

Intercultural Communicative Competence in Post-Pandemic University Students

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ABSTRACT. This study aimed to evaluate intercultural communicative competence in 151 students of a Peruvian private university in the post-pandemic period. Through a cross-sectional design, data were collected using a Likert scale test and analyzed with the K-means cluster technique. Three groups with different levels of intercultural competence were identified: low (33.8%), medium (38.4%), and high (27.8%). Difficulties in interpreting intercultural situations and limited sensitivity to cultural stereotypes were observed. The conclusion highlights the importance of developing intercultural knowledge and sensitivities in university students to improve their ability to interact in diversified contexts.

Keywords: cultural communication; effective communication; cultural diversity; intercultural sensitivity.

Competencia comunicativa intercultural en estudiantes universitarios postpandemia

RESUMEN. Este estudio tuvo como objetivo evaluar la competencia comunicativa intercultural en 151 estudiantes de una universidad privada peruana en el período post-pandémico. Mediante un diseño transversal, se recopilaban datos usando un test en escala Likert y se analizaron con la técnica de clúster K-means. Se identificaron tres grupos con diferentes niveles de competencia intercultural: bajo (33.8%), medio (38.4%) y alto (27.8%). Se observaron dificultades en la interpretación de situaciones interculturales y una sensibilidad limitada hacia estereotipos culturales. La conclusión resalta la importancia de desarrollar conocimientos y sensibilidades interculturales en estudiantes universitarios para mejorar su capacidad de interactuar en contextos diversificados.

Palabras clave: comunicación cultural; comunicación efectiva; diversidad cultural; sensibilidad intercultural. **Keywords:**

Competência comunicativa intercultural em estudantes universitários pós-pandemia

RESUMO. Este estudo teve como objetivo avaliar a competência comunicativa intercultural em 151 estudantes de uma universidade privada peruana no período pós-pandemia. Utilizando um desenho transversal, os dados foram coletados por meio de um teste de escala Likert e analisados com a técnica de cluster KMeans. Foram identificados três grupos com diferentes níveis de competência intercultural: baixo (33,8%), médio (38,4%) e alto (27,8%). Foram observadas dificuldades na interpretação de situações interculturais e sensibilidade limitada em relação aos estereótipos culturais. A conclusão destaca a importância de desenvolver conhecimentos e sensibilidades interculturais nos estudantes universitários para melhorar a sua capacidade de interagir em contextos diversificados.

Palavras-chave: comunicação cultural; comunicação efetiva; diversidade cultural; sensibilidade intercultural. **Received**

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Introduction

In a multicultural society, the increasing interaction between people from different cultures who coexist in the same geographical area has led to frequent cross-cultural interactions. Therefore, understanding cultural differences and intercultural communication are crucial to avoid misunderstandings (Cabrera Romero, 2021).

Now, the years 2020 and 2021 were critical for humanity due to the COVID-19 pandemic, which impacted multiple aspects, including economic, social, health, and educational. It has generated many changes in

lifestyle, including for students (Ticona Mamani et al., 2021). Higher education was not exempt from this crisis, and the system as a whole faced challenges for both teachers and students who had to adapt to new forms of learning (Hernández Herrera, 2022; Rojas-Vela et al., 2023).

In this new context, low level of communication have been observed in classrooms, which has an impact on the development of teamwork, in addition to generating incomprehension and insensitivity among students. They face academic stress, little empathy among themselves, culture shock, and implemented certain coping mechanisms (Nadeem et al., 2023). In addition, the presence of stereotypes and prejudices has been identified that contribute to the creation of an environment of marginalization based on the cultural origin of individuals who resort to intercultural social networks (Gu & Huang, 2022).

Consequently, the need arises for teachers to assume the responsibility of promoting harmonious coexistence between people from different cultural backgrounds (Sánchez-Castro et al., 2022). To achieve this goal, it is essential that the classroom becomes a space for shared meeting and communication between the various actors involved in the teaching and learning process (Pérez-Aldeguer, 2014).

This study was carried out at the Technological University of Peru (UTP), Huancayo Campus, which offers face-to-face, virtual and hybrid teaching modalities, and has a diversity of students from different regions of the country. One of the central objectives of this institution is the formation of intercultural citizens. In this framework, the UTP educational model is based on two key principles. The first is based on the learning approach adapted to the diversity of styles, which implies respect for the individual pace and style of each student, recognizing that the construction of new knowledge is derived from their previous knowledge, interests and motivations. The second focuses on access to information technologies through the Virtual Learning Environment, a fundamental component that complements and enriches the different teaching modalities. Likewise, collaborative learning is promoted, where students and teachers actively participate in the co-authorship of their learning processes (UTP, 2021). However, it is important to note that the achievement of effective collaborative learning, which is essential in today's education, is hampered by the persistence of cultural stereotypes and prejudices among students. Therefore, the need to develop intercultural competence as one of the primary study factors in education in the twenty-first century is raised (Ruiz-Bernardo et al., 2014).

