"I saw the sign": Extent of Use of Filipino Sign Language and its Impact on Interpersonal Relationships in the Workplace among Deaf employees

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Abstract: In recent years, there has been an increase in employment opportunities available to persons with disabilities. Despite this, stigma surrounding the employment of the Deaf community in particular remains, causing higher unemployment rates as many employers show a preference for those with motor disabilities. Socialization is often the cited reason for this. Deaf employees face several communication barriers, such as the lack of a common linguistic background with their co-workers, as the former is limited to manual communication while the latter uses verbal. To overcome this barrier, some workplaces utilize Filipino Sign Language (FSL) to facilitate effective communication between Deaf and hearing co-workers. This study aimed to determine the impact of the Extent of FSL Use on the Quality of Interpersonal Relationships in the workplace, along with the Personal and Work-Related Characteristics generally affecting FSL Use. Through the use of a self-administered questionnaire and purposive sampling limited to Deaf employees, a positive correlation was found between the Extent of FSL Use and the Deaf employees' perception of the Quality of Interpersonal Relationships with hearing colleagues. Factors such as Nature of Work, Educational Attainment, Industry, Network, and Organizational Size were also found to influence the Extent of FSL Use in the workplace.

Key Words: Filipino Sign Language; Deaf; PWD employment; workplace interpersonal relationships; workplace dynamics

1. INTRODUCTION

Due to the lack of readily available facilitation of interpreters, several complications arise for many Deaf workers, including but not limited to a lack of occupational prospects, innovative accommodations, employee retention, and salary increases (Guno, 2019; Mina, 2013). Existing literature has shown that these issues stem from the multiple communicative challenges Deaf employees face in day-to-day operations (Cruz & Calimpusan, 2018; Guno, 2019; Lamichhane, 2015; Mina, 2013; Svinndal et al., 2019). Because of the lack of communicative spaces for them in several areas of their work-life, most display low social participation in work-related social functions, leading to social withdrawal, difficulty in establishing rapport, reluctance in asking for accommodation, and feelings of being undervalued as an employee (Punch et al., 2007; Svinndal et al., 2019; Wells et al., 2009). As third-party mediators such as translators only relay information to them, there is little to no space for them to participate in meetings, casual conversations, training functions, etc., rendering them unable to provide incidental input and to fully participate in workplace interactions, both integral to the perceived self-importance of the disabled employee in the workplace (Wells et al., 2009).

As such, Deaf employees have been found to prefer communicating with their hearing co-workers in signed language directly, as it was "more comprehensible" and "easier" in terms of working with employees who understood the same language (Mina, 2013; Wells et al., 2009). Today, Filipino Sign Language (FSL) exists as the Philippines' national sign language institutionalized in Deaf culture, as it is "able to capture the idiosyncrasies of how Filipinos talk" (Filipino Sign Language Act 2018; Imperial, 2015). Though related literature is scarce, the use of FSL in the workplace and the overall involvement of the Deaf community as members of the workforce may be attributed to the following factors: Personal Characteristics such as their biological sex, educational attainment, alma mater (whether or not they were enrolled under a Special Education school), and their nature of work (Goertz et al., 2010; Kim, 2006; Lamichhane, 2015; Martz & Xu, 2008; Smith, 2007; Williams et al., 2006); as well as Work-related Characteristics such as their industry, company policy and advocacies, membership in a network, and the number of co-workers with similar disabilities (Foster

& MacLeod, 2003; Gatchalian et al., 2014; Graffam et al., 2002; Honey et al., 1993; Mansour, 2009).

According to a study by Wells et al. (2009), the quality of participation that Deaf employees experienced in their work environment directly affected their perception of interpersonal relationships. A high perception of the quality of interpersonal relationships directly impacts employees' behavior, especially regarding their ability to collaborate, commitment to their responsibilities, their overall performance, and internal and external organizational communication, among others (Szostek, 2019). Developing a common language employed internally within a social group involves the passive acquisition of communicative practices through association with a community, demonstrating internal identification, and, therefore, positive interpersonal relationships (Durrel, 2004). In line with this, Cohen and Kassis-Henderson (2012) reported that the use of language is of great importance when establishing rapport with multilingual co-workers. Though Cohen and Kassis-Henderson's observation was made about spoken languages, the general idea remains the same — provided a company's employees' desire to bridge the communication gap, their use and reception of FSL from their Deaf colleagues must be thoroughly studied, together with its effect on their workplace interactions and resulting perceived interpersonal relationships.

