

# Cross-cultural training and quality educational inclusion in a multicultural environment

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## **Abstract**

*In this paper the main objective is to analyze the relationship between cross-cultural training and educational inclusion in a multicultural environment. In the methodology we develop a non-experimental, descriptive, explanatory and correlational research based on quantitative methods. We used a sample of 683 from the fourth year of the University Degree in Primary Education and primary education teachers, we elaborated a Likert scale, Cronbach's Alpha is .886, KMO is .712 and Bartlett (.000), we made a reduction of the scale, and finally we applied the U of Mann-Whitney and the P of Pearson. Main results we highlight that the participants demonstrate the importance of cross-cultural training in multicultural environments to increase educational inclusion. We verified with the correlational analysis that teachers and future teachers are aware of the needs of the students, in the analysis by equation modeling, they reveal the strong relationship between pluriculturalism and educational inclusion.*

**Keywords:** *Transculturality, culturality, multiculturalism, teachers, primary education*

## **1. Introduction.**

In this article we are going to make a tour through the key concepts in our current society, related to the research topic. The aim of this paper is to show the necessary relationship that should exist between transcultural training and educational inclusion in a multicultural environment, and from an inclusive point of view, to tend towards a teacher training with a different character and adapted to the new educational contexts, that is, a transcultural teacher training.

Al-Amer et al. (2015, p.298), define culture as a "set of distinctive spiritual, material, intellectual and emotional characteristics of a society or social group, which encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs", so that we can understand the transcultural process as a transculturation, and this occurs when a social group receives and adopts the cultural forms that come from another social group, thus determining its own cultural practices. Thus, for some authors, pluricultural education is seen as a way of doing school and educating and, therefore, we understand that in order to improve educational inclusion we must conceive it as a cultural process and not a purely technical one. According to Unesco, inclusion is perceived as the process of identifying and responding to the diversity of needs of all students through greater participation in learning, seeking to reduce exclusion in education. And thus, with

an approach that responds positively to the "diversity of people and individual differences, we understand that diversity is not a problem", but an opportunity for the enrichment of society, seeking to benefit all people regardless of their characteristics (Ainscow, 2012, p. 296). Therefore, the intention is to seek a more meaningful training in pluricultural environments, and in this way, understanding the pluricultural concept we will show the situation of a collectivity or society within which a variety of cultures coexist. In this sense, pluricultural are those countries or states in whose territories cohabit different ethnic or cultural groups with different traditions, customs, beliefs and languages, as well as, the educational environment that we find with multiple aspects of culture in different forms and rooted in our own community.

According to Gremels (2016) transculturality consists of crossing the boundaries of fixed representations to confuse, alter and contaminate known cultural codes. Today the study of transculturality suffers from restrictions due to the mentality that hardens cultural systems. For us, cultures are places of learning and active development, let us remember the observations made by Adler (1975, p.16) on the relationship between diverse cultures, he relates what will be a new type of personality more and more frequent: the multicultural person, where the limits expand with great importance much further away from one's own culture. A multicultural person will be more open and flexible to change being in favor of new formations of reality. He does not cling to his culture nor does he live away from it, but lives in movement between both cultures.

The concept "transcultural" can also be understood through lexical analysis of the word. Its prefix, of Latin origin, "trans" means "through", "behind" or "on the other side of", therefore, the term transcultural can also allude to those transversal categories that could be found in any culture. For De Barros & Hernández (2018, p.164) the term "transcultural", is understood as a phenomenon that influences several cultures or their relationships, and that happens when a social group receives and acquires the cultures that originate in other social groups, so that the community ends up transforming to a greater or lesser extent its cultural and professional practices, and likewise the language or way of dressing, among other characteristics.

Ortiz (1940, p.67) created the term transculturality in order to find an explanation to the cultural dimension of the migratory processes in Cuban society, for this author transculturality usually occurs through migratory processes, official power policies or through the influence of the mass media. Therefore, this term can be defined as the different stages of the transitive process from one culture to another, because these do not consist only in acquiring a different culture, but involve the loss of the previous culture, and also the resulting creation of new cultural phenomena (Ortiz, 1940, p.17).

Today, the study of the transcultural network suffers restrictions due to the mentality that hardens cultural systems. The experience shared by populations of indigenous, African and European origin and the expressive elements that composed that experience, such as language and musical manifestations, were synthesized in the popular music practiced in the last five hundred years in the New World and in the audiovisual conceived in the last century and also in this one. Although of the evident transculturality of this production, the submission of this heritage and its contemporary unfolding to national delimitations, prevented for a long time the emergence of studies that were not committed to the affirmation of culture as naturally emanating from rigidly demarcated territories. Interconnecting material,

corporal and sociocultural aspects in the daily constitution of manifestations in constant movement and transformation (Alvares, 2016, p.29). From the transcultural approach, the existing cultural differences are understood, and the importance of providing comprehensive and quality cultural care considering the beliefs and values of the people to whom care is provided. By acquiring the cultural perspective, cultural competence is developed (Escobar & Paravict, 2017, p.42).

