

# An Article Review: Impact of Explicit Instruction on EFL Learners' Implicit and Explicit Knowledge: A Case of English Relative Clauses\*

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This review discusses Nezakat-Alhossaini, Youhanaee, and Moinzadeh's research study entitled "Impact of Explicit Instruction on EFL Learners' Implicit and Explicit Knowledge: A Case of English Relative Clauses." This study was chosen for evaluation because it strives to attach significance to explicit instruction in L2 acquisition, unlike other more recent research, which seeks to reinforce implicit instruction as it is viewed as the idealistic goal of language learning (Rebuschat & William, 2009). The present review will be developed by means of an evaluation of Alhossaini and her colleagues' study, consisting of a concise summary of the study, a classification of the philosophical perspective, the selection of criteria, and the strengths and weaknesses of the study. In this review, I hope that I succeed to broadly navigate the research enterprise, commencing with the philosophical perspective of research, such as the epistemological and ontological stances shaping the philosophical perspective and then colouring the research. By reviewing this study, I would also hope that I successfully evaluate the research quality by using appropriate criteria in an attempt to suggest potential directions for further research (under strengths and weaknesses of the study).

*Keywords:* implicit knowledge, explicit instruction, implicit knowledge, relative clauses

## Concise Summary of the Study

The study seeks to investigate whether explicit instruction promotes implicit or explicit knowledge of passive objective relative clauses in English, or whether explicit instruction promotes both types of knowledge. In essence, explicit instruction is concerned with developing a metalinguistic awareness of the target rule. Implicit instruction, on the contrary, is concerned with enabling a learner to infer the target rule without awareness (DeKeyser, 1995; Ellis, 2009). Alhossaini and colleagues claim that the impetus for selecting this topic arose from controversial discussion and debate about the interrelationships between implicit and explicit knowledge. More importantly, they think that research has not sufficiently investigated which measures can best assess the unconscious level of the acquired grammatical knowledge.

The study employs a quasi-experimental design with a pre-test/post-test and delayed test model that involves two main groups. The first group is composed of intermediate L2 English students, who have been

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randomly divided into an experimental group (N = 22) and a control group (N = 15). The former receives four sessions of explicit instruction on English relative clauses and the latter is exposed to a routine writing class. The second group contains advanced L2 learners of English (N = 16), and is used as a neutral variable (the main control group). In this study, three instruments have been employed to measure explicit and implicit knowledge. The first (an error correction task) is adopted to assess whether or not an L2 learner has acquired explicit knowledge of the grammatical structures. The second (self-paced reading task) and the third (stop-making-sense task) are adapted to measure whether or not the subjects have possessed implicit knowledge of the grammatical structures.

The study's findings reveal that the exposure of explicit instruction promotes both implicit and explicit knowledge. Alhossaini et al. illustrate that an abundance of research underpins these findings (Erlam, Loewen, & Philp, 2009); further, they state that implicit learning does not promote either explicit or implicit knowledge. This deduction could play a role in changing the beliefs against the importance of explicit instruction. For example, Krashen (1981, 1985), on the other hand, claims that explicit instruction can be efficacious only for simple structures and in the model of explicit knowledge. However, the findings reveal the converse; that is, L2 learners can acquire complex structures through explicit instruction. This can be elucidated by the fact that explicit instruction can demonstrate a great ability to enhance the speed of progress in acquiring language. The study concludes how explicit and implicit knowledge that is measured should receive cautious treatment.

### **Classification of the Philosophical Perspective**

Before I decide what kind of classification shapes the study, I need to subject it to scrutiny in order to be able to expound the research process of the study by comparing it with a physical case in the natural sciences. It is then linked with philosophical theories in an attempt to reach a logical conclusion on the type of classification framing the study. I am going to use Denscombe's (2010) book as a navigation tool for the comparison. (*The exact reason why a physical case is used will be clarified at the end of the comparison.*)

A research process involves a philosophical perspective, which guides a researcher in how to conduct research regarding the appropriateness of method and the validity of study (Mertens, 2010). Each philosophical perspective rests on two similar central concepts: ontology and epistemology, which, together, inform a researcher of the philosophical perspective of the research (Crotty, 1998). The former seeks to determine the nature of reality, while the latter strives to assess how knowledge inherent in the theoretical perspective can be created and the rationale of having knowledge of social reality (Carson et al., 2001; Denscombe, 2010).

