# Writing in English in Rural Elementary Schools in Spain: A Contrastive Analysis of ICT and Non-ICT Resources

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**Abstract**

*Studies on the application of ICTs (Information and Communication Technologies) in Primary Education have grown over the past years. However, in low-income rural schools, this use of ICTs has not been explored as much. Our research sets out to cover this topic according to two main phases: (1) An examination of our national / regional Primary Education context in the light of ICT deployment; (2) a contrastive analysis of three rural public schools in the north of Extremadura, Spain, by comparing three experimental groups who use ICTs with three control groups of learners performing similar tasks and activities but not using ICTs. In addition, ethnographic information gathered on site can enhance the analysis by comparing different factors that may influence English writing tasks when ICT s are applied in rural elementary schools with more vulnerable students.*

**Keywords:** Primary Education; ICTs; EFL; writing; rural schools; CLIL.

## 1. Introduction

In elementary school classrooms and other learning situations, a considerable number of studies seems to demonstrate that technological resources, as eveloped in a systematic, planned manner, often lead to successful and effective results (e.g., Cassells et al.,2015; Mazohl & Makl, 2016; Camacho-Martín & Esteve Mon, 2018, among others). Amidstthis backdrop of projects, a generic question is whether deploying ICTs (Information and Communication Technologies) entails positive learning improvements. Also, a widely examined notion is that ICTs may contribute to YLs' (young learners') dynamic engagement and optimal performance because the resources are novel / innovative.

In terms of EFL (English as a Foreign Language), the legislation in Spain (BOE, 2011; BOE, 2013) has greatly emphasized foreign language competences for Primary Education. As a result, more intensive teaching has taken place in English not only in the form of compulsory EFL courses but as CLIL (Content and Language Integrated Learning) practices. And yet, the EF / EPI (English Proficiency) agency(2020) places Spain at position 34 in the world's ranking for EFL levels (intermediate), and Extremadura, our region, has the lowest EPI level in Spain. This seems to unveil a mismatch between current EFL/CLIL objectives and actual learning outcomes in our region. In addition, current policies emphasize the importance of actively integrating ICTs in language learning, but the fact is that not much has been done in terms of ICT development in lower-income rural contexts over the past ten years.

Our general goal is thus to find out about EFL learning inregional elementary schools, where ICTs are introduced because of their alleged innovative / improving mechanics. In the use of ICTs for EFL writing activities, we hypothesize that students' writing, after the session treatment, may significantly improve: 1) if assisted by ICTs, 2) if not assisted by ICTs, 3) with no specific approach, or 4) with both types of instrumentation.

The specific objectives of this study are as follows: 1) To evaluate the role of ICT integration in EFL writing developments as compared to other means and instruments that rely on similar methodological strategies and aims, but without ICTs.2) To analyse cognitive processing and learning outcomes among fourth year Primary Education students after doing specific writing tasks in EFL. 3) To complement our results in these rural areas with feedback from Primary Education teachers and other Education agents by means of semi-structured interviews and discussions.

## 2. Theoretical framework

### 2.1 ICTs in rural elementary schools

According to the regional decree for Primary Education in Extremadura (DOE, 2014), the educational institution is responsible for all the necessary means and instruments to facilitate the use of ICTs both at elementary schools and homes for the improvement of children's transversal competences. One example is the "use of ICTs for learning and personal-social development, favouring a critical approach to how they receive and process the information" (DOE, 2014: 18969).Aware that ICTs imply a cultural and educational evolution, the administrative authorities have made it clear that the changes should be made in all types of school settings. A socio-political emphasis on ICTs seems to illustrate what Hernández-Carrera et al. (2020: 4)refer to as a "a collective awareness and individualized consumption at all levels". YLs' exposure to a rapidly evolving digital world also accentuates the demand for abilities and skills in the use of technological innovation in Education (Knobel & Lankshear, 2010). This phenomenon should open up new possibilities for more interconnectivity infrastructure where there was little or none, such as rural areas; "people are able to increase knowledge through access to related information, and provide added value in their lives" (Sunuantari et al.,2020: 147).