We can, in this way, understand the term "transcultural", as "a phenomenon that affects several cultures or their relationships", and that occurs when a social group receives and adopts the cultures that come from other groups, so that the community ends up replacing to a greater or lesser extent its own cultural and professional practices, as well as language, way of dressing, among other characteristics. It can be said that, within transculturality, ethical aspects, ideologies, beliefs and values, justice and equality and non-maleficence can be incorporated. Without ever forgetting, that each person is a social being with his inalienable rights (Escobar & Paravic, 2017, p.36).

The processes of transculturation, as well as multiple identities develop as a condition because they are within an incessant framework of cultural borrowings and exchanges and, at the same time, when they are in this framework of action, they come to create a "third space": on the one hand, there is the original culture in constant movement and communication; on the other, the permanent exchanges with other cultures and diverse formats, and, finally, as a product of the whole process emerges a new identity construct that does not lose strength in such cultural reciprocity. On the contrary, it is constantly and strategically enriched and fed back to the primary formats. In this way, transcultural processes are constructed in the interstices of the conflict raised by identity belongings, between what is specific and what is different, in order to then elaborate the new identity "constructs" (Zebadúa, et al., 2017, p.38).

The concepts of transculturality and heterogeneity, twinned for use in literary criticism, can be oriented towards the study of culture in a broader sense to observe not only the linguistic aspects of communities but also their diverse customs and worldviews. A process of transculturation where all cultures are fully involved in its development, a process that is not without tensions and conflicts (Alberto, 2017, p.44).

We can conclude by saying that transculturality is a metaphor that expresses the need to place on a heterarchical plane (as opposed to hierarchical) the relations between the various societies of the world, which would give way to a genuine dialogue between cultures, between equals (interculturality), and not from static positions but from the need to mutually and constantly redefine themselves "assuming transculturality" (Marqués, 2017, p.18).

On the other hand, García Castaño & Pulido Moyano (1997, p.236) in relation to the "cultural intellect" as a model of multicultural education tell us that what is pursued is to educate individuals to value the diversities that exist between the cultures with which we live together in addition to those that exist and are not close to us, according to this reasoning, the school should be oriented towards the cultural benefit of all students, obviously this requires teachers with a very specific training.

According to Barabas (2014, p.16) although meanings of multiculturalism as multiple cultures or coexistence of cultures are confused as equivalent to cultural pluralism, this term is a very common term in Latin American anthropology that tries to give a specific and differential place to native subjects in culturally diverse environments.

González Falcón (2018, p.95) presents a series of research related to cultural plurality, from how teachers coexist cultural diversity, to the management of it in schools, and the need for teacher training in intercultural skills, being clear that we must incorporate into the training of all teachers a pluricultural approach to make possible the correct development. Aguado (2010, p.41) calls it intercultural competencies, defined as the cognitive, affective and practical peculiarities needed to perform effectively in an intercultural context.

The connection between transculturality and educational inclusion, is well justified in view of all the above, on the other hand, educational inclusion, is acquiring great importance in the educational field and is becoming a matter of great attention and need in the social and educational fields (Muntaner, 2019, p.47), since all students, regardless of their attitudes, abilities and aptitudes, have the right to receive an inclusive quality education and participate in it (Echeita & Ainscow, 2011p.44; Ainscow, 2017, p.34). In the opinion of Booth & Ainscow (1998, p.63), the concept of inclusion is composed of two basic ideas: that of community and that of participation. The two ideas have as a characteristic their connection with inclusion strategies, and the character of process attributed to them. Thus, the objective of inclusion is to increase the participation of all students in the school curriculum, as well as to reduce school and social exclusion.

Advances in the human sciences have a great influence on the understanding of educational inclusion, each person presents diverse individualities, and this diversity makes us different and unique. The educational performance that is developed to meet the needs of inclusion, it is important to comment on the need to enhance meaningful learning. In order to promote the role of the teacher as a mediator between students and content, focused on the evolutionary development of the student. According to Unesco (1994), inclusive education is first and foremost a question of human rights, since it defends that no person can be segregated from the attention required by each individuality. Thus, we understand it as an attitude, a system of values and beliefs, not an action or a set of actions. Inclusive education is the most effective means of combating discriminatory attitudes, fostering open and caring communities, building an inclusive society and ensuring a school for all..." (UNESCO, 1994, p.42). For this to become a reality, we must be committed to developing the necessary changes in educational policies and practices so that we have a truly inclusive education.

In order to establish the connection between pluriculturality and inclusion, let us start from a double theoretical basis, between subjectivity and objectivity, Dubet & Martucelli (1996, p.523-526) present a matrix that classifies the theories of socialization into four main lines that cover the field of sociological debate on socialization (Molina, 2002, p.94):

1) A perspective characterized by a type of socialization linked to internalization and which has as its preponderant mechanism of integration, social integration (based on the establishment of an order and regularity of the system with cultural and normative agreements). In this perspective, the actor and the system are two sides of the same coin

and socialization makes it possible to grasp the individual through the link between these two dimensions. In this sense, the school, for example, is conceived as an institution - an apparatus - that is capable of transforming values into norms, norms into dispositions and dispositions into individual personalities.