Let us now ponder the necessary clues derived from the juxtaposition of the Alhossaini et al. (2014) study, "social reality", and the physical case, "natural reality", from an ontological and an epistemological viewpoint. The Alhossaini et al. (2014) study claims that explicit instruction can promote an L2 learner's explicit and implicit knowledge. The physical theory, on the contrary, claims that it is repeatedly perceived when a body is thrown upwards under definable conditions: velocity and acceleration reach zero at the highest point, and then the body starts to fall down as a result of gravitational effects against the direction of the motion of the body.

When both claims are juxtaposed, we will explore that, first, both have reality; the former claim is that implicit and explicit knowledge are effectively acquired as a result of explicit instruction, while the latter is that speed reaches zero at the highest point and a body then starts falling as a result of gravity, both of which are independent of our intervention. Second, they also have a real existence and are autonomous from our knowledge of them. However, third, "existence" in the physical case can easily be observed and detected via

the sense of sight or any other sense, especially when it is repeatedly conducted. In contrast with “existence” in the Alhossaini et al. (2014) study, it cannot be directly detected or easily measured, although it clearly exerts an influence on the progress of language in L2 learners. Fourth, in the physical case, the impact of reality is predictable; that is, we possess the ability to know the meaning that is inherent in reality as a truth with certainty and objectivity, detached from human beings, such that we can confidently establish a general law of physics. Thus, the cause-effect relationship is simply predictable and observable. The Alhossaini et al. (2014) claim, on the other hand, cannot be directly predicted or easily observed. We cannot make a conclusion, based on certitude and objectivity, that each individual exposed to explicit instruction (cause) will have possessed explicit and implicit knowledge (effect). It is ambiguous and can most likely accommodate the underlying causes of that effect. What it indeed implies is that the probability of acquiring implicit and explicit knowledge is more likely. It is a certain level of objectivity and probability, rather than certitude and absolute objectivity.

The comparisons that are drawn between the Alhossaini et al. (2014) study and the physical case elucidate that the ontological view, which applies to the research process of the Alhossaini et al. (2014) study, is referred to as critical realism; that is, “critical to our ability to know reality with certainty” (Trochim, 2006). The epistemological view, by contrast, is referred to as modified objectivism, which means that it holds subjectivity, but seeks to minimise it to come closer and closer to objectivity (O'Connor & Netting, 2011). The way in which ontology and epistemology are shaped in the study provides a lucid exposition of the philosophical perspective of classifying the study, which is post-positivism. To figure out what post-positivism means, one should first clearly define positivism. For a start, given that methods used in the natural sciences have achieved resounding success in explicating natural phenomena, natural scientific methods have been borrowed by and employed in social research (Denscombe, 2010; Mertens, 2010). Positivism claims that a reality exists as a meaningful entity, lying in wait for human beings to discover it as an absolute objective truth that is detached from subjective interpretations (Crotty, 1998).

However, the positivist approach has encountered criticism from many social researchers. They claim that the epistemological view in positivism cannot achieve the same level of objectivity as the one in natural sciences and, therefore, interpretivism has been developed to reject this view, claiming that there is no absolute objective meaning that is waiting to be discovered by human beings. Meaning is socially constructed and perceived via subjective interpretations.

The interpretivist approach did not last long before some social researchers have criticized that it lacks rigour and systematization, although it is a standing approach that has had success in social research. Post-positivism then emerged as an intermediary between positivism and interpretivism. Even though it shares some aspects of the interpretivist paradigm, it pertains more to positivism than to interpretivism (Denscombe, 2010). Hence, we have used the physical case above as a natural scientific instance to juxtapose it with the Alhossaini et al. (2014) study.

Taking the above into consideration, we might conclude the discussion by addressing the ontological, epistemological, and methodological views that are underlying post-positivism and its relevance to the Alhossaini et al. (2014) study, in spite of some slight overlaps among them.