On the other hand, the pedagogical experience in the university environment and the interaction with students from different regions of a country have revealed the presence of various difficulties. One of the problems identified is the digital divide, as stated (Alva De la Selva, 2015), which has intensified tensions in relationships between students, who face difficulties in communicating respectfully and accepting their differences. It is observed that stereotypes related to racial, socioeconomic, regional, and gender aspects, among others, prevail. Among these challenges, gender typification stands out, which often does not coincide with the gender identities of young people (Farias Muñoz & Cuello Riveros, 2018). This is partly due to the influence of society at large, as well as social media and the media, and these attitudes and expectations manifest themselves in everyday behavior.

University students, immersed in the digital age and constant technological evolution, have experienced a process of isolation, developing their own universe characterized by patterns of consumption, creation and dissemination of audiovisual content (Fernández-de-Arroyabe-Olaortua et al., 2018). This digital environment has given them the opportunity to acquire certain skills, but at the same time it has led to the neglect of other important competencies. Regarding the context of teaching, there has been a tendency among teachers, especially in the subject of comprehension and writing of texts, to focus predominantly on the mastery of the written language from a purely phonetic, syntactic and semantic perspective. In this process, the consideration of personal, cultural, and social factors that are part of human diversity and that influence the individual and social behaviors of students has been neglected (Madariaga Orbea et al., 2013).

University students behave according to their context and social environment, interpreting and configuring meanings to each brain input. A clear fact is when students interact with their peers, read, understand or produce texts, express their cultural differences, reflect their values, beliefs and customs. Another fact is that when they take a stand in the face of a controversy, they are influenced by their culture and social stereotypes. But it is not only cultural diversity, but also the personal and social diversity found in university classrooms, which requires intercultural dialogue between them, that together they reason, criticize, and value the shared living conditions (Soto Molina et al., 2021).

At university, little work is done on the development of cognitive and affective skills to manifest appropriate and effective behaviors in a given social and cultural context. This was experienced in the process of developing classes in the pandemic period 2020, 2021 and post-pandemic 2022; mainly in students in the first cycles, since it is difficult for them to organize themselves for collaborative work and they have no interest in knowing the cultural environment of their classmate. In remote classes, you hear the voices, but you don't see the gestures, their behaviors, their values. There is little interest and little concern about wanting to link or put into practice intercultural skills between one and the other. Therefore, the purpose of the study was to characterize the Intercultural Communicative Competence (ICC) in students of the second academic cycle of the UTP of all professional careers.

Intercultural communicative competence

ICC is defined as the set of cognitive and affective skills necessary to manifest appropriate and effective behaviors in a specific social and cultural context, with the aim of achieving effective communication. Spitzberg's (2000) ICC model consists of three levels of analysis: the individual level, based on the degree of competence of each person; the level based on general cultural aspects or specific to a single culture. Chen and Starosta (1996), based on classic models of intercultural competence by Dinges (1983), propose six models of intercultural communicative competence based on traditional approaches to intercultural competence. These models are: the approach to foreigners, the approach to subjective culture, the approach to the multicultural person, the approach to social behaviorism, the typological approach and the approach to the intercultural communicator.

The first five respond to traditional models of focus on competence in intercultural relations, the last approach being that identifies the great importance that communicative processes acquire for intercultural relations (Chen & Starosta, 1996). The present study was carried out based on the ICC models proposed by Chen (1989), Chen & Starosta (1997), Hammer (1989), Kim (1992), Rodrigo Alsina (1997) and Spitzberg (2000). Three basic components are proposed: cognitive, affective and behavioral.

Cognitive competence

From the perspective of Rodrigo Alsina (1997), it is called Cognitive ICC (ICC Cg) when the subject is aware of and aware of his or her own cultural characteristics and communicative processes; as well as the characteristics and communicative processes of other cultures. From the point of view of Gudykunst (2004) and Lustig and Koester (1996), elements such as knowledge of alternative interpretations, expectations based on social norms and personal characteristics of the interlocutor, knowledge of cultural similarities and differences, and real opportunities for multicultural contact are highlighted.

Cognitive ICC refers to the knowledge, understanding and awareness of one's own cultural and communicative elements and those of others that promote effective communication. Cognitive competence includes control of uncertainty, the ability to alternate interpretations, and knowledge of similarities and differences between one's own culture and that of the interactants (Chen & Starosta, 1997). Cultural knowledge involves understanding how one's own and others' cultural references affect thinking and behavior. It is important to know one's own cultural references, perceptions and communicative style (Samovar et al., 1998).

Affective competence

Affective ICC (ICCA) refers to the ability to project and receive positive emotional responses before, during, and after cross-cultural interactions. It is conceptualized as intercultural sensitivity, based on the idea of being aware of and receptive to personal emotions and emotional changes that arise in particular situations, with people and in particular environments (Vilà, 2004). The most relevant components are the control of anxiety, the development of empathy, the motivation towards intercultural communication and the attitude of non-judgment (Chen & Starosta, 1997).