The ICT focus in rural contexts is a consequence of the influence and reach of various digital literacy and competence programs for Education in Europe. In this digital adaptation challenge, the European Commission (2020) underscores European cooperation across all regions for education and formation, where ICTs play a fundamental role to refine high-quality learning by innovative approaches. Digital competences are crucial for YLs at all ages, but learners "need guidance into becoming active in the learning process, construct or make their own knowledge and determine their reality according to their experiences" (Cambridge Papers in ELT, 2020: 5). In this line of work, Slaughter et al. (2019) analyse video-conferencing and networked collaboration in rural Primary Education settings in Australia, observing, among other factors, that the more or less productive usage of the technology tends to be influenced by infrastructural, social, and educational traits that different regional elementary situations may showcase.

In Spain, at the state level, the Government has launched the "Educaen digital" agreement (BOE, 2020), which, triggered by the COVID-19 pandemic, aims to address the need for the reinforcement of ICTs in Education, and above all, in vulnerable / lower-income regions. Previous national support for teaching and learning innovation using ICTs include publicly funded projects such as EducaLAB (Ministry of Education, 2018), where teachers, students, and parents can share TET (Technology-enhanced teaching) issues and strategies for both in-class and virtual developments. The goal is similar to what Mazohl & Makl (2016) describe as active participation and involvement during class activities and self-study using specific devices.

Camacho-Martí & Esteve-Mon (2018) examined the results from the Samsung Smart School program,one of the national EducaLAB projects, in 26 Spanish elementary schools, focusing on questionnaires, interviews, and focus groups for information collecting and processing. The overall findings point to the importance of ICTs in this program to favour learners' attention, motivation, and engagement. The authors also concluded that key curricular competences could benefit from the program. Ramírez-Verdugo & Alonso-Belmonte (2007) compared the advantages of digital story-telling and internet-based technologies in six public schools with six-year-old students in Madrid, confirming a greater enhancement of listening skills among those exposed to the new technologies.

INNOVATED (EducarEX, 2019) was implemented in our region in order to test methodologies that incorporated ICTs. Each public school involved developed a PED (Digital Educational Project) that identified the factors and elements in that institution working for or against ICTs. The aim was to analyse all the areas (i.e., teaching, learning, communication, collaboration, etc) where ICTs could provide a space for individual and community engagement. Thus, as Figallo (2020) argues, the interaction among all school members and agents, interdisciplinary discussions, forums, and so on, should be facilitated by ICTs.

### 2.2 Primary Education learning traits

In terms of Primary education competencies for our age level (nine / ten years old), this period tends to materialize as "one of the peaks for cognitive expansion in children's psycho-evolutionary development" (Valhondo, 1995: 3). Córdoba et al. (2018), based on psycho-educational postulates by Piaget, describe the competences from age seven to 11: Among others, a more specific thinking based on tangible objects and ideas, more flexible, logical, and organized thinking, attention span widening (i.e., time span increases and more than one dimension can be observed at the same

time), hierarchical classification (by which children can comprehend structures and sub-class components), measurements, and cause-effect observation.

As Byrnes (2019: 544) states, "many of the phenomena that Jean Piaget examined have been well known to parents and early childhood educators". Piaget's work has helped researchers to investigate the kinds of specific competences highlighted and often considered as pillars for Primary Education curricula and ICT use. White papers on digital learning (e.g., Cambridge Papers in ELT, 2020) recallthe importance of Piaget's work for the classification of digital skills in YLs' age chart. For example, at age nine, a step forward is YLs' learning profitability from interacting via video-conferencing and tele-collaboration, "significant instruments at this stage", as Cassells et al. (2015: 4) report.

Parke et al.(2019) emphasized the role of social interaction at this stage of cognition. The children's close connections (family and peers) play a key part in their communicative development. Linguistic competence is enhanced "as a whole that can be analysed and divided into linguistic units" (Muñoz-García, 2018: 101). Vocabulary expands, grammar gets more complex, debates and arguments unfold, etc. However, because each individual is exposed to different contextual variables that may motivate but also curb language command (cf. Cohen, 2014), the development of communicative skills depends on the type of techniques being mastered, the resources with which one can apply such techniques, social-economic obstacles in the way of communication production, etc. A novel approach to the subjects also tends to work as an influencing factor on linguistic skill development, as brain activity seems to expand during the processing of such motivational input. An example is Hong et al. (2017), who recorded nine- and ten-year old students' cerebral impulses during the exploitation of pragmatic abilities when using on-line games in EFL.

