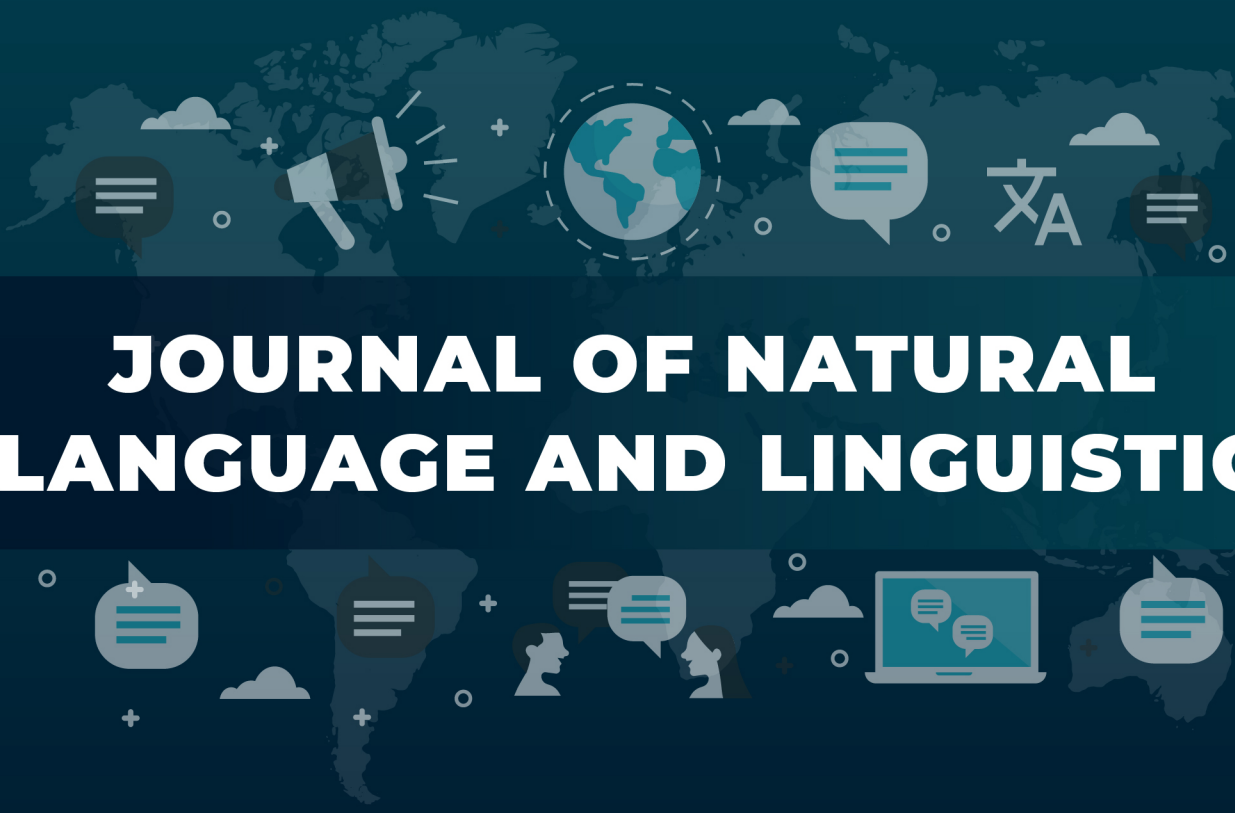

JOURNAL OF NATURAL LANGUAGE AND LINGUISTIC

VOLUME 1 ISSUE 1 (2023)

PUBLISHED BY
E-PALLI PUBLISHERS, DELAWARE, USA

Journal of Natural Language and Linguistics (JNLL)
Volume 1 Issue 1, Year 2023
https://journals.e-palli.com/home/index.php/jnll

Willingness to Communicate in English as a Second Language: A Research Protocol for Meta-Analysis

