



Speech Profile Of Pre-Service Teachers: Input To Speech Enhancement Program And Innovations

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Abstract

This investigation focused on the speech profile of pre-service teachers during the school year 2022-2023 as input for a speech enhancement program and innovations. Specifically, attempts to determine the socio-demographic characteristics of respondents in terms of gender, age, high school type graduated, parents' educational attainment, employment status, and estimated monthly income; determine speech profile in terms of Vocal Mechanism and Diction; identify their strengths and weaknesses in speech production; determine the significant relationship between speech profile and socio-demographic characteristics; and determine whether speech enhancement program or innovations may be introduced to improve weaknesses in speech production. A descriptive survey research design was used to gather information on the basic and speech profiles of 40 respondents. Results revealed, that respondents were generally female, 20-22 years old, graduated from public senior high school, with high school graduate parents, unemployed, and earned PhP 4,000- PhP8,000. Results showed that respondents were very strong in loudness, articulation, pronunciation, and even in reading rate. However, a closer examination of the data reveals that at least one-third were slow readers. Furthermore, an analysis revealed that females have louder voices than males, demonstrating a substantial relationship between gender and loudness of voice. As evidenced by the extremely significant relationship between rate and gender, females read faster than males. Results also showed that those with working moms could talk more articulately than those with jobless mothers. Finally, results demonstrated that pronunciation is unrelated to any demographic characteristics. A suitable speech enhancement program/innovation was designed to improve proficiency in speech production.

Keywords: Speech Production, Speech Profile, Voice Mechanisms, Pre-Service Teachers' Speech Ability, Speech and Oral Communication fluency, Speech enhancement program

Introduction

Speech is the most basic activity of man. Since the Philippines is a bilingual country, where English is only a second language used as a medium of instruction and as a means of carrying out concerns in the world of business, it has been noted that the distortions in English stress, intonation, juncture, and rhythm are frequent and can cause a communication breakdown.

Even before starting school, a kid learns the basics of this second language at home,

through fundamental English terminology taught to him as translations of bodily parts in English and numerals. Experts have underlined that spoken language, the foundations of which are built by the age of four, has a significant impact on children's kindergarten preparation and academic achievement throughout their academic careers. From preschool to primary school, students were taught the fundamentals of a wide range of ideas. Language acquisition is critical to the creation of

thoughts and ideas during different stages of development. To support learning, both oral and written communication skills are being cultivated.

As the child enters high school, more emphasis is placed on curriculum-based knowledge. Most curricula are designed to help an individual develop physically, ethically, socially, academically, and spiritually. As he progresses along the knowledge spectrum, the learner accepts the notion of obtaining increasingly complicated communication skills as preparation for work and life. The ensuing disparity in academic aptitude tends to continue or widen throughout their school experience (Fielding, Kerr, & Rosier, 2007; Juel, Biancarosa, Coker, & Deffes, 2003), which is why early oral language development is critical for future academic achievement. Communication is critical in the field of education. As pre-service teachers, often known as teacher candidates, strive toward a career as teachers, effective oral communication skills are essential. As a result, effective speaking skills would increase learners' social involvement and academic progress (Arung, 2016; Oruç & Demirci, 2020). As a pre-service teacher, it is critical to have strong oral and written communication skills, which are required in a variety of situations such as classrooms, meetings, and presentations. A teacher's oral and written communication abilities allow him or her to deliver knowledge, connect with pupils, and develop constructive relationships.

One of the main reasons why pre-service teachers should have strong oral and written communication skills is that it allows them to communicate with students more successfully. A professor who has strong communication skills can convey information clearly and concisely, which enhances students' understanding of course materials. Additionally, a teacher can use a variety of communication techniques to engage students, such as questioning, active listening, and storytelling, to create an atmosphere that supports learning and encourages students to participate in class discussions (Wei & Wang, 2019). Another important reason why pre-service teachers should be excellent at oral and written communication is that it allows them to create strong relationships with their pupils. A teacher who communicates well with their pupils is

more likely to develop mutual respect and trust. Furthermore, a teacher who can modify their communication style to accommodate the requirements of diverse students can create a helpful and inclusive learning environment (Hong, 2019). Teachers with good communication skills can also better understand their students' histories and learning patterns, allowing them to customize their interactions with each student and so achieve higher learning results. Apart from interacting with students, pre-service teachers need proficient oral and written communication skills for collaboration with colleagues. Collaboration and communication are keys to effective teamwork, leading to professional development and successful outcomes. For example, group meetings and project planning require the exchange of information and ideas, necessitating clear oral and written communication (Han, Schroeder, & Mallory, 2020). Therefore, having strong communication skills enhances collaboration, leading to better teamwork, which can improve teaching practice. Finally, the pre-service teachers should have proficient oral and written communication skills, as they facilitate effective interaction with students, help establish positive relationships, and foster collaboration with colleagues. Developing strong oral and written communication skills is a lifelong process that requires commitment and dedication. Pre-service teachers who possess these skills will be more effective in their roles and more valuable to their students, colleagues, and the communities they serve.