### **The Ontological View**

Post-positivism still hangs on the existence of a social reality, as does positivism. But our familiarisation with this reality will be imperfect, since it is not easily observable or predictable (cause-effect relationship) as a

result of the limitations of human beings (critical realism) (Mertens, 2010). The ontological assumption in the Alhossaini et al. (2014) study embodies the post-positivist paradigm in which the claim that *implicit and explicit knowledge are acquired as a result of explicit instruction* is difficult to observe or predict. The casual relationship is not directly known. Thus, a quasi-experimental method is employed in the study, followed by a careful statistical analysis as an attempt to eliminate all doubt and to support their claim that the effect of explicit instruction over implicit and explicit knowledge is real but with a certain level of probability. What also seems to appear in their paper is their claim that cannot convincingly falsify or prove the reality; however, their study represents a part of a broader attempt to get closer to the reality via a string of research studies. Thus, the conclusions derived from their data are tested with regard to the extent to which they account for previous theories that second-language researchers have produced. The timeline of the development of language acquisition theories embodies a lucid illustration of falsification and the changes that theories have undergone.

### **The Epistemological View**

The epistemological view of post-positivism has found it difficult, if not impossible, to detach researchers from participants and from the object being studied (Mertens, 2010). The values, personal experiences, biases, and knowledge that researchers hold definitely exert an influence over the participants and the object that is being investigated. Hence, the post-positivist approach maintains some subjectivity and seeks to maximise objectivity through the enhancement of objectivity (modified objectivity). The role of researchers is to strive thereby to adopt a neutral position to eliminate any flaw or bias which might influence the outcome of the research study in an attempt to bolster the level of objectivity (Willis, 2007).

The epistemological view of post-positivism is embodied by the Alhossaini et al. (2014) study in that they do not use a test that they created for the placement instrument. They utilize the Oxford Placement Test to ensure that the content of the test is not influenced by their direction. They also use an online measure of explicit and implicit knowledge. The rationale for using the online measure is that each of the participants should be exposed to exactly the same content of the measure, in the same way, in order to reduce the possibility of intervention by subjective researchers. However, the study does not spell out the exact role of the researchers; for instance, who have taught the participants, the researchers themselves, or other hired tutors.

### **The Methodological View**

As previously mentioned, the notion of using experimental methods has been borrowed from the natural sciences. However, because they are not easily feasible in social research studies, postpositivists have developed a quasi-experimental method. This type of method is similar to the experimental method in the natural sciences, but it lacks the complete control. This observation elucidates that there is greater potential of having one more explanation for the observed changes in addition to the main explanation. In a quasi-experimental design, participants are usually not randomly assigned to one or two groups to create comparison (Sim & Wright, 2000).

A postpositivist paradigm to methodology is obvious in the Alhossaini (2014) study in which participants could not be randomly assigned in a direct way to the experimental group. However, the researchers could randomly assign the institute to the experiment. The underlying assumption here is that since the participants' grammatical knowledge is not something that is concrete and tangible, nor biologically inherent to the human body, random assignment could not be employed in the study. They are assigned to the experiment on the basis of the placement test that they have had. Explicit instruction is employed as a quasi-independent variable, while

implicit and explicit knowledge are quasi-dependent variables. However, the study does not employ a qualitative method to provide us with more information such as tutors' and participants' experiences with the experiment.

### **The Selection of Criteria**

As discussed previously in *classification*, post-positivism proposes a modified objectivity that boosts value-free research by enabling a high level of objectivity in order to obtain an accurate understanding of social reality. The level of objectivity is mainly measured by validity and reliability (Markula & Silk, 2011). Therefore, the quality of Alhossaini et al.'s (2014) research can be judged on the basis of the criteria; that is, *empirical/analytic criteria*. In addition, since the conclusion arising from the study is hinged on numerical data obtained by the employment of a quasi-experimental design, the suggested criterion is reasonably the most appropriate to be adopted as a foundation for the elicitation of the strengths and weaknesses of the study.

### **The Strengths and Weaknesses of the Study**

#### **Reliability**

The Alhossaini et al. (2014) study uses the Oxford Placement Test to ensure that the subjects' grammatical knowledge is of an appropriate level to minimise the potential for uncontrolled variables. This implies that one expects the outcomes to be affected if there is a strong variation in the subjects' levels of grammatical knowledge.

Online tests have also been employed as measurements. These tests enhance the rigour of the method in such a way as to provide a higher level of objectivity, since online measurements can give the results immediately—unlike offline measurements which might be affected by the testers' personal experiences and bias. For example, some testers might lack confidence and, thus, be prone to award students' scores in the middle range in order to avoid serious errors (Morgan et al., 2003).