Anxiety control is an important element in ICCA. Anxiety is defined as an unpleasant emotional state characterized by subjective feelings of tension, apprehension, and worry, and affects cognitive, affective, and behavioral elements (Neuliep & McCroskey, 1997). Anxiety is also defined as feelings of unease, tension, worry, or apprehension about what is happening, such as an anticipation of negative consequences.

Empathy in cross-cultural communication is defined as the ability to put oneself in the mind of someone from a different culture and develop thoughts and emotions in interaction. Both verbal and nonverbal behaviors are included in its manifestation and expression. It is distinguished from sympathy because it is based on the cultural

references of the other, and not on one's own (Lustig & Koester, 1996). It implies a greater capacity for imagination to interpret the feelings and experiences of others from their own cultural references.

The motivation towards intercultural communication implies having an interest in knowing and learning from other cultural realities, without falling into exoticism, and being willing to learn from other people. Finally, the ability to evaluate people and situations is strongly conditioned by culture (Hellriegel et al., 2001). Evaluation involves judging whether someone or something is considered good or bad, and usually the culture itself is used as a reference, which provides levels for the measurement of people and things. This leads to judging as positive that which is similar to one's own cultural referents and as negative that which is furthest from them, constituting one's own culture as a criterion of reference.

Behavioral competence

Behavioral ICC (ICCCm) refers to the set of verbal and non-verbal skills that demonstrate an ability to adapt behavior in order to communicate appropriately and effectively (Vilà, 2003). Gudykunst (2004) highlights the following skills for the adaptation of communication: creating new categories, tolerating ambiguities, etc. Some of the components are: behavioral flexibility, verbal skills, non-verbal skills, and capabilities such as interaction control in multicultural contexts.

Behavioral flexibility refers to the ability to adapt one's communication style according to the cultural context and the situation in which the individual finds himself (Gudykunst, 2004). This skill involves responding appropriately to a variety of situations, people, and contexts. It involves developing interpersonal skills that allow for effective adaptation. In short, it is an important skill in intercultural communication to be able to adapt to complex situations and respond appropriately to diversity (Vilà, 2003).

The relevant verbal skills in the ICC are: speaking clearly and slowly. Colloquial or local expressions are avoided and each word is pronounced clearly. Important ideas are repeated, paraphrased using different expressions to explain the same concept. A simple vocabulary is used, verbs in the active voice instead of the passive voice. And the meaning of the message is discussed to avoid misunderstandings (Vilà, 2003).

The nonverbal skills proposed by Hellriegel et al. (2001), include the use of visual resources, appropriate facial gestures to emphasize the meaning of words, demonstrations to illustrate the content; frequent pauses and not taking for granted that gestures mean the same thing from different cultural points of view. The MCCC is activated when these differences are detected and acted upon. For each cultural setting, the most appropriate verbal and nonverbal skills should be considered, including frequent expressions, habitual gestures, and others.

Interaction control is a verbal and nonverbal skill. In any communicative encounter between people, there is a management that includes nonverbal aspects such as changes of turn in speech, the beginning and end of communication, the call for attention and other elements that acquire specificities in multicultural contexts (Hellriegel et al., 2001).

Method

The research was of a basic type, at a descriptive level, cross-sectional design, where through descriptive statistics, the ICC of university students was characterized. The sample was composed of 151 second-cycle students from the 10 professional schools of the UTP: Law, Psychology, Civil Engineering, Architecture, Systems Engineering and Computer Science, Industrial Engineering, International Business Administration, Administration and Marketing, Business Administration and Accounting. Sampling was simple random probabilistic.

Data collection procedure

Two instruments were used for data collection: i) ICC test, in which 18 cases were presented with scores from 1 to 4 on ICCG and ICCM. ii) A 54-item scale to measure the ICCG, ICCM and ICCA; with Likert-type response alternatives from strongly disagree to strongly agree. The instruments were validated by experts and the UTP Ethics Committee (Opinion Number: 012-2022-CEI-UTP). Reliability was performed with Cronbach's alpha, which yielded 0.72.

To apply the instruments, authorization was requested from the university and an informed consent form was used. The application was carried out remotely and virtually with the support of the teachers of the subject of Comprehension and Writing of Texts during the development of classes. Students who did not agree to take the survey and those who missed the remote class were excluded.

Data analysis

To characterize the ICC of university students, the K-means non-hierarchical cluster classification technique was applied, with the purpose of analyzing the grouping with relatively homogeneous characteristics; minimizing intragroup variability and maximizing intergroup variability. To determine the cluster number, the Within Sum of Squares, Silhouette and Gap metric methods were used.

A similar study carried out with the aim of knowing the perception of university students towards diversity and intercultural communication carried out the analysis of hierarchical grouping or clustering using the previous calculation of normalized Euclidean distances (Pareja de Vicente et al., 2019). In this study, they applied Ward's method of minimum variance due to its ability to discriminate when determining clustering levels (Kuiper & Fisher, 1975).