2) A second type of socialization understood as internalization, but whose mechanism is systemic integration, since it is thought that social integration is carried out by impersonal mechanisms (and socialization does not play a central role in this; society is conceived in systemic integration as the result of an aggregation, more or less random, of different individual actions). The theories that fall within this perspective are those of Marxist and structuralist inspiration, in which the issue of socialization does not occupy a central place, since greater importance is given to impersonal elements.

3) The third type links distancing with social integration, and emphasizes individuation, adding to a postmodern representation of socialization, while maintaining this social conception of integration. In a way, this model is what has brought Habermas -according to these authors- closer to a critical vision of modernity and understanding the differentiated spheres of society as a derivation of the normative sources in the lived world. Giddens' contributions can also be framed in this third way, in which socialization plays a key role in the theory of structuration, recalling the contingent character of interactions, of the competencies of social actors and the reproduction of social systems through time and space.

4) The fourth group of socialization theories arises from the interweaving of a distancing type of socialization and a systemic integration mechanism. It insists on the radical separation of the subjectivity of the actors and of the great principles of societal integration, and Luhmann's general theory of systems is given as an example. In this sense, the subject loses all real consistency and becomes the product of the functional principle of complexity reduction, the true guide of social systems (as these sociologists' comment, each social subsystem, governed by a closed identity program, adapts to disturbances coming from outside and which do not modify the initial program in any way). According to Luhmann, the complexity of modern society makes it necessary to renounce the study of social life based on individual subjects and to center it around subsystems, as true actors (the subject is thus fragmented and defined by its distance from social systems).

In a way, these four guidelines represent the panoramic range of theories on socialization and allow for a more complete vision of the sociological debate on the subject. In any case, it allows us to reflect on the growing distance of the subject and the social world and on the inability of a theory of socialization to account for the integration of society (Martuccelli, 2004, p.63). These are, then, the four fundamental positions in relation to socialization that are observed in the field of sociology and that allow us to link this topic with that of the construction of individuality in social life and, in this sense, of identity, key factors for quality inclusion, both social and educational.

To speak of educational inclusion is not only to propose a conceptual framework, but also to propose a change in educational practices and methodologies. In this regard, we understand that improving educational inclusion is a cultural process and not merely a technical one. For Peñalva & Leiva (2019) education in environments

of cultural pluralism, and the difference among students must be understood as cultural difference, has its own peculiarities as a theoretical-practical model and approach to care and understanding of cultural differences. We are facing a problem whose successful resolution entails great difficulty in successfully solving it and it is necessary to have an analysis that allows understanding the cultural keys of the phenomenon of education on which we want to act (Sáez, 2006, p.875). Education in an environment of cultural pluralism must be constituted as a quality education for all, beyond the recreation of specific programs or parcels with the adjective "intercultural". Its objective is to improve the characteristics of life and reinforce one's own cultural identity through the recognition and acceptance of this diversity (Arroyo, 2013, p.154).

Teaching practice, therefore, is influenced by multiple factors: from the teacher's own academic training to the singularities of the school in which he/she works, it is also very influential in the construction of the didactic knowledge that in it and from it is configured and consolidated, as it is generated as a human-social framework with great impact on the integral formation of students. Furthermore, it is determined by the social, historical and institutional context. In this sense, Forsyth, (2014) points out that teaching practice, spontaneous solutions, pedagogical functions and a social scenario have to be developed. In this way, it is important that students assume it as a planning realization for both, so that teachers develop professionally, understanding in all its breadth the learning process. And in this way, it is essential to emphasize the importance of the institution's involvement in the training plans designed for the teaching staff, making it possible for these to be in line with the university's training profile and appropriate to the context (García, 1997, p.238). In the sense of teaching practice in its transformative perspective, Freire (1990, p.310) mentions that neither excessive and mechanized action nor the most beautiful conscientizing theory leads to true praxis. This process requires a strategic and autonomous mastery of knowledge. Thus, teachers need to combine knowledge and processes with their own attitude towards constant change and innovation in their teaching practice.

The pluricultural school promotes an educational model that, in order to be effective, needs the strong support of society, contributing to organizational change. In the first place, teachers must receive adequate training and guidance in order to recognize and implement the educational needs of their students. Secondly, the teaching materials used in the classroom and by teachers should be adapted to this new environment. The type of school that can aspire to fulfill and achieve these objectives is one that enjoys open, critical, secular, non-indoctrinating, community-based spaces, etc. An egalitarian, non-selective, non-segregated space, that is, a school that debates with the environment and does not treat students according to their assignment, culture, religion or geographical origin. Therefore, the school that can long for these objectives is one that teaches in values of diversity and solidarity, or at least tries to do so (Pacheco, 201, p.672).