Vocal Mechanism

Every person wants to have an effective voice. Voice is essential in communication since it is only through the voice that the speaker can orally express what he thinks and feels. Voice quality begins with breathing. The loudness and softness of the voice correspond to the pressure built upon the folds (Hibbs, 1965). The mouth, or oral cavity, is the most modifiable of all the speech resonators. Through muscular contractions, our oral cavities can be modified so that the sounds that they produce can be reinforced. The human mechanism, with its complex neuromuscular controls, is capable of a range of variations for each of the sound attributes. No speaker produc-

es tones at a single loudness level. Experts have emphasized that a voice that is dominated by intellect rather than emotion tends to be moderate in pitch as well as in loudness (Eisensohn, 1979).

Effective reading is reading with speed, correct articulation, and correct pronunciation. Time and rate variations are as essential in reading and speaking as they are in music (Mayer, 1996). Speaking rates are almost always slower than reading rates. Strang (1988) suggested that the estimated average rate of reading for high school students is 250 to 300 words per minute and for college students, 320 to 350 words per minute.

On Diction

Most of the articulated sounds of American-English speech are produced, as a result of the activity of the lips and parts of the tongue. Those mobile articulators assume positions or make contact with fixed or relatively fixed parts of the upper jaw and the roof of the mouth.

The lips and teeth enclose the oral cavity. The tongue lies within and almost completely fills the oral cavity. The achievement of speech is neurologically related to the development of the cerebrum in man. The brain is the coordinator and integrator of activity. In the brain, impulses set up by sounds and movements that are received by the ear, the eye, and the other sense organs are translated into images or structural words that have significance and meaning.

The structuralist theory (Jacobson, 1968) holds that children are born with the ability to develop language and that phonological development and other aspects of language acquisition follow a universal language.

The Sounds of English

Consonants are sounds produced by obstructing the breath stream either by narrowing or closing the speech tract before coming out of the mouth or the nose. Consonants may be classified by their manner of articulation and voice. (Padilla, 2000). A vowel is a voiced sound produced without any obstruction or constriction as the sound flows through the cavity. The vowels vary from each other as to their production, in the size and shapes of the oral cavity. The position of the tongue, the shape of the lips, and the degree of the tension between

the lips and the tongue are taken into consideration when producing the sound (Padilla, 2000). Diphthongs are vocalic glides or blends of two vowels that are uttered in a single breath impulse within a single syllable. The prosodic theory (Walterson, 1971) holds that children initially perceive adult speech in terms of whole units of meaning rather than individual phonemes. Both Ferguson (1978) and Weir (1966) have noted the role of intonation patterns in speech development. Children may vary with regard to both the sequence and rate of development.

Effective instruction in oral language starts with effective oral language assessment—before thinking about what skills should be taught or how to teach them, educators must first identify the student's specific areas of need. An effective assessment will provide data profiles for a student (or groups of students) to help guide the appropriate instruction.

To achieve this goal of training individuals to become productive citizens of the future, a long process of educating the citizenry is required to ensure that investments in human resources result in the achievement of their desired ends. In the process, an assessment of the skills acquired and developed by each individual is necessary. Effective communication implies good or pleasant speech, and this in turn requires not only a clear and modulated voice but also a speech that can easily be understood and is accurate in the production of the individual sounds and in the selection of words. Speech expresses attitudes, feelings, thoughts, and ideas (Falca, 1999).

For our students, who will be future teachers, oral communication is the most important way of communicating. For them, effective communication skills are essential to building relationships, creating a positive learning environment, facilitating learning, collaborating with colleagues, and supporting student development.

A proper assessment of their speech profile in terms of loudness, rate, pronunciation and articulation to determine their capacities, strengths, and weaknesses in speech production has to be done to properly determine the appropriate and relevant intervention to be employed. If deemed needed, interventions and innovations may be introduced. Finally, with the aforemen-

tioned insights, the researcher was motivated to study the speech profile of the pre-service teachers of CapSU Pilar-Satellite College during the school year 2022-2023 as the basis for speech enhancement programs and innovations.