Based on its learning profile, this age can become fertile groundwork for challenge-based learning (Kohn-Rådberg et al., 2020) and transversal competences (Olivares et al., 2018). Parker (2007) contrasted different case studies and approaches to ICTs in elementary schools, evincing that a common methodological thread for optimal learning situations tends to be a rich and varied scope of communicative exchanges and collaboration. Escofet (2020: 171) argues that "even if ICTs may not be absolutely necessary in these methodologies", they facilitate the expansion of project-based communication and collaboration from physical to virtual environments. Mental maps, for example, can be a useful instrument for information classification and visual competency exploitation. ICTs can be used to accomplish mental map drawing and processing, but other traditional resources can be equally valid (González et al., 2015). In sum, making mental maps, collages, posters, and postcards fosters their critical thinking and creativity skills (De la Cruz & García, 2018).

The introduction of ICTs can favour the activation of such competences for writing if a well-planned course has been designed beforehand. Fernández & Fernández (2016) argue that the need for ICT development is secondary in the sense that there must be a well-planned course design first that can lead to an effective ICT integration. A recurrent obstacle, unfortunately, tends to be the deficient digital training provided in Primary Education in general (cf. Zayas, 2014).

### 2.3 Case studies and EFL writing

Case studies tend to point to ICTs as beneficial in the classroom. However, the choices made in terms of methodologies, teacher training courses, and cognitive-affective strategies are more important than ICT application per se (Baubeng, 2019). Jiménez-Millán & Domínguez-Pelegrín (2018) noticed that a flipped classroom method can lead to improvements to which ICTs contribute. The Primary Education context and learning features should be analysed with different techniques and approaches (Alvarez & San Fabián, 2012; Aguilar & Barroso, 2015), e.g., classroom observation, note-taking, interviews with pedagogic agents and students, discussions, and so forth. The triangulation of this ethnographic information with learning outcomes is a fitting approach (cf. Aguilar & Barroso, 2015).

As regards writing in Primary Education, different strategies and resources may be used. In general, planning, text, and revision are common procedures (Izquierdo-Magaldi et al., 2016) through which errors are addressed and corrective feedback is provided. Celaya, Pérez-Vidal & Torras (2001) relied on linguistic rubrics for EFL writing ina fifth year elementary school course by tackling three main aspects: Complexity, fluidity, and correction. Language complexity could be segmented according to the construction of sentences and paragraphs, fluidity was based on how sentences could be put together, and correction examined the number of errors within a sentence.

## 3. Methodology

### 3.1 Participants

The selection of three rural elementary schools north of Extremadura was motivated by different factors, but a major drive was the examination of actual ICT use in rural classrooms. We aimed to find out whether the transversal competences promoted by regional decrees in Extremadura could be fruitfully exploited via different ICTs. Elena Suárez, co-author in this paper, acted as the link between Higher and Primary Education, as she teaches in a rural elementary school. She ensured that our action research module did not interfere with neither the contents nor the objectives in the curricula (Spring semester 2019).

A total number of 70 students were selected: 50 in a larger so-called "bilingual program" school (school A), 13 (in a non-"bilingual" school-- B) and 7 (non-"bilingual", school C). In all three cases, the classes were divided in half: The experimental groups(X) with ICTs consisted of 25 students in school A, 7 in B, and 3 in C. The control groups (Y) without ICTs were also 25 in A, 6 in B, and 4 in C. The three techniques used to collect the data in the learning contexts were: a) observation and note-taking, b) writing production analysis and processing, and c) semi-structured interviews / discussions.

The school contexts varied in terms of the number of students and teaching modules. The largest school had two teaching formats: Subjects taught in the native language (Spanish) and in English ("bilingual" modules). The other two schools only had the first format in Spanish. Our education policies foster the inclusion of "bilingual programs" since early age, but some rural schools still offer one line only. Our analysis thus included a comparison of the two co-existing contexts.