The Alhossaini et al. (2014) study, however, includes some threats that can potentially reduce reliability. First, the way in which the instruction is achieved is not obviously addressed in the study; it only describes the type of instruction (i.e., proactive form-focused instruction). Proactive instruction can cover a broad area and many types of methods can be applied. In this case, can we claim, when the type of instruction is repeated with the same participants, that the students will achieve the same or approximate scores as they do in the study? Such a type of instruction can be enhanced via a structured instruction scheme, retaining the necessary means required for this kind of teaching.

Another type of prejudice may arise from personal preference when using off-line measurements. Tutors might have "a bee in their bonnet" (Morgan et al., 2003, p. 255). For instance, if a tester has marked several poor papers and then he or she comes across one that is significantly above average, this one will be likely to obtain a much higher grade than if it was marked as the first paper. Other markers might have the potential to record more hints at post-test or delayed test than at pre-test because they should have gained broader experience of noticing through the pre-test.

Finally, another type of bias can be formalised as a result of a common impression formed by previous stereotypes. For example, the consistency of items in all measurements can be illustrated by the fact that a tutor or tester (who designs the test) could have an impression of difficult situations that are common in relative clauses (frequent errors made by students, such as errors ascribed to first-language interference). Such a

negative impression can influence the testers by making them focus on the difficult ones and leading them to disregard easy ones or those that have parallels in L1 participants. The experiment can be improved by providing trained tutors or testers who use a stable, well-designed assessment plan.

In sum, the measures employed in the study are fairly reliable. The Oxford Placement Test has morphed into several versions to ensure score reliability. Online measures, likewise, diminish the possibility that prejudice and other subjective interventions might arise. However, the study carries some limitations, such as the description of the detailed approach of how explicit instruction is achieved and of how the items of the measure are built up. These limitations can be controlled by providing trained tutors and testers and a structured instruction scheme, along with a well-designed assessment plan.

### **Validity**

The study employs a test of explicit knowledge to assess if a participant has the ability to apply the grammatical rule in planned language use. This type of test is easily applicable to assess a participant's explicit knowledge through untimed grammatical judgment tests. However, they do not orally assess the spontaneous use of grammatical knowledge (implicit knowledge) in a straightforward manner under time constraints. The study uses two tests (i.e., a self-paced reading task and a stop-making-sense task) in an attempt to assess implicit knowledge. These two tasks, indeed, measure how fast a participant can process to comprehend every word or phrase (Papadopoulou, 2006). They do not exactly measure the unconscious status of acquired knowledge. An elicited oral production test has recently been developed to assess implicit knowledge. It includes grammatical and ungrammatical statements and a participant's task is to listen to each statement and orally repeat them. If he/she can orally correct the ungrammatical statement in a spontaneous and unplanned way, this outcome implies that the participant has acquired implicit grammatical knowledge. In sum, the elicited oral imitation test can logically assess implicit knowledge, while the other two tasks used in the Alhossaini et al. (2014) study are not appropriate for assessing the spontaneous use of a target's implicit grammatical knowledge.

### **Internal Validity**

Internal validity addresses whether the independent variable is the only cause of the change observed in the dependent variable (Bless, Higson-Smith, & Kagee, 2006). Participants are randomly assigned to either an experimental group or a control group after they have been evaluated through a placement test. If a single group was employed, it is difficult to make a convincing conclusion about whether the development of the experimental group is a result of explicit instruction. Other events or factors might occur between the pre- and post-test or between the post-test and the delayed test.

In addition, implicit and explicit knowledge are measured by identical measurements in all pre-post-test/delayed tests for both groups. This can reduce the calibration errors in the instruments.

The statistical procedure of variance analysis (Anova) is also used to manipulate the data that are observed. This can increase the validity of the level of certainty in the relationship between the dependent variable and the independent variable. What can be recorded on the surface should be interpreted, especially if the cause-effect relationship is not obviously observed (Denscombe, 2010).

Although assigning participants to one of two groups is a useful technique, it is possible that the tutor who runs the treatment group is active and more excited about using the new method than the other tutor who administers the control group. In this case, the treatment group could have developed noticeably quickly as a

result of the active engagement of the tutor, rather than of the explicit instruction itself.

