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Original

Effect of a Programme to Enhance Proficiency in Linguistic Competence in Secondary Education[☆]

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ABSTRACT

The present article aims to evaluate the effects of a programme to enhance proficiency in linguistic competence in verbal aptitude, inductive reasoning, academic performance, self-efficiency in linguistic intelligence and linguistic competence. For this aim, a quasi-experimental study was designed with repeated measurements and a control group. A total of 204 participants were taken from second year secondary schoolchildren (51.47% girls) with a mean age of 12.48 years ($SD = 1.48$). The results showed that the programme stimulated a significant improvement in language skills, academic performance, linguistic intelligence self-efficacy, as well as linguistic competence, in the experimental groups.

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Efecto de un programa para la mejora en competencia en comunicación lingüística de alumnado de Educación Secundaria

RESUMEN

El presente artículo tiene como finalidad evaluar los efectos de un programa para la mejora de la competencia en comunicación lingüística en las variables aptitud verbal, razonamiento inductivo, rendimiento académico, autoeficacia en inteligencia lingüística y competencia lingüística. Se utiliza un diseño cuasi-experimental de medidas repetidas con grupo control. Los participantes son 204 estudiantes de 2.º curso de ESO (51.47% son mujeres) con una media de edad de 12.48 años ($DT = 1.48$). Los resultados confirman que el programa estimuló en los grupos experimentales una mejora significativa en la aptitud verbal, en el rendimiento académico, en la autoeficacia en inteligencia lingüística, así como en la competencia lingüística.

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Introduction

Communicative competence is defined as the result of communicating within the realm of specific social practices. It involves a command of different competences such as language (use of grammar), sociolinguistic (knowledge and use of social interaction rules), pragmatism (understanding of inferences and functional features of language) and psycholinguistic (e.g., motivation and affective conditioning: Pilleux, 2001). Therefore, a comprehensive development of language proficiency requires developing a *knowledge* of the linguistic component, *know how* regarding the pragmatic-discursive component, *knowing of how to be* in the socio-cultural component, *abilities* in the strategic component that enables the individual to overcome the difficulties arising during the act of communication, and the *desire to do* in the personal component, which implicates the individual's attitudes and motivation (Bermúdez & González, 2011).

In education and for its teaching, there are at least two fundamental consequences of the multidimensional nature of communicative competency. The first is that developing this

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competence requires didactic interventions that demonstrate how the theory of grammar is applied to communication, as well as other strategies to cover each of its components. Secondly, it requires a transversal approach as its relationship to communication implies that it inevitably affects the development of all other competences and even, the learning process itself.

Education strategies based on the communication of a language derive from the first of these consequences for teaching. These strategies were initiated in the 60s, as proposed by Candlin, Widdowson or Richterich (Galera & Galera, 2000; Roberts, 2004) and they have dominated educational models in recent years. The second issue has given rise to interdisciplinary approaches to language didactics based on the theoretical hypothesis that improving competence in communication will lead to improvements in all other competences, and therefore, in the overall academic performance of students (Jiménez, 2010; Jorba, Gómez, & Prat, 2000).

The pedagogical model that best reflects the two features of linguistic competency is the Language Centre Project (LCP), a cross-sectional and interdisciplinary strategy established in English speaking countries in the 70s in association with several innovative education movements (Corson, 1990, 1999; Gómez, 2013; May, 1997). This was a model that was first implemented in Spain in the 90s, particularly in multilingual contexts (García & Torralba, 1996). The approach adopted is based on the idea that language is a communication system that requires developing the skills needed for understanding, talking, reading and writing, and the fact that these skills need to be practised in all possible communicative situations in which language is used, not only in the context of a subject dedicated to its metalinguistic study (Pérez & Zayas, 2007). The main objective is to improve the students' communication skills, whether in a second language (L2) or in their native language (L1). In this study we will use this second model as the basis to assess whether an educational intervention inspired on the LCP can improve a students' native language competency and if, as the theoretical models predicts, this improvement contributes to their overall academic achievement.

