

# Behavior Assessment Communicating: Scale Validation Through Exploratory Factor Analysis and Confirmatory Factor Analysis

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Abstract. This study aims to assess the reliability and validity of the Politeness Behavior Scale (PBC) and derive the most suitable model from it. The researcher created the PBC scale. The researchers used a descriptive quantitative data analysis method, the PBC scale adaption process. Students from the three provinces of South Sulawesi, West Sulawesi, and Central Sulawesi who registered during the academic year 2022-2023 made up the population of this study. By calculating the number of samples using the solving formula, the sampling technique in this study was stratified random sampling. One thousand two hundred students make up the research's sample. The PBC scale used in this study has five (five) indicators: self-regulation of polite behavior, self-efficacy of polite behavior, meeting social expectations, positive reinforcement, and no strings attached. The PBC scale includes 34 statement items. A validity test on the corrected correlation item value and an item reliability test utilizing Cronbach's and McDonald's alpha values were both used in the data analysis technique. Additionally, confirmatory component analysis (CFA) and exploratory factor analysis were used to investigate the data (EFA). The findings demonstrated that the PBC Scale adaptation shows the Fit Index with a chi-square value of (711.800/375), RMSEA of (0.053), GFI of (0.990), CFI of (0.987), and GFI of (0.990), (0.985).

**Keywords:** Politeness Behavior on Communicating Scale · Exploration Factor Analysis · Confirmatory Factor Analysis

## 1 Introduction

Politeness is fundamental to developing and maintaining social relations; politeness in communication is the core of life and social interaction. Indeed, these factors are a prerequisite for human cooperation in general. This aspect of politeness when communicating can describe a person's behavior and personality. [1], suggests that politeness, in general, can be associated with a relationship to two elements that can be interpreted as 'self' and 'other.' Theoretically, experts put forward views of politeness through pragmatic studies. [2, 3], The principle of politeness has several maxims, including tact maxim, generosity maxim, appropriation maxim, modesty maxim, conformity maxim (agreement maxim), and sympathy maxim.

The principle of politeness relates to one another, including through conversation, towards oneself and others [4, 5]. As a simile, the Self is the speaker, and other people are listeners or interlocutors. From this provision, individuals are expected to respect one another. Respect for other people in interactions can be established if the other person and we can reduce ego and background for themselves and prioritize mutual comfort towards others [6, 7].

Some research results suggest politeness in the form of greetings, calls or titles to describe civilized and polite behavior [8]. However, these politeness values need to be trained so that communication produces good clarity, conveys messages, and establishes good social relations between the two. Therefore, the communication process carried out well by both the speaker and the interlocutor will give a positive impression, for example, sympathetic, polite, friendly, and polite [2, 4].

The behavior of politeness in communication must be able to explain the perspective and how to train these aspects, especially in communicating with peers and older generations who prioritize the principles of politeness in language [9]. As a result, a tool is required to assess politeness behavior when speaking with youngsters or members of Generation Z. Consequently. A tool is required to assess politeness in interactions with the Z Generation [10].

The instrument of politeness in communication is measured in several indicators through EFA: self-regulation of polite behavior, self-efficacy of polite behavior, Fulfillment of Social Expectations, Positive Feedback, and selflessness. In short, this research was designed primarily to expand the application of a behavioral measure of politeness in language and communication [7, 11]. The focal point of this measuring tool is the development of new indicators and factors or experiences that can be used for practice by measuring the level of politeness behavior communicated in adolescents [12]. This research was designed to determine the validity of the measuring instrument developed for further research related to polite behavior in communicating in the Indonesian context.

### 2 Methods

#### 2.1 Research Design

A quantitative descriptive research approach was used in this study to evaluate the quality of each item on the politeness behavior scale. This research also intends to examine the first stages of creating a measuring device that yields a basis for outcomes so that they may be characterized. As a result, numerous original variables are replaced with a set of values, with several different versions created through exploratory factor analysis. It tries to ascertain the link between the components of each measuring device item, including the scale's construction material and its linguistic component.

#### 2.2 Research Samples

Students in South Sulawesi, Central Sulawesi, and West Sulawesi who were enrolled in classes during the 2022–2023 academic year made up the study's population. Through

proportionate stratified random selection, a subset of the population was selected based on shared features to create the study sample [13].

The following methods were employed to sample: (1) asking each faculty how many students they had from the three provinces, and (2) choosing nine faculties based on the results. (3) According to research by a few faculty members' students. There are 50,502 students enrolled at Makassar State University. The Slovin technique created the sample [14] with a probability value of 0.05. Therefore, his age range is 19–22 years. Samples from each university include Makassar State University, with 500 respondents; West Sulawesi University, with 300 respondents; Tadulako University, with 400 respondents.

### 2.3 Research Instrument

To gather information on the sample's descriptive author created a personal data form to gather information on the sample's descriptive qualities. Questions on age, gender, class, academic standing, and university of origin are included on the form.