The clusters made it possible to segment the student population according to its particular characteristics and needs in terms of ICC. The scale categories used in the analysis process were: 1 = rejection of intercultural communication, 2 = ethnocentrism, 3 = ignorance or ignorance of intercultural differences, and 4 = communicative competence. For the attitude scale, the category was: 1 = lack, 2 = moderate, 3 = acceptable and 4 = excellent. This procedure was carried out in RStudio, an integrated development interface to perform statistical analyses together with other tools.

To respond to the proposed objective, the possibility of grouping formation has been graphically analyzed, for which the Euclidean distance matrix has been made in which it is observed that there are clustering tendencies, which can be visualized in the blue regions in Figure 1.

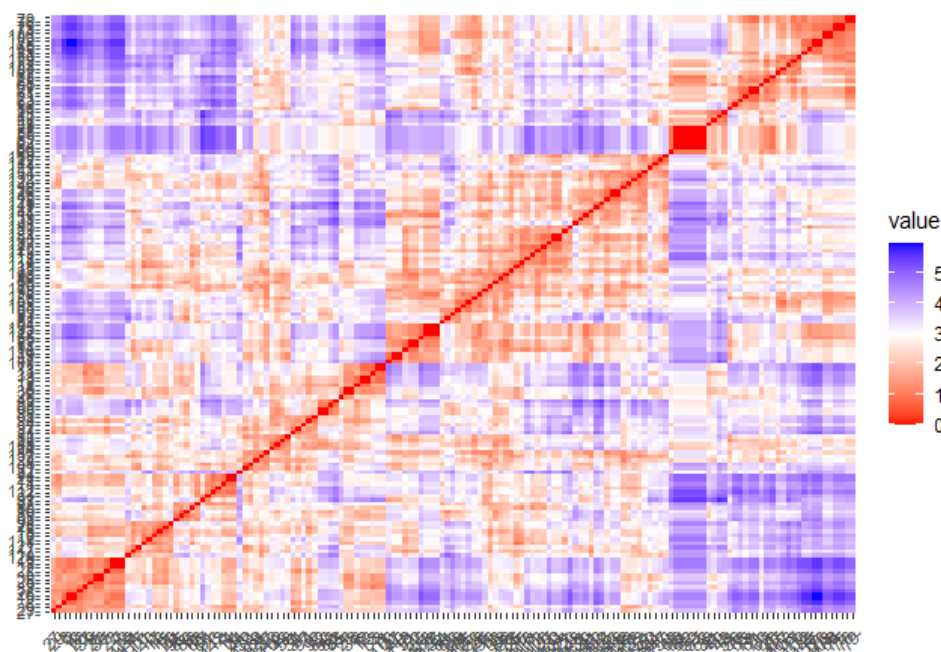


Figure 1. Euclidean distance matrix.

The cluster technique to be used was selected through a process of evaluating various available techniques. Table 1 presents the results of this process, highlighting that the K-means technique obtained the best results compared to the others. The techniques used included V1, K-means, PAM, Fcmeans and Clara, which are considered highly robust in cluster generation when using various indices. The Dunn, Davies_Bouldin, Calinski_Harabasz, Ball_Hall and Silhouette metrics are presented along with their respective ranges, highlighting the outstanding results obtained by the K-means technique. The Dunn metric shows the highest value in K-means, as indicated by its application. The Davies Bouldin metric, on the other hand, shows the

lowest value in K-means, also in line with its application. The Calinski_Harabasz metric shows the highest value in K-means, meeting its application. On the other hand, the Ball_Hall metric shows the lowest value in K-means, consistent with its application. Finally, the Silhouette metric shows the highest value, as expected based on your application.

Table 1. Evaluation results of cluster generation techniques and efficiency measurement metrics.

Metric	V1	K-means	PAM	Fcmeans	CLARA	Cluster
Dunn	Dunn	0.2343252	0.1779776	0.1779776	0.1825646	10
Davies_Bouldin	Davies_Bouldin	1.198151	1.310743	1.492425	1.39892	10
Calinski_Harabasz	Calinski_Harabasz	38.60089	34.75479	33.26829	28.87614	10
Ball_Hall	Ball_hall	1.433277	1.476692	1.629126	1.506086	10
Silhouette	Silhouette	0.2486475	0.2158419	0.1723167	0.2069979	10

K-means non-hierarchical cluster classification is an unsupervised classification technique, which allows relatively homogeneous clusters or groups. This technique allows group formation seeking at all times to minimize intragroup variability and maximize intergroup variability (MacQueen, 1967). To determine the cluster number, the graphical method shown in the following figures has been applied.

In Figure 2, in the Within Sum of Squares metric, if you overlap your knee over the curve, the cluster number stands out between 3 and 4.