Methodology

This part presents the process employed in the conduct of the study, such as research design, the locale of the study, respondents of the study, sample size, sampling technique, research instruments, scoring and categorization of variables, data gathering procedure, and data analysis procedure.

Research Design

This study is descriptive in nature, and finds answers to the questions, who, what, when, where, and how. It involves the description, recording, analysis, and interpretation of conditions. It also attempts to discover relationships between variables.

Locale and Respondents of the Study

This study involved all 40 pre-service teachers of the BEd Department of Capiz State University-Pilar Satellite College during the 2022-2023 school year.

Sample Size and Sampling Technique

This study employed the total enumeration where all the 40 students undertaking the Internship Program during the School Year 2022-2023 were included.

Research Instrument

To gather the needed data on the respondents' demographic characteristics, a validated and approved questionnaire was used. The research instruments was comprised of two parts: PART 1. Student Interns' Socio-Demographic Profile, intended to draw information on the respondents' socio-demographic profile in terms of sex, age, high school type, parents' educational attainment, employment status and estimated monthly family income. Part II. Speech Profile of Pre-Service Teachers. It is a researcher made questionnaire and checklist utilized to gather the respondents' speech profile. This was subjected to validation and approval by the panel of experts in the field. After approval, a pre-testing was done to 30 respondents, who were not

included as the final respondents of the study.

Reliability of Instrument

Before the final distribution of the questionnaire, its reliability and validity was pre-tested to thirty (30) third year Education students of Colegio de la Purisima Concepcion, Roxas City. To determine the reliability of the instrument, the Cronbach alpha model as suggested by Pallant (2004), is the most appropriate statistical tool that can estimate the reliability of the research instrument if it uses a likert scale. The SPSS Manual (2001) maintains that any instrument is required to have an alpha coefficient of at least 0.80 in order to be deemed reliable. The result of the reliability test was 0.898, which is higher than the earlier standard set at 0.80.

Data Gathering Procedure

A letter of permission to conduct the study was obtained from the Satellite College Director of CapSU, Pilar. Upon approval of the letter of request and permission, the actual conduct of the study was started. The study was conducted from December 7, 2022 to February 25, 2023. The respondents were asked to read at normal loudness, speed, articulation, and pronunciation to evaluate their speech profile. To test the articulation and pronunciation, distortion in speech was noted and recorded for verification, in a conducive room at Capiz State University- Pilar Satellite College. To test for Loudness, the researcher utilized the Cool Edit Application for a more precise and scientific evaluation. The respondents read aloud the words prepared by the researcher on cardboard; the researcher held the individual respondents' checklist, set the time for reading, and recorded the number of words read in a minute. With articulation and pronunciation, the researcher holds the checklist and marks the mispronounced or distorted words uttered. For verification and double-checking purposes, the students' responses were recorded in a tape recorder. A three-point scale was used to measure loudness, rate, and articulation. Frequency counts and percentages were employed in the study. The chi-square test was used to determine a significant relationship between the speech profile and the demographic characteristics of the respondents.

VARIABLES	FREQUENCY	PERCENTAGE
SEX		
Male	5	12.5
Female	35	87.5
Total	40	100.0
AGE		
23 years old & above	3	7.5
20-22 years old	34	85.0
19 years old and below	3	7.5
Total	40	100.0
TYPE OF HIGH SCHOOL ATTENDED		
Public	37	92.5
Private	3	7.5
Total	40	100.0
PARENTS' HIGHEST EDUCATIONAL ATTAINMENT		
Father's Highest Educational Attainment		
Elementary Graduate:	9	22.5
High School Graduate:	23	57.5
College Graduate:	4	10.0
Post Degree Graduate	4	10.0
Total	40	100.0
Mother's Highest Educational Attainment		
Elementary Graduate:	9	22.5
High School Graduate:	24	60.0
College Graduate:	5	12.5
Post Degree Graduate	2	5.0
Total	40	100.0
PARENTS' EMPLOYMENT STATUS		
Fathers' Employment Status		

Table 1. Distribution of respondents in terms of their socio-demographic profile. Table 1. Distribution of respondents in terms of their socio-demographic profile.

Table 1. Continue...