Transcultural education has become the new challenge of the school, so teachers must be prepared and trained to act in the face of a very specific diversity. Therefore, the important thing is to adapt teaching methods and school organization to the objective of achieving the greatest coherence between the personal characteristics of each student and the conditions of teaching, whatever their background and conditions. It is nothing new to say that the role of the teacher is in continuous

evolution, as we continually hear about new requirements for the professional profile of the teacher influenced by the increase in the heterogeneity of students, a significant growth towards mastery of several languages, the intercultural context in which they find themselves, the use of new technologies and the need to learn about special subjects (Pavié, 2011, p.70). Now, this response requires a guiding framework where the necessary standards in terms of training do not neglect the particular needs of the local area, carrying out the challenges that we are facing and those that we could face in the future such as the reception of people from other countries (immigrants) and the possible coexistence of different religions, customs and cultures (Luchetta, 2013, p.33).

In conclusion, according to Guilherme and Dietz (2014, p.19) in recent years, especially in the Anglo-Saxon debate on inter- or multicultural education, an urgent need has been externalized to "pluriculturalize" educational systems through mechanisms of "affirmative action" and "positive discrimination" that allow the "empowerment" of certain ethnic minorities, both autochthonous and allochthonous, during their process of self-identification, ethnogenesis and "emancipation". In the continental European debate, on the contrary, the need for pluriculturality in education is not claimed on the basis of the identity needs of minorities; the struggle for pluricultural education is justified, in these cases, by the apparent inability of the bulk of society to face the new challenges produced by the growing heterogeneity of students, the sociocultural complexity in majority-minority relations and, in general, by diversity as a central characteristic of future European societies (Gogolin, 1997, p.64; Verlot, 2001; Aguado, 2010, p.39). In this sense, while in the United States, the United Kingdom and lately also in Latin America an empowerment of minorities in education is developing, in continental Europe, the choice is being made for an education that transversalizes the promotion of pluricultural competencies within marginalized minorities and above all, within marginalizing majorities.

The concept of "the transcultural" has also been discussed with an apparently more neutral idea and, therefore, trying to elude the charge of "the multicultural" and "the intercultural" not only by shying away from the suffix "ism" but by ascending to a higher level as suggested by the prefix "trans". It is at this point that the interaction between different cultures can transcend not only their borders but also their interstices, a "third space", can overcome its own elasticity and give rise to a new but common cultural space that remains beyond its sources (Guilherme and Dietz, 2014, p.27). Consequently, the term poses another problem, which is precisely that it does not address the local variables, conflicts and potential that the situation itself can generate in a transcultural event. According to Eshel et al. (2010, p.996), for example, the notion of transculturality takes into account the historical processes of cultural changes and movements, including hybridization, which is composed of transculturalization processes. Therefore, terms such as "multicultural", "intercultural", "intracultural" and "transcultural" are becoming very common all over the world, both in the academic environment and in official policy documents; however, each of the terms has a peculiar familiarity in each society, whether it carries positive or negative connotations, depending on the academic traditions and the historical evolution of each of the terms in each specific context. However, this does not mean that the meaning of these terms is universal, although they are often paradoxically understood as such, despite their particular allusion to difference. While the definitions of multicultural, intercultural, intracultural and transcultural

tend to protest precisely in favor of decentralizing cultural assumptions and against universalizing ones, some theorizations often tend to conceptualize the terms from a dichotomous and endogamic perspective, based on generalizations, essentialisms and a unilateral understanding of other points of view. In this framework of terminology and recent conceptualization, the subject of teacher training in transculturality is still to be developed, and this is where our research wants to make its contribution.

## **2. Methodology.**

This research is based on the following general objective: to analyze the relationship between cross-cultural training, pluriculturalism and educational inclusion. We start from a non-experimental, descriptive, explanatory and correlational design, quantitative methodology and we take as reference an interpretative paradigm. A Likert scale was chosen as the research instrument.

### Participants.

We consider the population constituted by university students in the fourth year of the specialty of primary education of an Andalusian university, we will also use the population of primary education teachers of the province in which this university is located. The population of university students consists of 300 male and female students, all of them majoring in primary education. We will take the entire population, so that the sample coincides with the population. The Likert scale, after several absences and withdrawals, was finally answered by 299 fourth-year students. The sample of teachers is obtained from the population of teachers in the province of Jaén, a total of 9,878 subjects, which, applying the finite population sampling formula, yields a result of 384 teachers forming the sample. In total we have 683 randomly selected research subjects.

### Instrument.

We used a Likert scale with 18 items. The dimensions we considered in this study, extracted from the theoretical framework and the construction of the Likert scale are: A.-Pluriculturalism, B-Educational inclusion, and C.-Cross-cultural training. Consequently, we establish as independent variables: pluriculturalism and transcultural training. The dependent variable is: educational inclusion. The design of the Likert scale was carried out with an operationalization table, on the other hand, the validation was carried out, in a first stage of content, with an expert judgment and pilot test, secondly, a factor analysis was carried out to validate the scale in its construct using SPSS v25 software. The reliability analysis was performed by calculating Cronbach's alpha, giving a score of .886, which is considered good (George and Mallery, 2003, p.142), for structural modeling has been used Lisrel 8.80.