The Politeness Behavior on Communicating scale consists of 3 leading indicators: moral actions, imitation, and imitation behavior. The Politeness Behavior on Communicating scale consists of 34 statement items. Utilizing a Likert approach, the Politeness Behavior in Communicating measure is used. Due to the impartial nature of Indonesian respondents, this scale has been changed to 4 options. Based on a scale of 1 to 4.

### 2.4 Data Analysis

This study carried out by measurement experts at the pilot stage can be done more than once to obtain items that are accepted according to the standard measuring instrument. Through the cloud step, the researcher describes each item on the scale by providing a measuring tool. The quantitative item was analyzed using JASP software. The data were analyzed using JASP Version 13.1 for Exploratory Factor Analysis (EFA). The overall reliability is 0.950. It means a score above 0.07 is the minimum reliability score [15]. The Kaiser-Meyer-Olkin (KMO) Measure of Factor Loading (>0.5) and Bartlett's Sphericity Test (0.05) were utilized to filter the data during the initial EFA stage [16]. Fifty-one items and a response rate of 230 were calculated, and components with Eigenvalues >1 were considered [17]. To determine the number of variables to be retained. The researcher also passed a confirmatory factor analysis (CFA) test using the JASP statistical tool to establish the relationship between the factors in each item.

## **3** Results and Discussion

### 3.1 Findings

Based on the data obtained, the RMSEA value is 0.0053 or less than 0.008. The PBC Scale measuring instrument model shows a fit and acceptable model. In addition, the chi-square value shows 711,800/375 with a p-value of 0.01 and chi-square < 2.0. So, the PBC Scale is accepted in the category Index. In addition, a GFI value of 0.99 was found in the different fit measure categories or obtained a matching value almost close

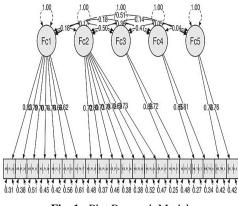


Fig. 1. Plot Research Model

to the fit model. The instrument scale is used as a measuring tool for the politeness of adolescent language. In addition, there are stages of data analysis to see an overview of the relationship between items and indicators.

The factor analysis of the Politeness Behavior on Communicating The instrument shows that the five factors have underlying the construct, and each factor has a contribution weight of one factor to the construct having a difference of 18.719% to 18.437%. Overall, the factors obtained describe the Politeness Behavior on Communicating scale of 47.970%.

#### 3.2 Discussion

In general, the development of a politeness behavior scale for adolescents has been developed by Craig to show that the validity of the measure can conceptualize their (adolescent) politeness [18]. The combination of behaviors discussed in this study provides information on the initial validity of measuring how verbal and nonverbal communication behaviors function to support politeness.

Along with adding to the progress of research on verbal and nonverbal interactions, the results of this study also contribute further insight as a strategy for individuals who experience mitigating and even exacerbating threats when interacting with friends [19]. Although the development of Craig's measurement tool still draws criticism. The facework in verbal and nonverbal relationships, this research takes the first step in exploring, in general, the interaction of both communication processes and strategies for implementing nonverbal behavior and strategies for linguistic messages that affect meaning in relational communication in the academic world [20].

On the other hand, in the factor plot model, Fig. 1 shows that most students associate politeness with moral actions, "polite behavior," the impression of "refined and cultured," imitation behavior "way of speaking." The result of this study shows that students, especially South Sulawesi, realize that the nature of politeness when communicating, especially verbally, plays an essential role in maintaining personal social relations between individuals [18, 21]. Several research results suggest that factors need to be considered for the appropriateness of individual politeness [22]. Obana reported that student respondents considered politeness a way of knowing a person's behavior in social interactions, seeing how they show respect for others and politeness about themselves [23].

In short, there are still some challenges in measuring the level of politeness in student communication apart from linking impressions, morals, and behavior, including expressions that leave a positive impression on the other person. On the other hand, communication that is not following social norms can cause process problems, including listening to problems and resolving other people's conflicts [24].

## 4 Conclusion

Politeness Behavior in Communicating (PBC) can assess the student's politeness behavior in communicating. Three leading signs make up this scale: self-control over polite behavior, self-efficacy over polite behavior, meeting social expectations, receiving good feedback, and selflessness. The 34 statement items that make up the PBL scale comply with the standardized model index. Therefore, the results of this study offer suggestions for future researchers to look at the outcomes of the adaptation scale in more comprehensive and in-depth research, particularly looking at Indonesia's situation as a nation with varied cultures. As a result, it can broaden the range within which the Politeness Behavior on Communicating (PBC) scale can be adjusted.

Acknowledgements. This research was fully funded by Direktorat Riset dan Pengabdian kepada Masyarakat (DRPM) 2022 on the PTUPT research scheme. Also, this research is supported by Lembaga Penelitian dan Pengabdian Universitas Negeri Makassar (LP2M UNM).

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