Employed	22	55
Unemployed	18	45
Total	40	100.0
Mothers' Employment Status		
Employed	35	87.5
Unemployed	5	12.5
Total	40	100.0
Estimated Monthly Family Income		
PhP 8,001 & above	7	17.5
PhP 4,001 - PhP 8,000	27	67.5
PhP 4,000 & below	6	15.0
Total	40	100.0

RESULTS AND DISCUSSION

SOCIO-DEMOGRAPHIC PROFILE OF RESPONDENTS

This part presents the distribution of respondents according to socio-demographic profile inclusive of sex, age, parent's employment status, parents' educational attainment, and estimated monthly family income.

SEX

In terms of sex, 37 or 92.5% of the respondents were female and 5 or 12.5% were male. Results imply that the majority of the respondents were female.

AGE

In terms of age, 34 or 85% of the respondents were 20-22 years old; 3 or 7.5% were 19 years old and below and likewise, 3 or 7.5% belonged to 23 years old and above. Results imply that the majority of the respondents were of ages 20-22 years old.

TYPE OF HIGH SCHOOL GRADUATED

In terms of the type of high school graduated from, 37 or 92.5% of the respondents graduated from public high school, and 3 or 7.5%

were from private secondary school. Results imply that the majority of the respondents graduated from public secondary high schools.

PARENTS' HIGHEST EDUCATIONAL ATTAINMENT:

Fathers' Highest Educational Attainment

In terms of the fathers' educational attainment, 26 or 65% were high school graduates; 9 or 22.5% were elementary graduates; 4 or 10% were college graduates; and 1 or 2.5% were post-degree graduates. The results imply that the majority of the fathers were high school graduates.

Mothers' Highest Educational Attainment

In terms of mothers' educational attainment, a majority, 25 or 62.5% of respondents, were high school graduates; 9, or 22.5% were elementary graduates; 5, or 12.5% were college graduates; and 1 or 2.5% were post-degree graduates. The results imply that the majority of the mothers were high school graduates.

PARENTS' EMPLOYMENT STATUS

Fathers' Employment Status

In terms of the fathers' employment sta-

tus, 22 or 55% were employed and 18 or 45% were unemployed. These results imply that the majority of the fathers were employed.

Mothers’ Employment Status

In terms of mothers’ employment status, a majority, 35 or 87.5% were employed, and 5 or 12.5% were unemployed. Results imply that the majority of the mothers were employed.

ESTIMATED MONTHLY FAMILY INCOME

In terms of the family’s estimated monthly income, results show that 27, or 67.5% earn PhP 4,001-PhP 8,000; 7, or 17.5% earn PhP 8,001 and above; and 6 or 15 % earn PhP 4,000 and below. Results imply that the majority of the respondents’ families earn an estimated income of PhP 4,001- PhP8,000.

SPEECH PROFILE

(Basis for Identifying Strengths and Weak-

nesses)

Anchored on the principle that human beings produce sounds base on the four fundamental attributes, namely: loudness, rate, articulation and pronunciation, table 2 provides conclusive evidences on the strengths and weaknesses of the pre-service teachers relevant to speech profile.

From the data presented in Table 2, it can be inferred that during the school year 2022-2023, the pre-service teachers of Capiz State University- Pilar Satellite College were strong on Rate, Articulation and Pronunciation. On the other hand, respondents have normal loudness of voice. Moreover, in terms of rate, data revealed that majority (42.5%) read faster and only 27.5% reads at normal pace. However, looking closely on the scores, almost one thirds of the respondents were slow readers, thus this attribute can be considered as weakness.

Speech Profile	Frequency	Percentage
Loudness		
High	18	45
Normal	20	50
Low	2	5
Rate		
Fast	17	42.5
Normal Rate	11	27.5
Slow	12	30.0
Articulation		
Satisfactory	15	37.5
Outstanding	25	62.5
Pronunciation		
Satisfactory	18	45
Outstanding	22	55

Table 2. Summary of the speech profile of respondents as basis for determining the strengths and weaknesses on speech production.

Relationship Between Speech Profile and Demographic Characteristics.

Table 3 presents the relationship of variables under investigation. Each speech profile attribute was related to the respondents' demographic profile to draw a picture of how each demographic characteristic affects the various aspects of speech production, which include voice production/ vocal mechanism and diction.

A. Demographic Characteristics and Loudness

Results of the test relationship (Table 3) between the respondents' demographic characteristics and loudness using the Chi Square test (X²) revealed that among the variables tested, only sex shows a significant association with loudness. Female respondents produced significantly loud or forceful sound compared with the male respondents,

The null hypothesis, which states that there is no significant relationship between the students' demographic characteristics and their speech profile in terms of loudness, is therefore accepted, except for sex.

