Apprehensions and Expectations of Preservice Teachers relative to Practicum during Pandemic: A Sentiment and Qualitative Analysis

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ABSTRACT

The study aimed to surface the apprehension and expectation of pre-service teachers in their practicum during the pandemic. The study used text mining, sentiment analysis, and qualitative-descriptive method in analyzing the apprehension and expectation of the participants relative to their practicum during the pandemic. Online, learning, and class appeared to be the top three frequently appeared words in the corpus while positive, trust, and anticipation garnered the highest emotional affect scores. Meanwhile, lack of actual exposures and failure to develop rapport were the source of apprehension of the participants while new learning amid challenging situation and more developed and capable self to address challenges were their expectations in their practicum amid the pandemic. The participants are eager to return to traditional face-to-face classes for their practicum despite the threat posed by the on-going pandemic. They are fully aware of what student teaching requires of them and can do for them which are highly technical and social in nature. Finally, optimism and resiliency of participants were surfaced when asked about their expectations in their student teaching amid the pandemic. It is recommended to apply new and other existing text mining analytical techniques to further analyze the text datasets in this study. A large dataset is also recommended for future analysis. This study also offered the potential use of the findings of this study to make informed decisions and policies to both educational institutions and educators.

Keywords:apprehension, expectation, sentiment analysis, virtual teaching, practicum, preservice teacher, qualitative-descriptive

1. INTRODUCTION

Change when happens reverberates to everyone and everything its effect. The unprecedented challenge/change that happened at the onset of 2020 caught the whole world by surprise; the COVID-19 pandemic. Almost all agencies, institutions, organizations, businesses were affected. The effects never spared the academe. The used to be onsite teaching and learning dramatically turned into online or virtual where the warmth of individuals was changed into the mediation of screen.

Because of the aforementioned, modes of learning delivery have switched into something virtual if not totally distant. Modules have taken the place of teachers. The use of technology has dominated teaching and learning through the use of various interactive technology-based strategies. Teachers who are seriously affected by the situation were caught unaware but expected to deliver just the same.

The individuals who were surprised with the effects of the pandemic were the preservice teachers or the education students who are bound to have their practicum in the form of practice teaching. Their excitement in the practice of the profession has transformed into apprehension. Their expectations tripled because of the many barriers that took its way to their supposedly enjoyable practice teaching. When students are overwhelmed by apprehension, they tend to cloud their desire to continue and their direction towards their goals. The pandemic has caused fear to everyone specially to students who are not accustomed with various learning modalities like online learning. The warmth inside the classroom was suddenly changed into hostility and unaffectionate reception of computers and gadgets used during online learning.

Students are faced with a lot of fears. Some of these are communication-based like communication apprehension, writing apprehension, and computer apprehension. According to Bailey (2008) since apprehension affects learning, therefore it is important that factors resulting to apprehension be put in place so that necessary adjustments could be made. Since, all apprehension are rooted from communication-based factors, it is very relevant to students who are major in English expected to be very communicative. They are

considered to determine whether they are also experiencing apprehension because of modality of learning. And, if despite their ability to communicate regardless of set-up or situation, apprehension still exists and is high.

In case that apprehension exists, what do these language major students expect in return. Do they remain positive and expectant in spite of apprehension?

Expectations are what keep individuals going or continue with their tasks. It gives them positive anticipation of what to come. Because of this, they learn to overcome their apprehension and are bound to exert more effort to overcome their obstacles along the way.

Indeed, there are a lot of studies in text mining and sentiment analysis but not with a combination of qualitative phase. Also, this study is novel as it includes preservice teachers who are language majors.

The researchers aimed to surface the apprehension and expectation of state university preservice teachers in their practicum during the pandemic. Through the use of computer-assisted and thematic analyses, this study sought answers to the following questions:

1. How may the texts of the participants be described through descriptive statistics and sentiment analysis?
2. How may the participants' apprehension be described?
3. What are the expectations of the participants in their student teaching during the pandemic?

2. LITERATURE REVIEW
2.1. Student Teaching amidst COVID-19 pandemic
The COVID-19 pandemic has brought numerous challenges and drastic changes to traditional student teaching experience (Piccolo et al., 2021; Ralston & Blakely, 2021). One key challenge to this is the sudden shift from in-person learning to remote or hybrid learning which requires preservice teachers to adapt to new ways of teaching and learning (Lei & Medwell, 2021; Piccolo et al., 2021; Pokhrel & Chhetri, 2021). Moreover, they are forced to even be more creative in engaging their students remotely (Marcum-Dietrich et al., 2020). This abrupt change posed a lot of challenges particularly to preservice teachers who have been thinking about their in-person teaching experience. Moreso, to the students who are used to teaching in physical classrooms. In addition to this, the pandemic has caused too much uncertainty and psychological distress (i.e., stress) among students (Pokhrel & Chhetri, 2021; Ralston & Blakely, 2021). This is true even for preservice teachers who need to navigate this even during a health crisis (Marcum-Dietrich et al., 2020).