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Article Information

Received: April 04, 2023

Accepted: May 01, 2023

Published: May 14, 2023

Keywords

Willingness to Communicate in English, Research Protocol for WTC, Effect Size, Heterogeneity, Homogeneity

ABSTRACT

This study explores three independent variables affecting Willingness to Communicate (WTC). Specifically, the purpose is to examine the degree of relationship between familiarity, self-perceived communication competence (SPCC) and motivation as explanatory (independent variables) to WTC (dependent variable) using three identified studies on WTC in English among L2 speakers from Japan, Turkey and Pakistan – all non-English speaking countries. Given the various limitations and some inconsistencies presented herein, a combined analysis on effect size seems difficult to be realized. However, even with all the difficulties, correlational meta-analysis can still manage to depict a sizeable description of effect size when raw data of answered questionnaire responses on each variable is made available to determine coefficient correlation, thus, effect size. Next, the use of WTC Model consistent in all data extraction and analysis coupled with the relatively consistent mentioning of three identified variables indicate some strong sense of homogeneity. Therefore, this paper can answer the most general questions when full-scale meta-analysis will be conducted in the future: what is the degree of correlation of familiarity, SPCC and motivation to WTC as L2 language individuals? What has the highest degree of correlation among all variables to the level of WTC?

INTRODUCTION

Using WTC Model developed by MacIntyre (1998) which integrates psychological, linguistic and communicative variables to describe, explain and predict second language communication, the questionnaire instrument is used with participants from three non-English speaking countries. Upon reading all three research studies for meta-analysis, a knowledge gap exists because between familiarity, SPCC and motivation, there is no direct explanation of each one on the level of correlation to WTC, hence, a correlational design is intended to determine the degree of relationship. The combined result of correlation will determine effect size. It is to be emphasized that Pearson's correlation coefficient that will determine effect size contributes to knowledge gap in the literature as it is not explicitly stated as a homogenous statistical procedure in correlational analysis. One of the reasons could be that although the three studies identify a correlational relationship, it is not an explicit statement of purpose. For instance, in the study among Pakistani students, the general purpose is to explore the perceptions of students as specified in the research questions but results indicate correlational analysis among identified factors. Differences in the conduct and interpretation of quantitative data on WTC across studies indicate some issues on heterogeneity to be later discussed.

Research Questions

Based on the knowledge gap identified in the literature, this paper asks two questions:

- What is the degree of correlation of familiarity, SPCC and motivation on the level of WTC in English among L2 speakers using Pearson's correlational coefficient?
- Which variable has the highest degree of correlation to WTC?

LITERATURE REVIEW

Bukhari, S. (2015) *et al* investigates perceptions of undergraduate students in Pakistan on WTC as L2. The study indicates that familiarity as an independent variable affecting WTC posts the highest degree of correlation with a mean of 91.86 (communicating with friends) as opposed to communication with strangers with a mean value of 37.64. This result is further reasoned by students' desire to communicate in small groups rather than with strangers as in the case of public speaking. Although this research does not directly ask the question on the degree of correlation among identified variable(s), results indicate that familiarity and English proficiency, a by-product of SPCC, and degree of motivation indirectly implied in WTC on the level of small group communication such as dyad (M=84.12), small group (M=85.26) indicate high levels of motivation.

The aforesaid study has consistency on the degree of correlation among familiarity, SPCC and motivation that explains levels of WTC as stipulated in the research question for meta-analysis procedure. The weakness is presented because no correlation coefficient is mentioned throughout the study. The reason would be that in this case study, it focuses on perceptions rather than correlational which renders weakness in the reliability of the study as a whole. However, what is interesting about it is a general perception of WTC that is considered situational, in different contexts where Pakistani students would communicate willingness where identified variables for meta-analysis are highlighted. Finally, the same

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questionnaire method of data collection is used with a sample size of 170, lower than the Japanese study with 398 students.