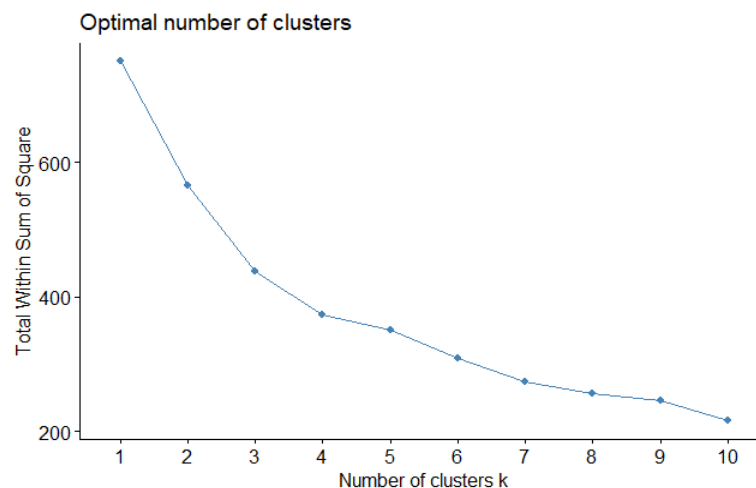


Figure 2. Métrica within sun of square.

In Figure 3, according to the Silhouette metric, the optimal cluster number is observed as 10.

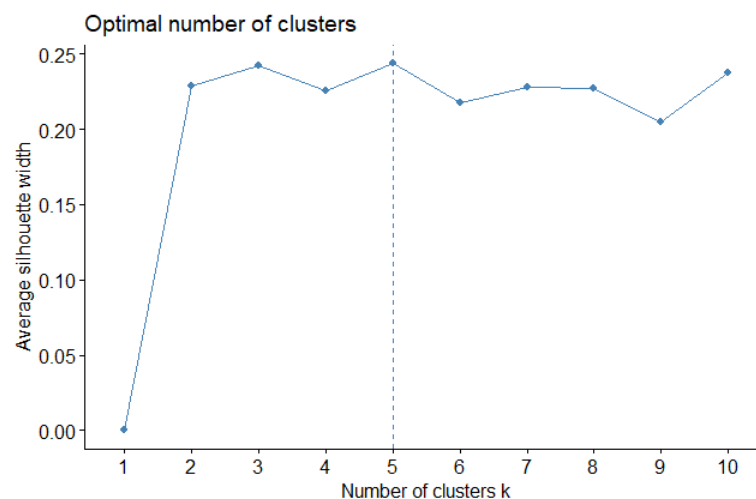


Figure 3. Metric silhouette.

In Figure 4, according to the Gap metric, the optimal cluster number is observed as 4.

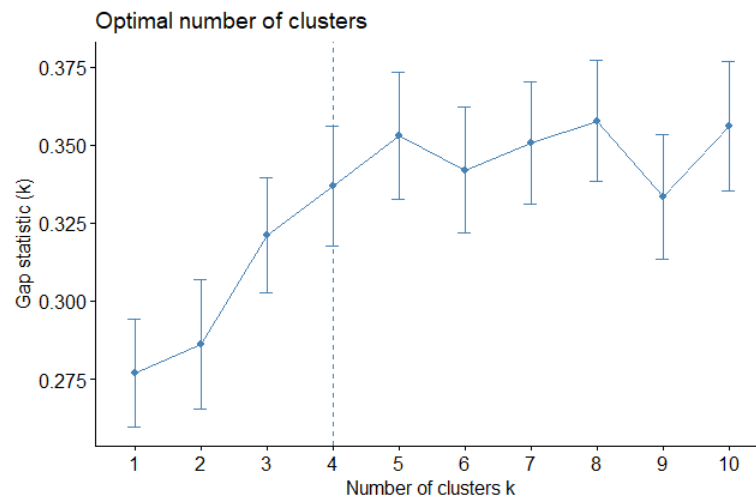


Figure 4. Gap metric.

Under this analysis, where 3, 4 and 10 clusters are optimal, a general analysis was carried out for an accurate proposal. To do this, it has been proposed to process 30 indices, for the K-means method for Euclidean distances. The indices processed are: 'kl', 'ch', 'hartigan', 'ccc', 'scott', 'Marriott', 'trcov', 'tracew', 'Friedman', 'rubin', 'cindex', 'db', 'silhouette', 'duda', 'pseudot2', 'heale', 'ratkowsky', 'hall', 'ptbserial', 'gap', 'frey', 'mcclain', 'gamma', 'gplus', 'tau', 'dunn', 'Hubert', 'sdindex', 'dindex', 'sdbw', 'all'. The result is 3 clusters as shown in the results of Figure 5, where it can be seen that 8 methods (the largest number) suggest 3 clusters as the optimal to take into account.

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* Among all indices:
* 5 proposed 2 as the best number of clusters
* 11 proposed 3 as the best number of clusters
* 2 proposed 5 as the best number of clusters
* 1 proposed 7 as the best number of clusters
* 4 proposed 10 as the best number of clusters

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Figure 5. Identification of the 3 clusters.

Figure 6 shows graphically the distribution of the 3 clusters according to simple grouping (A) and grouping based on the centroids and distances of each data (B).