1.1 Research Objectives

Specifically, this study seeks to answer the following research questions:

1. To what extent do Deaf workers use FSL in the workplace?
2. What is their perceived Quality of Interpersonal Relationships in the workplace?
3. How does the Extent of FSL Use impact their perceived Quality of Interpersonal Relationships?
4. What is the relationship between the Personal and Work-related Characteristics of Deaf employees and the extent to which they use FSL in the workplace?

1.2 Conceptual Framework

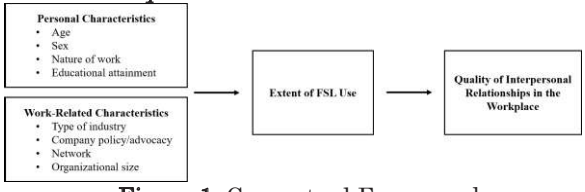

Figure 1. Conceptual Framework

This study focuses on the extent to which FSL is used in workplaces with Deaf employees in different industries and its effect on their perceived quality of interpersonal relationships within said environment.

There are three independent variables in this study, namely (1) Personal Characteristics, (2) Work-related Characteristics, and (3) the Extent of FSL Use in the workplace among Deaf employees. The primary dependent variable of this study is the Quality of Interpersonal Relationships in the workplace. The Extent of FSL Use in the workplace is affected by the outlined Personal and Work-related Characteristics. 'Extent' in this variable refers to both the frequency and variety of interactions where Deaf employees utilize FSL.

This can then affect interpersonal relationships within the work environment. Given that spoken language plays a vital role in establishing rapport among multilingual workplaces (Cohen & Kassis-Henderson, 2012), there is reason to believe that this effect is present among sign language users as well, if not more significant.

2. METHODOLOGY

In line with the enumerated research questions, the study utilized a descriptive and explanatory research design. A purposive sampling technique was used, and respondents were chosen based on the following criteria: they 1) must be entirely deaf and 2) must be employed. The researchers tapped personal connections, contacted various organizations, and crowdsourced on social media for potential participants.

The instrument used to gather data was a self-administered questionnaire using Google forms. The questionnaire consisted of four sections; sections one and two were designed to catalog the respondents' Personal (e.g., age, sex, nature of work) and Work-related (e.g., type of industry, organizational size) Characteristics, respectively. Section three utilized a 7-point Likert scale with questions to ascertain the Extent of FSL Use in the workplace. With 1 being low and 7 being high, respondents were asked to rate their ability to communicate with co-workers using FSL in everyday workplace situations, such as supervision, meetings, and spontaneous interactions. This was adapted from a similar study by Punch et al. (2007), modified to fit the present paper's nuances. Section four used a 4-point Likert scale to examine the Quality of Interpersonal Relationships the respondents had with their co-workers. Questions in this section were adapted from Szostek's (2019) study and operationalization of the determinants of the Quality of Interpersonal Relationships. A simplified version of the Informed Consent Form was appended to the Google Form. The entire questionnaire is in English

but included Filipino translations for the convenience of the respondents.

The following statistical tests were used in the study:

Table 1. Data analysis matrix.

Independent Variables	Type of Data	Dependent Variable	Type of Data	Statistical Test
Personal Characteristics:				
- Age	Ratio	Extent of FSL Use	Interval	Spearman's Rho
- Sex	Nominal			t-Test
- Nature of work done	Ordinal			Descriptive
- Educational Attainment	Ordinal			Descriptive
Work-related Characteristics:				
- Industry	Nominal	Extent of FSL Use	Interval	Descriptive
- Company policy/ advocacy	Nominal			Mann-Whitney
- Network	Nominal			Mann-Whitney
- Organizational Size	Interval			One-way ANOVA
Extent of FSL Use	Interval	Quality of Interpersonal Relationships	Interval	Spearman's Rho

3. RESULTS AND DISCUSSION

3.1 Characteristics Affecting Extent of FSL Use

The Personal and Work-related Characteristics which showed a statistically significant effect on the Extent of FSL Use are Network and Organizational Size, while notable trends were observed for the Nature of Work, Educational Attainment, and Industry. For the remaining independent variables, Age, Sex, and Company Policy/Advocacy, the researchers could not gather sufficient evidence to declare that they affected the dependent variable significantly.