As Stake (1995), quoted in Simons (2009), states, untypical case studies may contribute to illustrate what more typical cases may not reflect. The agents involved in our case studies were not only students but also Primary Education instructors, officials, inspectors, and parents / legal tutors. We had to deal with some previous chores, including session planning and integration in third parties' courses, project presentation to the authorities, official permission requests, parents' authorizations, and so forth. These took place during the 2018 semester, and by the beginning of the Spring semester, 2019, we were ready to set up the dates for the sessions.

The socio-economic level of the participants can be considered as mid-low. ICTs are common in these areas, and WIFI connection is optimal in some villages, but not all, especially depending on the type of internet provider. Children's school schedules do not generally differ from the ones in urban areas (i.e., morning classes and afternoon / evening extra-curricular activities). A distinctive social feature is children's more frequent gathering and playing on the streets without any adult supervision, as schools and other public institutions are at walking distances.

### 3.2 The sessions

We carried out five sessions with the students in each school, where we proposed eight writing activities in their EFL courses (see Table 1).In all cases, the topics are included in their fourth year of studies, and the material was adapted to the curriculum demands and objectives.

**Table 1.** Organization of sessions, timing, and activities

| Timing | Sessions | Number | Activities |
|---|---|---|---|
| Week 1 | 1st session | Activity 1 | Initialevaluation |
| Week 2 | 2nd session | Activity 2 | Birthdaycardactivity |
| | | Activity 3 | Thanksgivingcardactivity |
| Week 3 | 3rd session | Activity 4 | Mental Map about their villages |
| | | Activity 5 | Writing about their villages according to the mental maps |
| Week 4 | 4th session | Activity 6 | Question raising and display of information about a person |
| | | Activity 7 | Reviewing questions and answers from activity 6 to specify the information details |
| Week 5 | 5th session | Activity 8 | Final evaluation |

The session activities integrated some of the strategies described in the elementary school curriculum (DOE, 2014).[1] An example is Activity 2 (see Figure 1), where the Y group had to write a birthday party invitation in paper form.

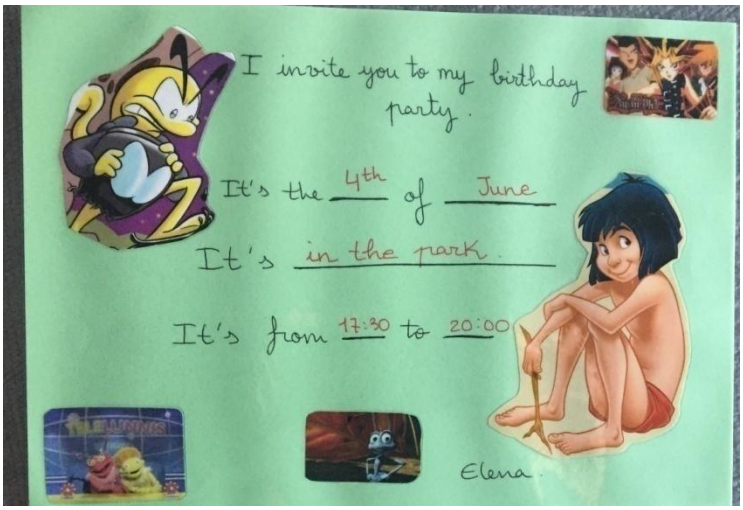


**Figure 1:** Example of a birthday invitation card in paper form

Another example was Activity 4, for which the students had to collaborate to organize their ideas for the description of their villages. The model used was, in this case, a mental map, by which the learners arranged key ideas in simple sentences (see Figure 2).After classifying the information in the mental maps either digitally or physically, the students were instructed to complete a guided composition about their villages.