In another study, Oz, H. & Pourfeiz, J. (2014) clearly asks the English proficiency level of Turkish students and variance in WTC, consistent with meta-analysis procedure of examining degree of influence on identified variables on WTC. Based on the outcome, SPCC posts the highest degree of relationship to WTC with regression coefficient of .74 establishing a direct path. This result indicates that students have the opportunity for L2 competence through increased opportunity for interaction (Oz, H. & Pourfeiz, J., 2014). Motivation affects WTC indirectly as mediated by communication apprehension suggesting that lower levels of apprehension indicates higher SPCC, thus, WTC. Using 134 sample size, this study branches out its factors aside from those intended for meta-analysis: integrativeness, instrumental orientation, ideal L2 self and attitudes toward learning situations in their effects to WTC.

Inclusion and Exclusion

On the level of inclusion, all studies identified are underpinned by WTC Model (MacIntyre *et al*, 1998) which means readiness to refer into discourse at a particular time with a specific person or persons, using L2. For this procedure, all three identified variables: familiarity, SPCC and motivation will be included in the analysis and their combined effects will be scrutinized. In establishing effect size, weighted mean will be determined to examine strength of each explanatory variable. Next, to be included is the derivation of correlation coefficient assuming that raw data will be determined from each study. Correlational analysis will have a greater weight using such coefficient. Next, sample sizes in the aforementioned study will also be considered even with differences in numbers as each study has different context and time.

Exclusion of several variables not intended for meta-analysis will include the following: ideal L2 self, instrumental orientation and international posture. Exclusion, however, indicates inconsistency of procedural analysis as a result from differentiated statistical procedures will have exclusionary considerations. Further on, analysis on gender disparity in terms of their effect on WTC among Turkish students will not be included considering it is not discussed in other studies. Lastly, as previously stated in this paper, inclusion of spoken communication and similarity of research questions will be considered in the analysis, therefore, written communication and research questions outside of the scope of the factors affecting WTC will be excluded in the analysis.

As the presence of multicollinearity is well-pronounced especially in the study on Turkish students where integrativeness as a corollary them to familiarity is affected by several factors such as ideal L2 self and motivation, this kind of branching-out analysis among independent variables will likewise be excluded.

METHODOLOGY

Research Protocol

In conducting meta-analysis, the following steps and procedures comprising the research protocol are discussed.

Consistency

In conducting meta-analysis on WTC in English as L2, identified studies should have consistency in the explanatory variables identified by the researcher for establishing correlational analysis. Three variables are identified in this paper: familiarity, self-perceived communication competence (SPCC) and motivation as each explains certain degree of influence on WTC. While consistency is an assertion, it becomes theoretical rather than realistic as some studies identified have other explanatory variables such as integrativeness, international posture, gender, which will constitute as exclusionary variables. Next, variations in research purpose and questions between studies make it difficult for meta- analysis to have consistency. However, this can be mitigated by addressing consistency in research question among others listed by identifying similarity instead of including all. For instance, how factors (variables) affect WTC as standard question becomes one of the inclusions – such question identified in WTC among Japanese students. In WTC among Turkish school, different perceptions of students on WTC may not directly address how explanatory variables of WTC (familiarity, SPCC and motivation) affect variations in WTC, consistency can only be addressed in implicit assumptions.

Another inclusion in this protocol is consistency in WTC as spoken language only constitutes public speaking and informal communication among individuals. Meta-analysis will not identify WTC in written communication. Three studies identified have consistency in spoken WTC within a classroom context among participants speaking English as L2.

Next, similarity in research instrument using questionnaire method where descriptive statistics such as mean and standard deviation are used will provide for homogeneity and consistency in research outcome. Other statistical procedures such as ANOVA, Chronbach's alpha will be excluded as they are not consistently identified in each study.

Effect Size

One challenge presented in this protocol is establishing effect size considering several statistical procedures are uniquely identified in each study. As a correlational meta-analysis, it becomes yet another disturbing instance to proceed with the procedure except for some instances where weighted mean can be identified for all studies following the idea that mean is identified in each study. For instance, the study on WTC for Pakistan students clearly indicates WTC posting a mean value of 64.84

making it the highest among other variables used in the study. In doing correlational effect size, weighted mean can be a strong variable for effect size.