In fact, prior to the pandemic, Waters and Russel III (2016) explored the perceptions and experiences of US secondary pre-service teachers who opted to take virtual internships. They found that convenience was their primary motivating factor for taking virtual internship. In addition to this, the participants who took virtual teaching internships have reservation about teaching in-person compared to virtual teaching. Several studies have also highlighted the major differences in tradition and virtual teaching experience during the COVID-19 pandemic (Piccolo et al., 2021; Senaratne & Hettimullage, 2023). For example, Piccolo et al. (2021) has mixed results it – from practicing technology best practices to disappointing preparation experience. Their study also elaborated the impact of the pandemic to preservice teachers and student teaching coordinators as they navigate the paradigm shift in teaching internship. A significant number of preservice teachers reported a shift in their role from that of a being a lead teacher to that of a student support provider in the virtual classroom.

Overall, student teaching amidst pandemic may provide new opportunities to preservice teachers as they need to adapt to these challenges (Marcum-Dietrich et al., 2020; Piccolo et al., 2021; Thomas et al., 2021). Developing new skills and competencies while in remote or hybrid learning with the help of technology may be beneficial to preservice teachers as they hone their skill in teaching and create new and innovative teaching methods in the process (Marcum-Dietrich et al., 2020; Piccolo et al., 2021). For this very reason, preservice teachers' apprehensions and expectations towards teaching despite the threat of COVID-19 pandemic should be explored. For example, if a preservice teacher is anxious or worried about their possible experience, interventions would be initiated before their actual teaching so that they can be equipped with the right skills and improve their psychological well-being and jumpstart their craft without having unnecessary baggage that could impact their overall ability. In terms of student expectation, by understanding what are their expectations towards teaching amidst adversity, school and teachers may be able to provide the necessary support and resources to meet those expectations. In the end, understanding both apprehensions and expectations of preservice teachers is necessary to provide targeted support and create a positive student teaching experience which in turn help both the institution and student to become more effective and confident teachers that will support students.

2.2. Text mining and sentiment analysis
Text mining analysis is a core part of natural language processing (NLP) and a form of data mining technique which analyzes textual data. It involves extracting insightful information from both structured and unstructured text data. Text mining analysis have been widely used to identify potential patterns, trends, and relationships that may not be seen in a glance (e.g., Fleuren & Alkema, 2015; Kumar & Ravi, 2016; Williams et al., 2016; Yoo & Lim, 2021). Sentiment analysis on the other hand, is also part of NLP which focused on identifying subjective information from text data (Sahu et al., 2011). It involves extracting overall sentiment based on set of

text data which can be associated to be either positive, negative, or neutral (e.g., Beigi et al., 2016; Bringula et al., 2022; Miranda & Bringula, 2021; Miranda & Martin, 2020; Ulfa et al., 2020). In addition to this, newer techniques allow the association of newer set of sentiments associated with human emotions like happy, trust, anticipation, fear etc. (Carli et al., 2016). Several studies (e.g., Beigi et al., 2016; Bringula et al., 2022; Cruz & Balahadia, 2021; Ferreira-Mello et al., 2019; Garcia, 2020; Garcia & Cunanan-Yabut, 2022; Miranda & Bringula, 2021) have also suggested that sentiment analysis in general is useful in understanding the opinion of individuals or groups in particular topic or idea (Asif et al., 2020; Balahadia et al., 2016; Ulfa et al., 2020).

3. MATERIALS AND METHODS

The aim of this study was to explore the preservice teachers' apprehensions and expectations relative to teaching amidst the COVID-19 pandemic. For this purpose, two classes of fourth year education and English major students who had their virtual internship were selected and asked to participate. A one-page essay written using a word processor related to the aforementioned topic was asked to be submitted. The students were given three days to submit the essay. In total, 99 students submitted individual essays about their apprehensions and expectations. There are 31,583 words comprising 181,228 letters and special characters found from essays submitted by the students. When the data was subjected to several pre-processing techniques such as removing punctuation marks and stripping of any extra or leading whitespaces, 180,853 letters from 1,479 sentences remained. When further pre-processing techniques were applied (i.e., removing stop words, changing case to lowercase, and lemmatization), this reduced the total number of words to 17,076. This makes the corpus of this study for text analysis.