### Data analysis.

### Content validity.

Regarding validity, first of all, a content validity was carried out by fifteen PhD specialists (Malla and Zabala, 1978: 22). Their competence coefficient was calculated to be  $k=.9$ , which shows a high level of competence (Mengual, 2011). After analyzing the validation questionnaires, some questions were readjusted. On the other hand, a



pilot test was carried out on a subgroup of the sample to review comprehension difficulties, identify questions that generated doubt, etc., and the corresponding checklist was used (Iraossi, 2006). The results of the pilot test were satisfactory, so the instrument was considered validated in its content.

#### Construct validity (Exploratory Factor Analysis).

The factor analysis technique that we have applied in our research follows the guidelines that establish the following stages, being of an exploratory nature (Díaz de Rada, 2002):

1.-Study of the correlation matrix: it is necessary to study the correlation matrix to check if our data are adequate to perform a Factor Analysis. The KMO coefficient has been used, in our case the value is .712, following Kaiser (1974) the value is acceptable, Bartlett's test of sphericity has a significance of .000, and the value of the determinant is  $1.364E^{-7}$ , so we continue with the analysis.

2.-Factor extraction: the communalities analysis showed us that the factors have a value greater than .542, so it is not necessary to eliminate any item from the factor analysis. The best represented item is: B8 (.900): Students with disabilities have problems in coping with the school curriculum. The worst represented item is: C12 (.542) -As a teacher I have sufficient training to attend to cross-cultural students.

3-Factor rotation: Varimax rotation was performed, studying the accumulated percentage we conclude that the first five factors explain 76.132% of the accumulated variance.

4-Study of the factor scores: the distribution of items is shown according to the highest level of saturation by factors, eliminating factors with less than three items.

Items integrated in Factor I. (40.368 % accumulated variance):

#### Dimension A (Pluriculturality):

A1 (The term multicultural refers to the current of thought that deals with the study of the presence in the same space and time of heterogeneous cultures).

A2 (Interculturality is the interaction between two or more cultures equally, favoring the inclusion and harmonious coexistence of all individuals from a respectful relationship between cultures).

A3 (Intraculturality is the capacity of a cultural group to look within itself, contextualizing its status within the culture in which it is inserted).

A4 (Transculturality is the way in which cultures, by interaction, generate new joint cultural facts).

A5 (The transcultural level acts as a mediator between cultures, through cooperation and communication, independently of the specific knowledge received from those cultures).

#### B (Educational inclusion)

B7 (Students with special educational needs are those who require, for a period of their schooling or throughout it, certain support and specific educational attention).

B8 (Students with disabilities have problems in coping with the school curriculum).

B9 (As a teacher, I have enough training to attend to students with disabilities).

B11 (I have didactic resources to assist students with disabilities).

C (Cross-cultural training)

C13 (A cross-cultural training should include inclusion as a key theme).

C14 (A cross-cultural training should include neuroscience as a key topic.)

C15 (A cross-cultural training should include didactic methodology as a key theme.)

C16 (A cross-cultural training should include neuroscience as a key theme.)

C16 (A cross-cultural training should include cultural knowledge as a key topic).

C17 (A cross-cultural training must include knowledge of research as a key topic.)

C18 (A cross-cultural training should include practical examples in balance with the theory being learned).

We have calculated Cronbach's alpha of factor 1: .889 (15 items), rating "good", it is confirmed that the construct is good, and that, in addition, we can reduce the scale by 3 items with a reliability similar to the original one.

Correlation analysis.

To perform the correlation, we subjected the Likert scale to the Mann-Whitney U test for two independent samples, which tells us that the data follow a normal distribution, so Pearson's P correlation must be used. The items with significant correlation (.01) are the following:

-Dimension A (Pluriculturalty): A1>A3 (.690), A2>A4 (.731), A3>A1 (.690), A4>A2 (.731), A5>A4 (.640).

-Dimension B (Educational inclusion): B6>B7 (.335), B7>A5 (.497), B8>B10 (.564), B9>B11 (.573), B10>C12 (.596), B11>B9 (.573).

-Dimension C (Cross-cultural training): C12>B10 (.596), C13>C16 (.738), C14>C17 (.666), C15>C16 (.650), C16>C13 (.738), C17>C18 (.734), C18>C17 (.734).

The items with the highest significant correlation are:

-A1>A3 (.690)<>A3>A1 (.690): A1.-The term multicultural refers to the current of thought that deals with the study of the presence in the same space and time of heterogeneous cultures. A3.-Intraculturality is the capacity of a cultural group to look within itself, contextualizing its status within the culture in which it is inserted.

-A2>A4 (.731)<>A4>A2 (.731): A2.-Interculturality is the interaction between two or more cultures equally, favoring the inclusion and harmonious coexistence of all individuals from a respectful relationship between cultures. A4.-Transculturality is the way in which cultures, by interaction, generate new joint cultural facts.