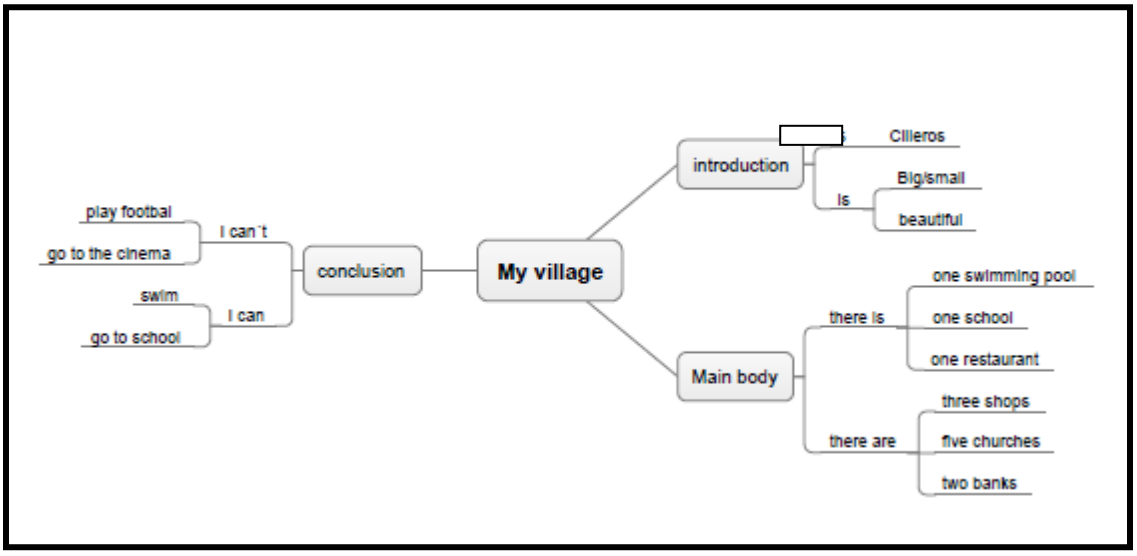


**Figure 2.** Example of mental map creation using ICT

In activities 6 and 7, we sought to find out about classmates' personal information such as family members, birthdays, hobbies, and so on. Some key vocabulary was exploited in those semantic fields by presenting cards either on the

[1]According to the regional legislation, some strategies that correspond to our own session approaches are: 1) Planning / production for text complexity gradation; 2) Message expression according to different text models or formulae; 3) Text production in relation to previous knowledge and critical thinking; 4) Socio-cultural communication in written texts; 5) Communicative functions (greeting, thanking, inviting, describing, requesting information, etc); 6) Simple verb tenses and modals to express conventional messages; 7) Highly frequent vocabulary for written production.

digital screen with the program Genially or on a conventional board. Then, to review the activity, the students had to identify questions with appropriate vocabulary (e.g., *Hobbies>What is your favourite pastime?*). They used Plickers in the X groups, an application that identify their answers by recording the codes from raised answer templates. The Y group students managed to match charts with cut pieces of paper to classify the information (see Figure 3).


**Figure 3**: Matching questions and key vocabulary in the Y groups

The final assessment in the last session resumes and parallels the initial assessment approach in the classrooms. It consisted of short writing questions based on the contents from the sessions. For example, they had to write about their villages using simple sentences (e.g., "In my village, there is/are…"). They also had to construct questions related to concepts such as "origin", "family", "hobbies", and so on.

## 4. Results

### 4.1 Classroom observations and discussions

The activities were the same in all three schools, but there were logistic differences in terms of timing, organization, behaviour, and procedures. The following is a summary of the different situations and discussions in the learning settings.

First session:

School A was the only school that had groups X and Y placed in two different classrooms, as A had many more students than B and C. On this first day, the instructor told them to complete a pre-test file with basic information needed for our experiment, i.e., short compositions on their personal lives, village, etc. Group X did the activity on the computers and finished everything on time, having a good attitude and behaviour in general, whereas group Y were less willing to compromise and had a less open approach to the completion of the tests. Some students did not finish on time.

The students in schools B and C were organized similarly. The X groups sat on the first two rows with computers (supervised by Elena Suárez) and the Y students were placed at the back of the rooms with their regular teachers. All the groups behaved quite well and finished the activity on time. The difference in school C on this first day was the time for the class: 1:30 pm, a late class. The result was that the students showed less concentration and less willingness to do the activity, although they all finished on time.