B. Demographic Characteristics and Rate

Table 3 further shows the test of the relationship between the demographic characteristics of the respondents and their speech profile in terms of rate or speed. Chi-Square (X²) revealed that respondents' speech profile in terms of rate is dependent to their sex. It was also further observed based on the result of the study that female respondents read faster compared to the males. However, no degree of association was observed between students' speech profiles in terms of rate and the other variables tested in the study.

The null hypothesis which states that there is no significant relationship between the students' demographic characteristics and their speech profile in terms of rate/speed, is therefore accepted, except for variables, namely: sex, which has a highly significant association with respondents sex profile in terms of rate or speed.

C. Demographic Characteristics and Articulation

Among the demographic variables included in the study, only the mother's employ-

ment status was significantly associated with the respondents' speech profile in terms of articulation. It was observed that almost 100 percent of the respondents whose mothers are employed have outstanding articulation.

The null hypothesis, which states that there is no significant relationship between the respondents' demographic characteristics and speech profile in terms of articulation, is therefore accepted, except for mothers' employment status, which is significantly associated with their speech profile in terms of articulation.

D. Demographic Characteristics and Pronunciation

Table 3 further shows the test of the relationship between the respondents' demographic characteristics and speech profile in terms of pronunciation. Results of the Chi Square (X²) test revealed that their pronunciation is independent of their demographic profile characteristics.

The null hypothesis, which states that there is no significant relationship between the students' demographic characteristics and their pronunciation, is therefore accepted.

Conclusions and Recommendations

Based on the findings of the study, the following conclusions were made:

1. The pre-service teachers were generally female, 20-22 years old, mostly graduated from public senior high school, with parents who are high school graduates, unemployed, and earns PhP 4,000- PhP8,000.
2. The pre-service teachers of school year 2022-2023 dominantly speak at normal loudness of voice, can produce sounds of vowels and consonants correctly and can produce words clearly and precisely. However, almost one-third of the respondents were weak in reading rate/speed.
3. Females have louder voices than males, demonstrating a substantial association between gender and loudness of voice. Females can read quicker than males, as evidenced by the extremely significant association between rate and gender. Results also demonstrated that those with working moms could talk more articulately than those with jobless mothers. However, pronunciation is unrelated to any of the demographic

factors of the respondents.

4. Significant and substantial data are revealed in this study that can become basis of enhancement and innovative schemes to increase the speech production rate and proficiency of pre-service teachers.

will further develop and improve the students' speaking and writing skills; so that when students go out to a bigger world, they can exude mastery and confidence considering the excellent training they have.

Demographic Characteristics	SPEECH PROFILE			
	Loudness	Rate	Articulation	Pronunciation
1. Sex	7.331*	12.802 **	^a 0.114ns	^a 1.000ns
2. Age	2.723ns	1.088ns	^a 0.701ns	^a 0.781ns
3. Type of High School Attended	2.428ns	2.587ns	^a 1.000ns	^a 0.372ns
4. Educational Attainment of fathers	3.48ns	3.314ns	^a 1.000ns	^a 1.000ns
5. Educational Attainment of Mothers	4.195ns	4.713ns	^a 1.000ns	^a 1.000ns
6. Fathers' Employment Status	1.260ns	1.769ns	^a 0.253ns	^a 1.000ns
7. Mothers' Employment Status	0.283ns	1.439ns	^a 0.041*	^a 1.000ns
8. Estimated Monthly Income	0.403ns	2.790ns	^a 0.253ns	^a 0.523ns

Table 3. Summary table of Chi Square values showing relationships between different demographic characteristics and speech profile.

a Fisher's Exact Test of Significance

* **Significant At 5% Level**

** **Highly significant at 1% level**

ns **Not significant**

RECOMMENDATIONS

Based on the conclusions of the study, the following recommendations were made:

1. The pre-service teachers may personally endeavour for self development to achieve competence and proficiency in speech production.
2. The pre-service teachers may be exposed more to reading exercises to help them strengthen their articulation, pronunciation and loudness of voice; as well as help them improve their speed in reading.
3. Teachers in English, particularly the speech teachers, may consciously exert more efforts in creating and providing learning experiences that

3. Results from this investigation shall be used as a springboard or basis for remedial teaching in English, or in speech class.

Similar studies may be conducted using other research designs or utilizing other statistical methods to better explore the speech profile or speech production of pre-service teachers.

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