Table 2. Extent of FSL Use by Presence of Network

Network of PWD Organizations	n	Extent of FSL Use Score	
		M	*SD*
Present	48	37.85	12.65
Not Present	6	21.33	6.77

The Mann-Whitney U Test conducted to establish a relationship between Extent of FSL Use and companies' coordination with PWD groups (presence of a Network) yielded a p-value of 0.0019 ($\alpha = 0.05$). There is enough evidence to conclude that being part of a network directly increases the Extent of FSL Use. The result confirms previous studies (Cruz & Calimpusan, 2018), which observe that forming relationships and connections with the larger Deaf community through the aforementioned networks is essential for Deaf workers to receive social, economic, financial, emotional, and other forms of support in both their jobs and personal lives. It allows them to be more engaged with like-minded individuals who are more likely to take actions towards inclusivity, including supporting the use of FSL across various platforms.

Table 3. *Extent of FSL Use by Organizational Size*

Organizational Size (No. of Deaf employees)	n	Extent of FSL Use Score	
		M	*SD*
1-15	23	30.00	13.32
16-30	19	37.74	11.79
Above 30	12	44.83	9.45

Likewise, a one-way ANOVA test conducted to draw a relationship between the Extent of FSL Use and the organizational size of a company yielded a p-value of 0.0036 ($\alpha = 0.05$), indicating a significant difference in the Extent of FSL Use between companies that house 1 to 15, 16 to 30, and more than 30 Deaf employees. This suggests a linear relationship between a company's Organizational Size and the Extent of FSL Use, confirming Foster and MacLeod's (2003) findings that few Deaf co-workers are likely to lead to a smaller Extent of FSL Use due to isolation and discouragement.

For the variables in which trends in the data were observed, namely Nature of Work, Educational Attainment, and Industry, the researchers were only able to utilize descriptive statistics instead of the planned statistical tests due to the insufficient number of respondents for specific categories.

Table 4. *Extent of FSL Use by Nature of Work Done*

Nature	n	Extent of FSL Use Score	
		M	*SD*
Vocational	13	28.08	13.23
Rank and file/Clerical	28	36.04	13.14
Supervisory	6	46.50	8.87
Managerial	6	42.83	7.73
Executive	1	35.00	N/A

Regarding Nature of Work, supervisory and managerial showed the highest mean score in the Extent of FSL Use, compared to employees in lower job levels such as vocational. Excluding the executive level that garnered only one respondent, thus being an unreliable value, this trend may be explained by the greater likelihood of employees with higher job levels requesting additional workplace accommodations from accumulating years of experience (Punch, 2016).

Additionally, the distribution of labor in supervisory and managerial positions may mean that they have more resources to dedicate to promoting FSL among their co-workers than those with labor-intensive physical occupations.

Table 5. *Extent of FSL Use by Educational Attainment*

Educational Attainment	n	Extent of FSL Use Score	
		M	*SD*
Elementary	2	24.50	3.54
High School	9	30.11	13.87
College	37	37.38	13.48
Vocational	3	36.67	8.62
Post-Graduate	3	44.00	7.94

The respondents were also asked regarding their educational background. Employees with post-secondary educational attainment, such as college and vocational degree holders, report higher average use of FSL because they are more likely to request and receive additional workplace accommodations compared to those with elementary or secondary education (Punch, 2016). This may be because PWD employees with lower educational attainment can be assigned to lower positions, which companies usually prefer (Kim, 2006). This allows employers to save money that would otherwise have been invested in training, supervision, and other related expenses, negatively affecting FSL usage.

Table 6. Extent of FSL Use by Industry

Type of Industry	n	Extent of FSL Use Score	
		M	*SD*
Creative	5	44.40	13.15
Education	4	39.25	17.46
Food Service	9	27.22	11.19
Manufacturing	8	28.38	12.36
Professional Services	24	40.83	11.64
Retail	2	30.50	7.78
Utilities	2	26.50	0.71

Results show that Extent of FSL Use varied greatly across industries: workers in the utilities and foodservice sectors rated their usage of FSL the lowest. In contrast, the creative industry had the highest reported Extent of FSL Use, followed by the professional services and education industries. The nuances of communication across various industries and differing job requirements may explain this discrepancy. The industries which scored lower could require less communication among employees in general. Those in the utilities industry, for example, may be required to do work with minimal interaction with co-workers, making FSL use low regardless of other factors such as the number of PWD peers. In contrast, FSL may be more widely utilized in different fields, which require employees to communicate more with others. This is especially true for the education industry, which gives more opportunities for Deaf teachers to converse in FSL with both Deaf and hearing co-workers and students.