The majority of research studies in this field, both on L2 (e.g. Cantero & Aarli, 2012; González, 2004; Pérez & Serna, 1997; Trujillo, 2010) or the native tongue (Gómez & Arcos, 2007, 2013; Trujillo & Rubio, 2014), propose interventions designed from a purely theoretical point of view and they employ innovative approaches. However, they lack an implementation and evaluation process to validate their efficacy. In this regard, little evaluative research has been carried out, both from a quantitative and qualitative point of view, which could serve to document the impact of these programmes, and thereby inform decision making processes. There are some studies that measure certain parameters of linguistic competency, such as improvements in the L2 interaction index after implementation of bilingual projects (Cantero, 2014), or the differences in proficiency in different language components between immigrant and native students (Navarro & Huguet, 2007; Navarro, Huguet, Sansó, & Chireac, 2012; Navarro, Huguet, & Sansó, 2014), although none have evaluated the effects of a LCP type intervention. Our study intends to redress this deficit by designing an interdisciplinary intervention to enhance language competence that will include an inherit systematic and rigorous appraisal process to measure the predicted impact on communication and, according to the working hypothesis, in other competencies as well as on the overall academic performance, consistent with the interdisciplinary nature of linguistic communication.

In this context, the main objective of the study was to experimentally assess the effects of a language competency enhancement programme on different variables in secondary education students (corresponding to different components of competency, such as *knowledge*, *knowhow*, *be able to do* and *want to do*): verbal aptitude, inductive reasoning, academic performance, self-efficacy in linguistic intelligence, and linguistic competency per se. We formulated four hypotheses, regarding potential outcomes: H1, the language competency enhancement programme significantly improves the verbal aptitude of participants relative to the controls, although it does not improve inductive reasoning; H2, the programme significantly improves academic performance of the participants compared to the controls; H3, the programme produces a significant improvement in self-efficiency in linguistic intelligence of participants relative to the controls; H4, the participants in the language competency enhancement programme significantly improve their performance in the linguistic competency diagnostic test compared to the controls.

Method

Participants

The total sample was made up of 204 students in their second year of secondary education. From this sample, 97 individuals (47.55%) were assigned to the control group and 107 (52.45%) to the experimental arm. The age range of the participants was between 12 and 14 years of age ($M = 12.48$, $SD = 1.48$), and the differences in age in the two groups conditions were not significant, $\chi^2 = 1.23$, $p > .05$. From the total sample, 22.5% were 12 years old, 47.7% 13 and 29.8% 14 years old. The gender distribution was 99 (48.53%) male and 105 (51.47%) female.

The sample was taken from students in two year groups at four different secondary schools located in rural areas and with similar socio-economic indices. In each centre one class-group was randomly assigned to the experimental condition and the other to the control. The sample was selected by randomised cluster sampling from a list of centres in Toledo and based on their socio-economic characteristics.

Instruments

Dependent variables were measured by applying four validated assessment tools before and after implementation of the independent variable (the language competency enhancement programme). Two additional dependent variables were also measured: academic performance and the result of the language competency diagnostic test.

Verbal aptitude was assessed with the updated BADyG-M (Spanish acronym for Battery of General and Differential Aptitudes: Yuste, Martínez, and Galve (2005). This battery is comprised of six main tests and three complementary ones (*verbal analogies; number series; figure matrices; sentence completion; numerical problems; fitting pieces; oral storytelling memory* (OSM)*; orthographic visual memory; and discrimination of differences*). In the present study *verbal analogy* (VAN) and sentence completion (SCO) tests were used, which make up the *verbal factor* (VFA). In addition, complementary tests of *OSM* and *orthographic visual memory* (OVM) were also used. In order to calculate the compound reliability (CR) and average variance extracted (AVE), a confirmatory factorial analysis of the study data was performed using the maximum likelihood method for parameter estimation. The results demonstrate a high reliability (CR = .91), and the average variance extracted was higher than .50 (AVE = 57.85%), implying a high proportion of the variance is accounted for by the construct. Cronbach's alpha was also calculated for the study's tests, resulting in the following consistency indices (Cronbach alpha: VAN, $\alpha = .79$; SCO, $\alpha = .82$; VFA, $\alpha = .81$; OSM, $\alpha = .74$; OVM, $\alpha = .79$. In addition, the McDonald's omega reliability coefficient for the factor VFA was .78.