In totality, effect size is determined using Pearson product-moment correlation coefficient (r) measured in a standard scale ranging from -1.0 and +1. This effect size will determine the strength of the relationship between familiarity, SPCC and motivation as identified independent variables on WTC as the dependent variable. Correlation will be described linear which is either positive or negative. For example, a high value of r (close to +1) indicates a positive correlation to WTC, meaning to say familiarity of an individual one communicates with increases the degree on WTC. Opposite to such correlation is a negative correlation where two variables move in separate direction. The third level of correlation is no correlation where identified explanatory and dependent variables have no relationship whatsoever. To obtain quantitative relationship, raw data of described studies need to be extracted, for instance, on familiarity actual number of instances of individuals attributing high desire on WTC based on raw number of familiar people versus will indicate positive correlation as opposed to unfamiliar individuals.

Finally, potential moderating variables will constitute identified three independent variables namely familiarity, SPCC and motivation.

Quality of Information on Each Study

Foremost in conducting meta-analysis is substantive appraisal of each study in terms of research questions, theoretical underpinnings, internal validity, among others. The following highlights key findings of three identified research studies form Japan, Turkey and Pakistan which can constitute knowledge foundation for meta-analysis. Yashima (2002) investigates relations among variables of WTC on their effect to WTC underpinned by WTC Model. Among the variables highlighted in the study such as L2 proficiency, attitudes or motivation, L2 communication confidence, and international posture, L2 confidence and international posture directly influenced WTC with international posture influencing motivation. Based on the identified variables for meta-analysis, L2 confidence which falls under self-perceived communication competence (SPCC) has the highest degree of positive correlation with WTC as indicated in the chi-square goodness of fit at 62.63 with 49 degrees of freedom, which is not significant. In this case a non-significant finding is indicative of the goodness of fit (Yashima, 2002).

Sample size for this study (389 Japanese students) is good enough but one important measurement of correlational relationship is not used in the study, correlation coefficient. Although internal reliability is obtained from Chronbach alpha numeric for each independent variable, the absence of r values weakens research outcomes for correlational analysis. Another compounding issue of research quality is the presence of sub-categories for some independent variables such as international posture that affects levels of motivation (independent variable) which can lead to multicollinearity of research outcome, hence, poor validity can be inevitable.

For conducting meta-analysis, focus on the degree of correlation between independent variables to WTC should be consistently derived, computation of mean and standard deviations to be included along with correlation coefficient. This can be made available if raw data can be extracted from the research author.

RESULTS AND DISCUSSION

Based on the previous analysis, the following template integrates the protocol.

Table 1: Sample Size, Mean, Effect Size and Theoretical Model

	Sample Size	Mean	Effect Size (Correlation Coefficient r)	Theoretical Model
Bukhari, 2015	N = 170	. 64	To be determined with the available raw data on Pakistani students' response to familiarity, SPCC and motivation on WTC.	WTC Model
Oz, 2015	N = 134	. 63	To be determined with the available raw data on Turkish students' response to familiarity, SPCC and motivation on WTC.	WTC Model
Yashima, 2002	N = 389		To be determined with the available raw data on Japanese students' response to familiarity, SPCC and motivation on WTC.	WTC Model

Table 2: Inclusion/Exclusion Criteria and Keywords

Inclusion Criteria	Exclusion Criteria	Keywords
WTC studies for the last 5 years	Participants with English as first language	Willingness to Communicate in English as Second Language
EFL (English as Foreign Language) students	Written communication	Familiarity
Participants who communicate English as L2	Gender-separating studies (between males only or between females only	Self-perceived communication competence