As for the characteristics which did not show significant effects or specific trends, they may not be as relevant to the usage of FSL as compared to other factors. A Spearman's Rho test to measure the linear relationship between Age and Extent of FSL Use scores returned a p-value of 0.8346 ($\alpha = 0.05$). A t-Test for independent samples test to compare the mean scores of male and female categories showed insignificant difference ($p = 0.8932$). Lastly, the effect of the presence of company advocacy was tested through a Mann-Whitney U Test, though this again proved insignificant ($p = 0.45$). However, it is also possible that their impacts are simply not observable because of the small sample size in some categories. The study was not able to gather enough evidence to conclude that advocacy has a significant effect on the Extent of FSL Use, but further research is still needed to confirm the findings.

3.2 Extent of FSL Use and Quality of Interpersonal Relationships

Each respondent's scores for Extent of FSL Use and Quality of Interpersonal Relationships were treated as interval values, obtained by calculating the sum for their respective sections in the questionnaire.

The resulting data from both variables suggests a positive correlation. To confirm this finding, Spearman's Rho correlation coefficient was used to test for nonparametric correlations. The test revealed a moderately positive correlation coefficient, and a statistically significant relationship between the two variables, $r_s [52] = 0.45$, $p < 0.001$ ($\alpha = 0.05$). The researchers thus conclude that a larger Extent of FSL Use within the workplace improves the quality of Deaf employees' perceived interpersonal relationships with their co-workers.

In line with related literature, the quality of participation that Deaf employees are granted within their workplace directly affects their perceived Quality of Interpersonal Relationships (Wells, 2009). This participation may be illustrated as the extent to which they are able to communicate with their colleagues, particularly for incidental conversation, interaction, and information (Foster and MacLeod, 2003), something that is encouraged by their use of FSL as the primary medium. An increased perception of the quality of one's interpersonal relationships with

their co-workers has been found by existing literature to foster learning processes in organizations, positively affect employees' psychological safety, and decrease counterproductive work behavior (Carmeli et al., 2009; Szostek, 2019). In this sense, an increase in the extent to which FSL contributes to those effects as well.

4. CONCLUSIONS

It must be noted that given the limited number of respondents and the skewed nature of a few categories in the data set, these results are not meant to generalize the Deaf population. Instead, these are intended to raise awareness on the issue of employment and occupational accommodations for the Deaf community and to instigate further research efforts. With that said, the following characteristics displayed statistically significant effects on the Extent of FSL Use: the Nature of Work, Educational Attainment, Industry, Network, and Organizational Size. Oppositely, the following factors displayed insignificant effects: Age, Sex, and Company Policy/Advocacy. Meanwhile, the Extent of FSL Use has been confirmed to have a significant positive correlation with Quality of Interpersonal Relationships in the workplace. By extension, the aforementioned characteristics also directly impact the dependent variable. The analysis of the survey results shows the importance of proper allocation of resources and responsibilities to Deaf individuals that match their personal and work-related assets, along with initiative from their hearing peers to cultivate a healthy work environment. These findings may guide employers and the larger Deaf community alike to determine which factors should be focused on to ensure inclusive practices in the workplace, which are still insufficient for Deaf workers.

5. ACKNOWLEDGMENTS

The researchers would like to express their sincere gratitude to their research adviser, Dr. Melvin A. Jabar from the Behavioral Sciences Department, for his guidance and patience throughout the study. Likewise, to their research mentor, Ms. Omega Diadem Danganan, who has taught them valuable information and techniques in practical research.

Moreover, special thanks are in order to the following key contacts: Miss Bernadette Infanta, Rowena Jimenez, Marc Peñaredondo, Lucilina Castillo, Ar. Mary Grace L. Gonzales, and Ronezes Rivera. Their advice and connections to the Deaf community were essential in the completion of this project.

Additionally, the researchers would like to recognize and extend gratitude to the following organizations for their assistance in the dissemination of the survey questionnaire: Metro Manila Development Authority, Project Inclusion Network, FSLTreasure, the National Council on Disability Affairs, the Department of Labor and Employment, and the Department of Foreign Affairs.

The researchers are also grateful for the unwavering support of their friends and families. Last but not the least, they would also like to thank De La Salle University for the opportunity and resources available.

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