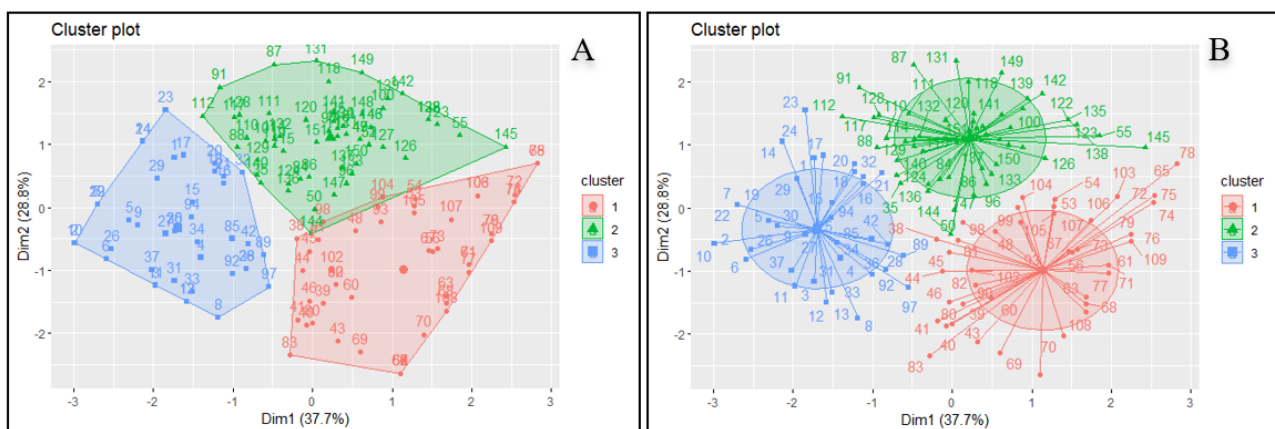


Figure 6. Clusters obtained. A) Simple grouping. B) Grouping based on the centroids and distances of each data.

Results

Figure 7 shows the three clusters, where cluster 3 is the closest to the optimal values of the categories of each dimension processed. Clusters 1 and 2 are below cluster 3 values because they are not close to 1.

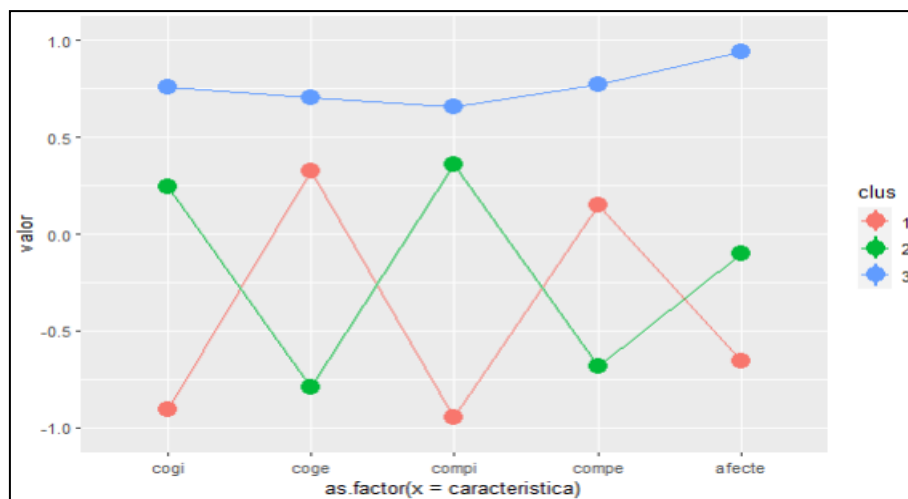


Figure 7. Clusters obtained.

In Figure 8 the values of the ICC dimensions were not standardized, such behavior is observed, this image represents the approximate means for each dimension.

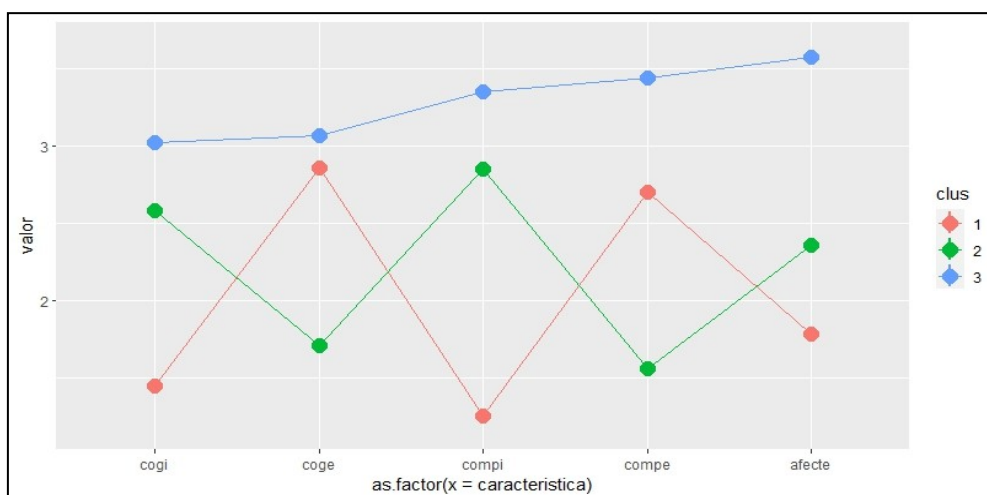


Figure 8. Approximate averages.