-A5>A4 (640): A5.-The transcultural level acts as a mediator between cultures, through cooperation and communication, independently of the specific knowledge received from those cultures. A4.-Transculturality is the way in which cultures, by interaction, generate new joint cultural facts.

-B8>B10 (.564): B8.-Students with disabilities have problems in coping with the school curriculum. B10.-I have material resources to assist students with disabilities.

-B9>B11 (573)<>B11>B9 (.573):

B9.-As a teacher I have sufficient training to serve students with disabilities. B11.- I have didactic resources to attend to students with disabilities.

-B10>C12 (.596): B10.-I have material resources to assist students with disabilities. C12.-As a teacher, I have sufficient training to serve cross-cultural students.

-C14>C17 (.666): C14.-A cross-cultural training should include neuroscience as a key topic. C17.-A cross-cultural training should include knowledge of research as a key topic.

-C15>C16 (.650): C15.-A cross-cultural training should include didactic methodology as a key theme. C16.-A cross-cultural training should include cultural knowledge as a key theme.

-C17>C18 (.734)<>C18>C17 (.734): C17.-A cross-cultural training should include knowledge of research as a key topic. C18.-A cross-cultural training should include practical examples in balance with the theory being learned.

The item with the highest correlation is:

-C13>C16 (.738)<>C16>C13 (.738): C13.-A cross-cultural training should include inclusion as a key theme. C16.-A cross-cultural training should include knowledge of culture as a key theme.

The items that have significant correlation (.01) with dimensions other than their own are:

-B7>A5: B7.-Students with special educational needs are those who require, for a period of their schooling or throughout their entire schooling, certain supports and specific educational attention. A5.-The transcultural level acts as a mediator between cultures, through cooperation and communication, independently of the specific knowledge received from those cultures.

-B10>C12>B10: B10.-I have material resources to attend to students with disabilities. C12.-As a teacher I have sufficient training to attend to cross-cultural students.

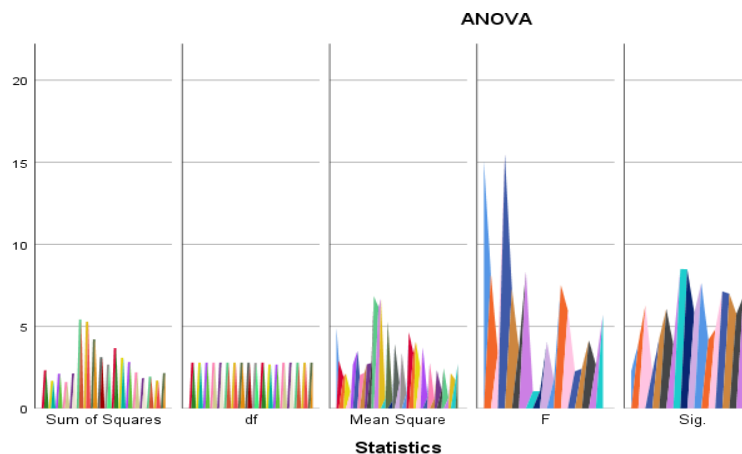
Descriptive analysis.

Regarding the descriptive analysis, we will highlight, by dimensions, some answers of the research subjects that are relevant to appreciate the ideas of the sample group on the subject under investigation. In dimension A (Pluriculturalism) the subjects "agree" that intraculturality is the capacity of a cultural group to look within itself...(mean=3.94) and that transculturality is the way in which cultures generate new joint cultural facts (3.93). In dimension B (Educational inclusion) they are "indifferent" that integration and inclusion are equivalent concepts (3.06) and that students with disabilities have problems in coping with the curriculum (3.40) or that

they have sufficient training to serve students with disabilities (3.27). In dimension C (Cross-cultural training) they are indifferent to the question that I have sufficient training to deal with cross-cultural students (3.13), or that cross-cultural training should include neuroscience as a key topic (3.29).

### Hypothesis testing (ANOVA)

Analysis of variance (ANOVA) tests the hypothesis that the means of the two samples are equal. The null hypothesis states that all means are equal, while the alternative hypothesis states that at least one is different (Fisher, 1949). To perform the ANOVA test we need a grouping variable (Factor Group) and the two independent samples. First, we calculate Levene's statistic to test the hypothesis of population variance, the result forces us to accept the null hypothesis, then we proceed to the calculation of the one-factor Anova.



**Figure 1. One-factor Anova.**

The results show that we cannot establish significant differences in the data (ANOVA) according to the degree of significance ( $<.05$ ).