The first pre-test file was generally disliked. Even though the teacher assured them that the grade would not count and that the contents in this test had already been seen and done before, they complained about this "surprise test". The novel introduction of computers for some people in class (in the case of schools B and C, who shared the same spaces for the sessions) added some fuel to the complaints. In fact, some Y group students felt they were being treated unfairly. The teachers told them that the computers were just an instrument, but that everyone had to do the same exercises, and this seemed to assuage their concerns.

Second session (Activities 2 and 3):

School C's group X had more problems with the digital activities due to technical difficulties (the computers did not work as well as they should). However, in general, the students worked well in pairs, they liked the activities, and finished them on time.

The problem with the computers was pre-empted by the instructors, alleging that they do not normally use the devices because they are not technologically updated and "make the students either lose their patience or curtail their initial excitement". Instead, the teachers usually do the activities on the digital whiteboard. Nonetheless, thanks to the inclusion of laptops and tablets, the activities were successfully accomplished. The students liked the introduction of the additional computer equipment for the tasks, and one student in school A, group X, remarked at the end of the class that "Elena's classes are the best".

Third session (Activities 4 and 5):

Group X in school A was divided into groups of three on PCs, laptops, and tablets. The mental map activity took a long time for the X group to do, and so, there was no time left for the second composition activity. Group Y enjoyed doing the mental map in colours by matching pictures on the wall, explaining the sentences, etc. However, they also needed more time for the second activity and could not finish on time.

The two groups in school B did not complete the second activity either. Group X did not pay too much attention, getting easily distracted by what the other students did at the back of the class. In school C, in turn, the two groups finished the two activities on time, although the Y group lacked some vocabulary for the activities, and had more problems with their completion.
The instructor in school A complained more about and disagreed with the mechanics, e.g., she said it was too much work for just two days, given the facilities and time. She also stated that the use of the electronic whiteboard would be enough to present the mental maps. Nonetheless, she finally relented and appreciated the positive outcome of the experience. The other teachers had no complaints and liked the means deployed. Many students working in groups became impatient because their partner would betaking too long on the device, but they all finally got to use them for the task objectives.

Fourth session (Activities 6 and 7):

The compositions in schools A and B were finished in this session. After the writing task, in school A, group X only had time to doactivity 6, dealing with the presentation of topics, key vocabulary, and questions using Genially. Group Y had time to do both activities, as the presentation took less time and the students worked faster. In school B, the two groups completed all the activities for the day, and group X enjoyed the Plickers application for activity 7, finding it "a fun and useful resource". The two groups in school C finished the two activities on time and were generally pleased.

Fifth session:

All the groups completed the post-test files. In general, all the students found the test as a fair step after the sessions, although many had hesitations and questions about the procedure. Group Y in schools A and C showed less willingness to do the tests and thus complained more. In school C, this assessment file had to be postponed one week after the sessions, as the Easter holiday got in the way. The teacher had to remind them of more words and concepts during the late assessment.

The teacher in school A disagreed with having her students do the post-test without formally preparing for it the day before. She was explained that a main objective in our research was to evaluate how much they had learned by only practicing the content in class with or without the use of ICTs. In addition, Elena told her that she could go over all the contents later on again with the students in order to guarantee a more solid learning assessment. The teachers in school B and C had no objections about the evaluation design. All the learners were willing to complete the final assessment file, although some of them put forward that it was a bit difficult.

### 4.2 Writing evaluation

The evaluation of the pre-tests and post-tests was done jointly by the teachers and researcher according to some specific rubrics (see Table 2). The scores were calculated based on those 0-5 criteria for each of the four exercises in the tests: 1) Inviting someone to a birthday party, 2) Thanking someone for something, 3) Writing about one's village, and 4)

Asking pertinent questions related to specific topics. The final score would be the mean value from 0 to 5 derived from the four exercises.