The distribution of students in each cluster according to Table 2 is as follows: cluster 1 represents 33.8% of the students, cluster 2 corresponds to 38.4% and cluster 3 covers 27.8% of the students. In total, these three clusters represent 100% of the students who participated in the study. This information allows us to have a clear view of how students are distributed in each group and provides us with a basis for analysing the characteristics and needs of each cluster in relation to the ICC.

Table 2. Percentage of students in all three dimensions.

Title	Percentage
1	33,8%
2	38,4%
3	27,8%
Total	100,0%

Table 3 shows the three clusters resulting from processing, and also presents the categories of each dimension.

The results allowed to characterize the ICC in university students according to the following clusters:

In cluster 1 in relation to the KIC, the following were found:

- In the ICCG dimension, level 1 is observed: Rejection of intercultural communication.
- In the ICCG and ICCA dimension, there is level 3: Acceptable.

- In the ICCCM dimension, level 1 is observed: Rejection of intercultural communication.
- In the ICCCM and ICCA dimensions, level 3 is observed: Acceptable
- In the ICCA dimension, level 2 is observed: Moderate

Table 3. Characteristics of the ICC.

Dimensions	Cluster		
	1	2	3
ICC_Cognitiva (Likert Questionnaire)	1	3	3
ICC_Cognitiva (Attitude Scale)	3	2	3
ICC_Comportamental (Likert Questionnaire)	1	3	3
ICC_Comportamental (Attitude Scale)	3	2	3
ICC_Afectivo (Attitude Scale)	2	2	4

In summary, 33.8% of students in Cluster 1 found students who reflect ICCCG at Level 1; they express rejection of intercultural communication. This means that this group of students lack awareness and knowledge of their own cultural characteristics. The group also recognizes students with ICCCGa acceptable level; they reflect a lacks of knowledge, but they are interested in knowing their identity and culture. Likewise, in the ICCCM it is located in level 1, this means that students do not reflect verbal and non-verbal skills that allow them to adapt behavior appropriately and effectively in a context of cultural diversity, they do not accept knowing and interacting in intercultural communicative processes with others. In the ICCCMa dimension, an acceptable level is observed; they show interest in showing behavior that reflects identity with their culture. In relation to the ICCA, they are at the moderate level, that is, they show the ability to project and receive positive emotional responses before, during and after intercultural interactions.

Cluster 2 in relation to the ICC was found:

- In the ICCCG dimension, they are at level 3: Rejection or ignorance of intercultural communication.
- In the ICCCGa dimension, they are at level 2: Moderate.
- In the ICCCM dimension, they are located at level 3: Rejection of intercultural communication.
- In the ICCCMa dimension, they are at level 2: Moderate.
- In the ICCA dimension, they are at level 2: Moderate.

38.4% of students in Cluster 2 report ICCCG and ICCCM at Level (3), which is located in rejection or ignorance of interculturality. This means that this group of students lack understanding of how cultures vary and how they affect people's thinking and actions, they express confusion and disorientation in cross-cultural encounters. We also find a moderate Level of awareness and knowledge of one's own identity, attention to what is socially appropriate, the ability to control and modify behaviors, and adaptation to particular situations. While the ICCA is at the moderate level, this indicates that young people have little control of anxiety, have moderately developed empathy, in the process of developing motivation towards intercultural communication and moderately able to avoid judging people.

In cluster 03 in relation to the ICC, the following were found:

- In the ICCCG dimension, level 3: Rejection or ignorance of intercultural communication.
- In the ICCCG dimension, there is level 3: Moderate
- In the ICCCM dimension, level 3: Rejection of intercultural communication.
- In the ICCCMa dimension, level 3: Moderate
- In the ICCA dimension, it is located at level 4: Moderate

Finally, in this 27.8% of students in Cluster 3 we find that the ICCCG and ICCCM are at Level 3, expressing rejection of interculturality. From the theoretical perspective, this group of students lacks understanding of how cultures vary and how they affect people's thinking and actions, they express confusion and disorientation in intercultural encounters. An acceptable level of ICCCG y ICCCM is also recognized; They state that their verbal and nonverbal skills allow them to adapt their behavior appropriately and effectively in a context of cultural diversity. Finally, in this group, students are reported to have an excellent level in the development of the ICCA; that is, they are able to project and receive positive emotional responses before, during, and after intercultural interactions, they are able to control anxiety, they are empathetic, and they feel motivated to promote and participate in intercultural communication.

Discussion

ICC refers to a person's ability to interact and communicate effectively with individuals from different cultures, taking into account not only linguistic and cultural aspects, but also emotional, cognitive, and social skills. Vocational training is required to take into account intercultural competence so that it responds to international professional mobility and the globalization of knowledge while respecting the cultural values of each country (González Aguilar, 2018). From the analysis carried out in university students, it was possible to identify three clusters in which ICC is characterized and its dimensions such as cognitive, behavioral, and affective. This is different from the study by Pareja de Vicente et al. (2019), who grouped into four clusters and identified different profiles among the participants. But it highlights the existence of a positive trend towards the recognition of cultural diversity as an enriching aspect for the generation of inclusive attitudes and intercultural communication.