Given that the participants in the research are volunteers, the study doesn't show whether any dropped out of the treatment group during the one-week course. If some dropped out on account of it and the more-motivated participants tended to remain at the post-test or the delayed test stage, then the treatment group will appear to be more effective than it really is by virtue of the motivation of participants, not the type of instruction.

According to the description of the research study procedure, the participants were not instructed to leave the box blank if they did not know the answer. If some guessed the item correctly by chance, it is extremely likely that they would not guess correctly at the post-test or delayed test stage, and then they would receive a low score. This thread, statistically, offers that the scores in the distribution regress to the mean, due to guesswork, not to the explicit instruction itself (Gravetter & Forzano, 2011).

### **External Validity**

External validity concerns the extent to which the findings of the study could possibly be generalised to a broader population (Jackson, 2008). The sample design of the Alhossaini (2014) study is a fairly well-structured paradigm that is intended to boost external validity. The sample is, first of all, selected as subjects from one English institute in Iran, and then subjected to a placement test to rule out those whose scores did not fall in a close range of grades, between 85 and 100. Those who passed the test were randomly assigned to the treatment group (N = 22) and the control group (N = 15). However, the study is supposed to use probability sampling (i.e., the participants are randomly selected from several institutes to ensure that the selection of the sample is not affected by the researchers and also in order to give a chance to increase the number of participants, which appears rather few and unequal in both groups. The restriction of selection from one institute raises the question of whether or not it is sufficiently confident of generalising the findings to the population. The study does not address the characteristics of the sample, such as whether they are high school students or undergraduates or whether they are educated and skilled. Logically, for instance, if the educational policy in the institute or in Iran seeks to endow students with reading speed and other cognitive skills, how confident are we that the research process used in the Alhossaini et al. (2014) study will work properly with a sample in a different institute or country, which does not encourage its students to develop reading-speed and other mental skills?

In short, the measure employed to assess explicit knowledge is reasonably valid. Also, the idea of assigning participants to one of two groups, rather than pre- or post-test, minimises the threats to the internal validity. However, the study does not use the appropriate measures for implicit knowledge nor does it describe how the threats to internal and external validity are controlled. It, again, can be enhanced by employing an elicited oral imitation test, which is the most appropriate to assess implicit knowledge. In future research, a description of how threats to validity are controlled should be clearly provided.

### **Systematic Application of Method**

The research procedure of study has undergone several obvious stages with fairly structured design. First of all, the research process starts with a placement test for individuals who voluntarily sign up for the study. Those who pass the placement test are randomly assigned to one of two groups. The experimental group is exposed to explicit instructions and the control group is exposed to standardised (routine) instructions. Both groups, then, are given three tests; one is for explicit knowledge, and the other two tests are for implicit

knowledge. The two groups, then, are compared with a group of advanced EFL learners (doctoral students). The data are analysed statistically by using descriptive statistics, a t-test, and ANOVA.

The study basically uses a good systematic method. However, it lacks some deeper explanations of the exposure and testing stages, both of which have been extensively discussed under reliability and validity. In addition, the assignment of participants to groups in the study has led to some bewilderment. For instance, the participants have been assigned to one of two groups: the experimental and control group, and then their performance is compared to doctoral students' performance (the study does not offer that doctoral students are represented as a control group). I suspect that what the researchers are seeking to do is, first of all, to divide the participants into two experimental groups. Every group is subject to different teaching conditions (e.g., explicit vs. implicit or routine instruction) and, accordingly, a control group (e.g., doctoral students) is included as a baseline for comparison.

From an ethical view, the study also indicates that the participants voluntarily take part in the study. However, the study does not describe whether or not they have signed a consent form or are informed of the purpose of the study.

### Conclusion

The effect of explicit learning on the acquisition of implicit linguistic acquisition is still a controversial issue in the second language acquisition research. The purpose of this article was to evaluate Alhossaini and her colleagues' study as a means of promoting the methodology especially the data collection techniques so that they can be taken into consideration when further studies are conducted. Also, potential directions for further research (under strengths and weaknesses of the study) were discussed as an attempt to encourage researchers to continue doing their research employing enhanced methodology.

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