**Table 2:** Scores given to test activities according to competence rubrics

| |
|---|
| Score 0: Does not write anything or barely writes few words that make sense in the text and / or are mistakes. |
| Score 1: Cannot do the proposed activity correctly: The written sentences make very little sense, contain numerous lexical-grammatical errors, and the vocabulary is scarce. In general, the writing does not meet the required level. |
| Score 2: Can do the proposed activity but much information is missing; makes mistakes and has writing difficulties (misspelt words, lacks appropriate vocabulary, disorganized, lexical-grammatical errors, etc). |
| Score 3: Can do the proposed activity but some information is missing; makes some mistakes. The writing has been done coherently and it is clear, but some details are missing; there are some lexical-grammatical errors, and the vocabulary is average. |
| Score 4: Does the proposed activity correctly. There are occasional lexical-grammatical errors but few. It is well-organized, there may be minor mistakes and some small details may be missing. |
| Score 5: Does the proposed activity correctly and according to all the expected requirements. It is well-organized, all the needed information is there, there are no lexical-grammatical errors (if any, very occasional), and the vocabulary is broad. |

The computation of the results from pre- to post-tests was done by comparing the initial score with the final one for each student in each school. Because school A outnumbered the other two schools by a wide margin of students in both groups, this school was selected for the computation of each exercise in the tests. These results were compared by a non-parametric sign test, as scores were randomly distributed and the number of scores in each group was below 30. This comparison indicates whether a statistically significant variation exists between that exercise score in the pre-test and the post-test.

The values for each exercise in Table 3 demonstrate that both X and Y group students' scores were significantly better in the post-tests than in the pre-tests, as induced from their p values ($p \leq 0.05$); the only exception being the Y group in exercise 4 (asking questions). The evolvement in the performance is especially significant for exercise 1 in group X (birthday cards) and exercise 3 for group Y (village compositions). The z values point to numerical marks: The higher the z-value, the higher the number of scores identified above the mean. Thus, group X outperformed group Y in that sense, except for exercise 3.

**Table 3**. Results from the sign test for pre-test and post-test scores in school A

| Exercise | Group | Z-value | P-value |
|---|---|---|---|
| 1 | X | 4.42635 | 0.00001 |
| | Y | 3.77964 | 0.00016 |
| 2 | X | 4.24264 | 0.00002 |
| | Y | 2.83683 | 0.00456 |
| 3 | X | 3.96177 | 0.00007 |
| | Y | 5.2915 | 0.00001 |
| 4 | X | 2.5000 | 0.01242 |
| | Y | 0.4264 | 0.66982 |

The other two schools can also be compared for a general view of the overall scores in the tests (see Table 4). These scores are final for each student's pre- and post-test (by calculating the mean scores derived from their four exercises). Again, as no group had more than 30 students, the sign-test was found as an appropriate measurement.

The information in Table 4 confirms the significance of the values in Table 3. It also provides the p-values for schools B and C, indicating that both groups in each school obtained significantly better marks in the post-tests ($p \leq 0.05$). In terms of the z-values, it seems that in school C, group X obtained more above-the-mean marks than Y, whereas the opposite happened in school B (Y more than X).

**Table 41.** Results from the sign test done according to groups and schools

| Comparison | Group | School | Z-value | P-value |
|---|---|---|---|---|
| Pre-post tests | X | A | 6.06339 | 0.00001 |
| Pre-post tests | Y | A | 4.79869 | 0.00001 |
| Pre-post tests | X | B | 2.12132 | 0.03389 |
| Pre-post tests | Y | B | 2.7136 | 0.00666 |
| Pre-post tests | X | C | 3.63803 | 0.00027 |
| Pre-post tests | Y | C | 3.35659 | 0.00079 |

## 5. Conclusions

The combination of ICTs in EFL writing has produced mixed results, to be interpreted as different arguments that can be buttressed by an interrelationship between classroom activities, observation, performance, and final interviews. One assumption might be that because the technology is new to the children, it will automatically lead to positive results. However, as compared above, the facts may tell us otherwise in some cases.

The overall good scores obtained in the post-tests by all the groups can be attributed to a fairly successful practice with the content in the sessions (with and without the use of ICTs). School A, having more students and being divided into two separate rooms, demonstrate to have a more-than-average performance level. This can be also attributed to their greater exposure to CLIL in this school. A good example can be the birthday card activity done by the X group in school A. Even with technical difficulties, they elaborated the activity more than other groups, enjoying the application and helping each other to improve the cards. This development is confirmed by their excellent performance in the post-test, surpassing all the other groups in that exercise.