Likewise, it was possible to characterize the ICC of university students by applying the K-means unsupervised clustering technique. This technique allowed to characterize a population of students represented with many variables grouped into dimensions, in such a way that they represent them in clusters and tend to behave independently of each other. This technique was also used in the study by Lozano Martínez et al. (2013), to analyze the participation of families of native and foreign origin in educational centers. They found three groups of families according to their degree of participation: a first group, made up of native families that is characterized by participating more intensely in parents' meetings; a second group, which constitutes the group of foreign families and remains at medium levels of participation; and a third group, also made up of native families, which is characterized by participation with little intensity. As in the Lozano Martínez et al. (2013) study, in educational settings, family participation in the school should be promoted and awareness of intercultural education should be worked on.

On the other hand, the findings are similar to the study carried out by Castiñeiras Domínguez and Fernández González (2020), who confirmed that students have deficiencies in their ICC and in particular, are located within the behavioral component, with the results of the rest of the components being relatively favorable.

Carrying out this characterization in university institutions allows us to propose proposals to develop the ICC because the current trend in higher education is internationalization. A clear example is higher education institutions in the United States that seek to prepare students for life and careers in a globalized world (Fantini, 2020), so intercultural communication is fundamental for the integration of students who belong to different cultures and it is key to work from university classrooms (Xu, 2019).

The study analyzed three dimensions: cognitive, behavioral, and affective, which express common characteristics in each cluster. Like Castiñeiras Domínguez and Fernández González (2020), who analyzed attitudes, behaviors, and knowledge. They found that the students had deficiencies in the ICC, specifically in the behavioral component, with favorable results for the rest of the components. ICC was high in terms of affective and cognitive components. In this study, it is moderate, which means that at the institutional level, strategies must be proposed to develop the basic and necessary ICC in this age of information and globalization.

Likewise, Cabrera Romero (2021) assessed the ICC of students by focusing their attention on cognitive and behavioral aspects and determined significant differences with respect to school training in indigenous language and culture. Students with training in indigenous language became competent in relation to intercultural communication. For his part, Rico Troncoso (2018) evaluated the ICC of students in cognitive and behavioral aspects to determine if there are significant differences with respect to training. Students with Mapuche indigenous ancestry participated up to the third generation and to address ethnic, racial, religious, gender or cultural diversity is through the development of the ICC and should be in any teaching program.

In response to this, Šifrar Kalan (2021) states that the development of ICC is the responsibility of both institutions and the individual himself; Not only do immigrants benefit, but also all those who relate to each other. In other words, it is essential to welcome people from other cultures, because together we learn and grow, both the one who arrives, and the one who welcomes. In the case of our study, students moderately welcome people who are from other regions.

Martínez-Lirola (2018) concludes that by introducing the ICC in the twenty-first century, students will grow as global citizens and teaching will join social demands. In the area where this study was developed, there is a need to implement ICC workshops. Educators of trainers and pedagogy students are helped to rethink the preparation provided in universities, from intercultural frameworks of action, and it will be the

pedagogy students who will have to transform schools into inclusive spaces for children, young people and families living in immigrant, indigenous and intercultural contexts (Sanhueza Henríquez et al., 2016).

Finally, Hernández Díaz and Ávila (2016) state that the insertion of cultural and intercultural aspects constitutes a strength of the teaching-learning process in higher education, and Mejía and Agray Vargas (2014) point out that, at the university level around the world, a global awareness must be awakened and that immersion courses in the learning of a foreign language are a good opportunity to develop the ICC. In short, universities must implement cross-curricular training in the ICC.

Conclusion

Students who belong to Cluster 1 and 2 are characterized by expressing ignorance of how to interpret and/or act in a certain multicultural communication situation. It implies the scarcity of ICCG, it is a group of young people who tend not to know how to interpret some behaviors and situations that can occur in intercultural communication. Behaviorally, they do not know how to act in the face of the challenge of an intercultural context. The degree of intercultural sensitivity is relatively moderate. They reflect certain affective shortcomings to successfully face intercultural communication, similar to Cluster 3. Unlike in the ICCA they manifest a certain acceptable degree of intercultural sensitivity, being able to face the challenge of intercultural communication with greater certainty than in the previous cases.

The achievement of the ICC characterization at the university serves as a basis for rethinking the study plan and the professional profile to be

The achievement of the ICC characterization at the university serves as a basis for rethinking the study plan and the professional profile to be achieved in the different professional careers. Young people live in a globalized and culturally diverse environment, they are more connected than ever, information technologies, social networks, global platforms have brought people closer together regardless of race, language, customs, etc.; that is, from different cultures. This makes intercultural interaction common in everyday life and in the work environment. If university graduates do not develop the ICC, they will not be able to understand, respect cultural differences and communicate effectively; which is essential for coexistence and cooperation the development of humanity.

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