### Confirmatory factor analysis.

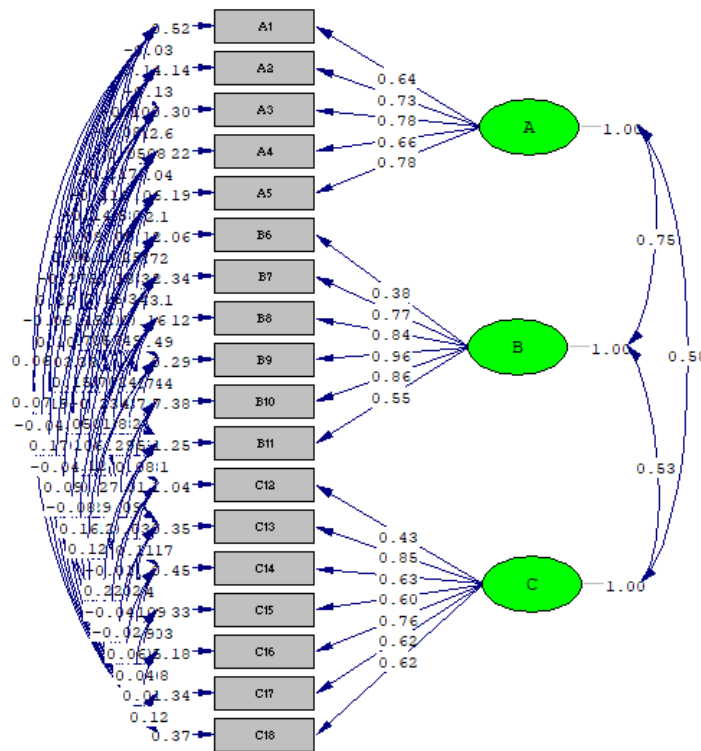
The SEM methodology consists of a series of phases according to Kaplan (2000) and Kline (2005) that we will specify in four.

Phase I.-Specification of the Measurement Model. In this stage the latent traits and the dimensions that represent them as variables of interest of a substantive theory are established. For the structural study we will use the scale with 18 observed variables.

Phase II.-Identification. Computational Implementation of the System of Structural Equations. To determine if the model is identified we must calculate the degrees of freedom (gl), in our case the value is 24, so we can say that the model is over-identified.

Phase III.-Parameter estimation. The model estimation phase includes a graphical representation of the theoretical-conceptual structure of the instrument under analysis. This representation is the basis for the formulation of the reproduced matrix that will be compared with the derived matrix. For the Likert scale, the figure representation is shown in the graph, in which the ovals represent the five latent variables (constructs) and the squares the 30

observed variables, which together make up the dimensionality of the instrument.



**Figure 2. Graphical representation of the natural measurement model of the Likert scale.**

As for the regression coefficients between the latent and observed variables, the interpretation is as follows.

**Dimension A (Pluriculturalty):**

-Major influence of the latent variable on: A3 (.78).-Intraculturality is the ability of a cultural group to look within, contextualizing its status within the culture in which it is embedded.

A5 (.78).-The cross-cultural level acts as a mediator between cultures, through cooperation and communication, independently of the specific knowledge received from those cultures.

-Less influence of the latent variable on: A1 (.64).-The term multicultural refers to the current of thought that deals with the study of the presence in the same space and time of heterogeneous cultures.

**Dimension B (Educational inclusion)**

-Greater influence of the latent variable on: B9 (.96).-As a teacher I have sufficient training to attend to students with disabilities.

-Less influence of the latent variable on: B6 (.38).-Integration and inclusion are equivalent concepts.

**Dimension C (Cross-cultural training):**

-Higher influence of the latent variable on: C13 (.85).-A cross-cultural training should include inclusion as a key theme.

-Least influence of the latent variable on: C12 (.43).-As a teacher I have sufficient training to serve cross-cultural students.

The strongest relationship between the latent variables is given by:

A (Pluriculturalty) - B (Educational inclusion) (.75).

A (Pluriculturalty) - C (Cross-cultural training) (.58)

The lowest ratio is given by:

B (Educational Inclusion) - C (Transcultural Training) (.53)

Phase IV.-Evaluation of the adjustment. Application of indices and goodness-of-fit criteria.

In this stage we use indices and goodness-of-fit criteria to relate the validation evidence to the dimensional structure of the instrument being evaluated, which in our case is acceptable:  $\chi^2/df$  (9.4). IAA: GFI (.96), RMSEA (.11), SRMR (.065), RMS (.060), ECVI (.84). IAI: AGFI (.74), IFI (.99), NFI (.98), TLI/NNFI (.91), RFI (.90), CFI (.99). IP: PNFI (.15), PGFI (.14), AGFI (.74).

### 3. Data analysis.

This research was conducted on a population of 81 teachers and 79 students at the National University of Equatorial Guinea, Bata campus. The objective was to analyze the perception of teachers and students on educational competencies at the National University of Equatorial Guinea (Bata). For the validation of the data collection instrument, we resorted to content validation, which was satisfactory, and construct validation, through exploratory factor analysis. The result of this analysis on the one hand confirms the construction of the scale, and on the other hand reduces it to 8 items, obtaining a reliability according to Cronbach's alpha of good (.840), similar to the complete scale, so it is validated in its construct. However, the exploratory factor analysis allows us to say that the items with the greatest importance in the scale are those corresponding to mathematical competence, learning to learn and innovation, and didactic competence. Similarly, the least relevant items are those corresponding to scientific and cultural-artistic competence. On the other hand, three factors are determined that regroup the items, dimensioning the scale, i.e., we can speak of technological, social and personal dimensions.