A similar case in school A is the village composition activity done by group Y. This is another instance of that correlation between a highly positive classroom atmosphere and performance excellency. The students' use of paper-

based charts on the wall guided their writing effectively, and they were motivated to complete the task because it was viewed as a practical challenge and they were excited to do it.

The X group took a bit longer to complete the compositions, in part due to their excessive time spent on the mental map application, with which they probably overindulged. This overuse of the tools is an important effect to account for in terms of motivation when a new application is presented to students. It happened in all three schools. The introduction of Plickers in school B drew much attention and wide acclaim. The seven students unanimously asked for more activities with the tool in the future. Nonetheless, in terms of performance, the X group did less well than Y in school B. In this case, a novel instrument for the presentation of vocabulary and phrases did not assumingly correlate with better writing performance in comparison with non-ICT resources.

In the case of school C, it is difficult to point out which group, X or Y, profited the most from the activities. Both consistently liked doing them and there were very few complaints. In numerical terms, X scored a bit higher than Y, but the four Y members seemed to have a lower EFL level from day 1. Language command should thus be taken into account.

As a second major contrastive approach, the reactions and comments from teachers and students in the classroom can be compared with some key ideas arising from semi-structured interviews with Primary school instructors and Education experts at university. The three elementary school teachers in the sessions seemed to dread the use of PCs in class, despite a fervent support put forward when asked about ICTs in the interviews. The school A instructor was generally less resilient and compliant with having to adapt to the technologies the task objective demanded. A good reason was the poorly maintained equipment. In interviews with them and other elementary school teachers, most instructors agreed that learners should have limited exposure and timing when using ICT applications because "they may eventually get distracted".

Their perceptions contrast with what we have described above as the correlational aspect with novel instruments. The positive cause-effect with ICTs is noticeable and measurable, but teachers generally perceive it as less positive because students overuse them or get distracted. The teachers, however, respond more optimistically to a generic question on ICTs in Primary Education ("Do you think ICTs are a good instrument to teach with?"),
But their confidence in ICTs diminishes when more specific questions are introduced regarding the type of applications and equipment to be used. Their main concern, in the end, is how to deal with ICTs effectively so that "distraction and unruliness are curbed, and the tools work and fit the objectives well".

One elementary school teacher states that "ICTs may be used well or badly, like a knife; you can either carve an excellent piece of turkey breast or use it to kill a person". Another that ICTs are essential instruments but its access, application, development, and exploitation must be controlled at all times, "as children are eager to take advantage of the situation and navigate on the internet, social networks, and so forth". Those high spirits and eagerness to use the applications emerged in our sessions at all times, but, as the tasks progressed, students sometimes ignored the tasks and had to be controlled / checked. If done with a small group of students, this supervision can be carried out effectively, but with 50 students in one class, as one teacher put it, "it is like trying to prevent the Titanic from sinking".

The three university experts interviewed, on the other hand, generally see more positive sides of ICT use during Primary schooling. The professors (from Extremadura and Madrid) mainly refer to the adoption of an effective correspondence between specific applications / tools and key competences (e.g., oral pronunciation, vocabulary enhancement, etc). As one of them puts it, "ICTs are effective as long as you have previously done ample study to dynamically integrate them in class with a specific purpose in mind".

Our study in the three regional schools has provided us with valuable insight into the nature of procedural, instrumental, methodological, reflective thinking, and innovative practices in these rural areas. Even though the demand for a better technological infrastructure is called for, especially if compared to urban teaching contexts, the design of an effective ICT-based curriculum is also viewed as far from materializing. In EFL, this is no exception. Adequate teacher-training courses and formation opportunities may be fundamental steps to take, but above all, a paradigm shift mentality at all levels (administrative, teaching, socio-cultural) are needed in order to overcome the obstacles of an embedded traditional approach to EFL. Finally, administrative / institutional elements such as content assessment, type of classroom design, schedules, and so on, may influence the dynamics of effective ICT deployment.

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