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	x	x	x	26	7	26.9%
C-group	S14	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	x	x	x	x	1	1	1	1	x	x	x	1	x	x	x	x	18	12	66.7%
C-group	S15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	x	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	29	8	27.6%
C-group	S16	x	1	x	x	x	x	1	1	x	1	1	1	1	x	1	x	x	x	x	1	1	1	1	x	x	x	x	1	1	1	1	1	17	10	58.8%
C-group	S17	1	1	1	1	1	1	1	1	x	1	1	1	1	1	1	1	1	1	x	1	1	1	1	1	1	1	1	1	x	1	1	1	29	1	3.4%
C-group	S18	1	1	1	x	x	x	1	1	1	1	1	1	1	1	1	1	x	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	27	1	3.7%
C-group	S19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	0	0.0%
C-group	S20	x	1	x	x	x	x	1	x	x	x	x	1	1	1	1	x	x	x	x	x	1	1	1	1	x	x	x	x	x	1	1	1	13	8	61.5%

Appendix 9: Processed Data – Syntax (continued)

E-group	**S24**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	3	9.4%
E-group	**S25**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	1	1	1	1	1	1	1	1	1	1	1	1	1	31	0	0.0%
E-group	**S26**	1	1	1	x	x	x	1	1	1	1	x	1	1	1	1	1	x	x	x	1	1	1	1	x	1	x	x	1	x	1	1	1	21	8	38.1%
E-group	**S27**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	10	31.3%
E-group	**S28**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	0	0.0%
E-group	**S29**	x	1	x	x	1	1	1	x	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	x	x	x	23	3	13.0%
E-group	**S30**	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31	1	3.2%
E-group	**S31**	x	x	x	1	1	1	1	1	1	1	1	1	1	1	1	x	1	1	1	1	1	1	1	2	x	1	1	1	1	x	1	1	27	4	14.8%
E-group	**S32**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	1	1	1	1	1	1	31	0	0.0%
E-group	**S33**	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	1	x	1	1	1	1	1	1	1	1	1	1	1	1	1	29	6	20.7%
E-group	**S34**	x	1	1	1	x	x	1	1	1	1	1	x	1	1	1	1	1	1	1	x	x	x	1	1	1	1	x	1	x	1	1	1	23	6	26.1%
E-group	**S35**	1	1	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	1	1	1	1	1	1	1	1	x	1	29	3	10.3%
E-group	**S36**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	0	0.0%
E-group	**S37**	1	1	1	1	1	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31	3	9.7%
E-group	**S38**	1	1	1	1	1	1	1	x	1	1	1	1	1	x	1	x	1	1	1	1	x	x	x	1	x	1	1	1	1	1	1	1	25	3	12.0%
E-group	**S39**	1	1	1	1	1	1	1	1	x	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	30	1	3.3%
E-group	**S40**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	10	31.3%
E-group	**S41**	1	1	1	x	x	x	1	1	1	1	1	1	1	x	1	1	1	1	1	1	1	1	1	x	x	x	x	x	x	x	1	1	21	9	42.9%
E-group	**S42**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	0	0.0%
E-group	**S43**	1	1	1	1	1	1	1	1	1	1	x	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	x	1	x	1	1	29	9	31.0%
E-group	**S44**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	0	0.0%

*The data shows the possible number of errors per item. Invalid answers are marked with and X and receive no value.

C-group: Control group
E-group: Experimental
Score: Number of error
Max.: Maximum score possible
Error rate: (Score÷Max)100