The Mann-Whitney U test allows us to determine that the data follow a uniform distribution, and preserve the null hypothesis, so we proceed to the correlation analysis with Pearson's P, highlighting the negativity of the correlations, which allows us to affirm, significantly, that the subjects who valued the scientific competence reject the didactic competence and vice versa, and on the other hand, the participants who valued the treatment of information and the digital competence reject the cultural-artistic competence, and reciprocally.

The descriptive analysis, in general, shows that the average participant is male, of Fang ethnicity, belonging to the Faculty of Education and aged between 25 and 36 years. If the subject is a teacher, he/she has a bachelor's degree and teaching experience of 6 to 10 years. On the other hand, in a score of 1 as the minimum value and 10 as the maximum value, the highest rated competencies are: Linguistic communication (7.9), Scientific (7.1), Information processing and digital competence (7.0), Didactic competence (6.6), Mathematics (6.4), Learning to learn and innovation (5.3). The failed competencies are: Personal autonomy and initiative (4.1), Intra and interpersonal (2.7), Social and citizenship (2.47), Interaction with the physical world (2.41), Cultural and artistic (2.3). The higher

valuation for technological competencies and the lower valuation of social and personal competencies is observed.

The hypotheses were tested by means of a one-factor ANOVA, which was carried out for the variable "teacher/student" and the variable "ethnicity". Regarding the first factor, the significant differences are established in mathematical and scientific competencies, which are more highly valued by teachers than by students. Regarding the second factor, ethnicity, in relation to linguistic communication, the Bubi ethnicity is the one that values it the least, in relation to the rest of the ethnicities that have similar values. The competency of autonomy, learning and innovation is more highly valued by the Bubi ethnic group than by the rest, who value it similarly. Finally, in relation to intra- and interpersonal competence, it is more highly valued by the Bubi ethnic group, and less highly valued by the Fang ethnic group, with the rest of the ethnic groups having an intermediate value. Without going into the significance of the different competencies according to ethnicity, which would be the subject of another study, it is clear that the perception of some competencies according to ethnicity of origin is decisive. With all this, the null hypothesis is rejected and we confirm the alternative hypothesis of this research: Teachers and students give importance to educational competencies.

To conclude, and connecting with the ideas of Zabalza (2007), Mas (2012) and Galbán & Ortega (2021) in the sense of the importance of competencies more of a social and personal aspect, we can start reflecting on how the process of implementing competencies in higher education should be faced at the Bata campus.

#### **4. Discussion.**

The aim of this research is to analyze the relationship between cross-cultural training and educational inclusion in a multicultural environment. The sample is composed of students in the fourth year of the Primary Education degree at the University of Jaén and primary education teachers in the corresponding province. In order to achieve this purpose, a Likert scale was designed and constructed through an operationalization table. A reliability analysis was carried out, giving a good result, according to Cronbach's alpha (.886). The validation of the scale is carried out with exploratory factor analysis (KMO (.712), Bartlett (.000), Determinant (1.364-7), which not only confirms our study dimensions, but also reduces the initial 18-item scale to a 15-item scale with similar reliability. According to the factor analysis, we highlight the weight given to the students' problems in facing the curriculum and, surprisingly, the little weight given to teacher training to solve these problems, which is somewhat contradictory, since from our point of view, training is key to solving the needs of our students. Subsequently, after verifying with the Mann-Whitney U test that the data distribution is normal, the Pearson's P correlation is calculated, which gives us a very interesting conclusion, since the research subjects know the concept of special educational needs, and that to give them a response they need material resources, linking these resources to sufficient training, being able to observe the importance of training to use resources but not for a teaching methodology for example. Pearson's P correlation significantly supports the idea that cross-cultural training should include inclusion as a key theme, and knowledge of the culture as a key axis. The contrast of hypotheses was carried out through an ANOVA, after testing for homogeneity of variances with Levene's test, concluding that the null hypothesis is accepted, so that no significant discrepancies between the answers of the subjects of the two samples are appreciated, which makes us think that the

perception of the educational environment when one is a university student is the same when one is already inserted in it.

## 5. Conclusion

The descriptive analysis allows us to conclude that the subjects investigated do not differentiate integration from inclusion, being diametrically different concepts, nor do they give the required importance to the necessary training to attend to pluricultural students. Finally, considering the regression coefficients between some of our variables, we conclude that for the pluriculturality dimension the concepts of intra- and transculturality are key, and much less that of multiculturalism. We highlight the belief of having sufficient training to attend to students with disabilities, although inclusion is not differentiated from integration, and finally the importance of cross-cultural training, although it is not demanded. Based on the extracted results, and referring to our objectives, we conclude the strong relationship established between pluriculturality and educational inclusion and transcultural training, becoming the key to achieve quality inclusion, and showing the need to bring the topics transcultural training and educational inclusion closer together. We conclude by saying that transcultural training must include inclusion as a key topic, as well as cultural knowledge as a fundamental axis.

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