Oral communication (public speaking, communication with friends, acquaintance and strangers)	Variables exhibiting multicollinearity	Motivation
Use of WTC Model	Fixed effect meta-analysis	WTC in context
Correlational study with independent variables: familiarity, SPCC and motivation	Non-peer-reviewed research	Affective factors
Weighted mean for each independent variable	Non-original studies	
Correlation coefficient to establish effect size	Non-correlational studies	
Random-effect meta-analysis		
Reported outcomes have similar results according to research questions		
Original studies		
Peer-reviewed research for increased validity of outcomes		

Homogeneity and Heterogeneity

The kind of meta-analysis that fits the aforesaid discussions will be a random-effect meta-analysis where the sample size is a random size within a large population of studies on WTC. That being said, certain levels of homogeneity in the degree of correlation among familiarity, SPCC and motivation can be pooled together to determine the effect size through correlation coefficient. Next, homogeneity can also be ensured in determining the weighted mean considering all studies have mean values for WTC although some identified factors have no mean values. Internal validity (Chronbach's alpha) can also be included in the consistency and validity of variables. Another factor for homogeneity is the use of the same WTC model across studies and uniformity of description of participants as L2 speakers in English. On the other hand, heterogeneity is also present considering that different factors affecting WTC are presented in all studies discussed and the presence of multi-collinearity in some variables hinders robust findings. To test for heterogeneity, standard Q-statistic or chi-square test is recommended for variation in study outcomes between studie

LIMITATIONS

Based on previous discussions, it is fair to say that this meta-analysis has so many limitations to consider, namely:

- Independent variables are not uniformly discussed
- Presence of multicollinearity
- Non-uniformity in statistical procedures
- Absence of correlational analysis based on correlation coefficient
- Difficulty in determining effect size given the absence of correlation coefficient
- Heterogeneity

CONCLUSION

Given the various limitations and some inconsistencies presented herein, combined analysis on effect size seems cumbersome to be realized. This research protocol aims to establish the degree of impact of identified independent variables such as familiarity, SPCC and motivation on WTC using correlational coefficient. Even with all difficulties, correlational meta-analysis can still manage to depict a sizeable description of effect size when raw data of answered questionnaire responses on each variable is made available to determine coefficient correlation, thus, effect size. Next, the use of WTC Model consistent in all data extraction and analysis coupled with relatively consistent mentioning of three identified variable indicate some strong sense of homogeneity. Therefore, this paper can answer the most general questions when full-scale meta-analysis will be conducted in the future: what is the degree of correlation of familiarity, SPCC and motivation to WTC as L2 language individuals? What has the highest degree of correlation among all variables to the level of WTC?

REFERENCES

Basu, A. (2017). How to conduct meta-analysis: a basic tutorial. https://doi.org/10.7287/peerj.preprints.2978v1.

Borenstein, M., Hedges, L., Higgins, H. & Rothstein, H.R. (2009). Introduction to meta-analysis. *Wiley Online Library*. https://onlinelibrary.wiley.com/doi/book/10.1002/9780470743386.

Bukhari, S. *et al* (2015). Willingness to Communicate in English as a Second Language: A Case Study of Pakistani Undergraduates.

Oz, H. & Pourfeiz, J. (2015). Willingness to Communicate EFL Learners to Turkish Context. *Learning and Individual Differences Journal*. https://www.researchgate.net/profile/Huseyin-Oz/publication/270913700_Willingness_to_communicate_of_EFL_learners_in_Turkish_context/links/54cb548e0cf22f98631e79ad/

Willingness-to-communicate-of-EFL-learners-in-Turkish-context.pdf

Riasati, M. & Noordin, N. (2011). Antecedents of Willingness to Communicate: A Review of Literature. *Studies in Literature and Language, 3*(2), 74-80. https://www.researchgate.net/publication/228828007_Antecedents_of_Willingness_to_Communicate_A_Review_of_Literature

Yashima, T. (2002). Willingness to Communicate in a Second Language: The Japanese EFL Context. *Modern Day Journal.*