To determine the emotion of the essays, the NRCLex python package was used. It is a python package primarily developed to recognize emotions embedded in a text based on eight different emotions (i.e., fear, anger, anticipation, trust, surprise, sadness, disgust, and joy) on top of the typical two sentiments (i.e., positive and negative). The NRCLex package follows three basic NLP procedures (Figure 1). This package simplified the overall process of extracting the sentiments in texts. In the procedures, the package automatically removes any unwanted text, it then performs the required NLP techniques for preparing the text for analysis. This part produces a well cleaned and pre-processed corpus. This corpus is then submitted to the next step for final analysis. In the emotion investigation, each word from the corpus was counted and checked their emotion category. This part iterates and summarizes the scores of the relevant words. In the emotion analysis, it produces the result in the form of a python dictionary, where the tallied scores are stored. In this study, NRCLex was used to identify the emotions exhibited in the 1,479 sentences of the students.
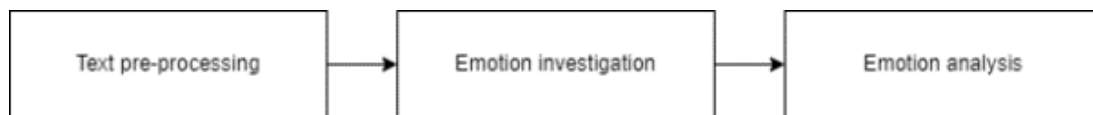

Figure 1: NRCLex procedures

Also, for the qualitative part, this study utilized qualitative-descriptive research design where the question to be answered is not the "why" of things but the "what". This design would allow for the investigation and making sense out of experiences of participants through careful description and analysis.

To produce data elements necessary for thematic formation, the participants who were selected using the following criteria: (1.) a 4th year regular BSEd in English student; (2) had his/her internship (virtually) during the academic year 2021-2022; (3) had completed both the in-campus and off-campus student teaching programs (both virtual) successfully; and, (4) willing to be interviewed, were subjected to an interview through the use of open-ended questions. They also provided written comments to supplement their answers during interview.

The interview guide was submitted to experts in the fields of text mining and sentiment analysis, language teaching, and qualitative research to ensure its relevance, correctness, and appropriateness. All the comments of the experts were incorporated in the final draft of the interview guide before it was used to the participants.

The graduating language major students where the once considered in the study because of communication-based apprehension which states majority of apprehensions are communication-based. This means that when students are able to communicate themselves the easier and faster they could address apprehensions. Meanwhile, when their apprehension is mainly on communication, pedagogical considerations must be given attention.

Clearly, the researchers used homogenous purposive sampling technique in selecting the participants of the study. Out of the aforesaid criteria, only 8 students qualified in the qualitative phase of the study. These eight were thoroughly oriented about the rationale and objectives of the study. The extent of their participation was also explained to them. They were informed, too that they are free to withdraw just in case they are no longer interested to continue with the interview. All eight participants finished the entire process of interview session.

Ethical considerations were strictly followed in this study. All involved were informed and their approval was sought. No one was also forced or coerced to participate in the conduct of this study. All data gathered from the participants were solely used in this study. Just in case the same data will be used in the future, the researchers will make sure to ask permission to the participants. When permission is not granted, the researchers will not use the acquired data.

Meanwhile, for this study, the collected data were analyzed using Braun and Clarke (2006) thematic analysis which is divided into six steps. These are Step 1: Become familiar with the data, Step 2: Generate initial codes, Step 3: Search for themes, Step 4: Review themes, Step 5: Define themes, and, Step 6: Write-up.

Step 1 is intended for the thorough listening and transcription of data to ensure correctness, exactness, and completeness. The data are gathered recordings and written responses. Step 2 involves identifying and clustering of initial codes which could be in the form of sentences or phrases. Step 3 is analysis of initial codes to produce the themes. Step 4 is validation of themes by revisiting the previous steps leading to the transcript. Step 5 is the finalization of themes attested by support testimonies or responses of the participants. Finally, step 6 is the presentation and discussion of the themes.

3.1. Ethical considerations

A consent consistent with the Data Privacy Act of 2012 in the Philippines was acquired from the participants of this study.

4. FINDINGS AND DISCUSSION

4.1. Frequent Words

There are 3,211 unique words within the corpus. Figure 2 illustrates the top ten most frequently appearing words. The word "class" ranked the highest (n = 181), followed by "learning" (n = 170), "online" (n = 152), "year" (n = 139), "teaching" (n = 123), "also" (n = 122), "time" (n = 110), "one" (n = 103), "need" (n = 92), and "face-to-face" (n = 86). The word "student" and "teacher" were excluded in this list. For example, the word "class," "learning," "online," "year," "one," and "face-to-face" frequently appears when they compare their experiences in the past two years of COVID-19 pandemic particularly how online learning differs from traditional in-person classes. The word "time" and "need" on the other hand, is used by the participants specifically about on their to fully adapt to the current situation and move forward.
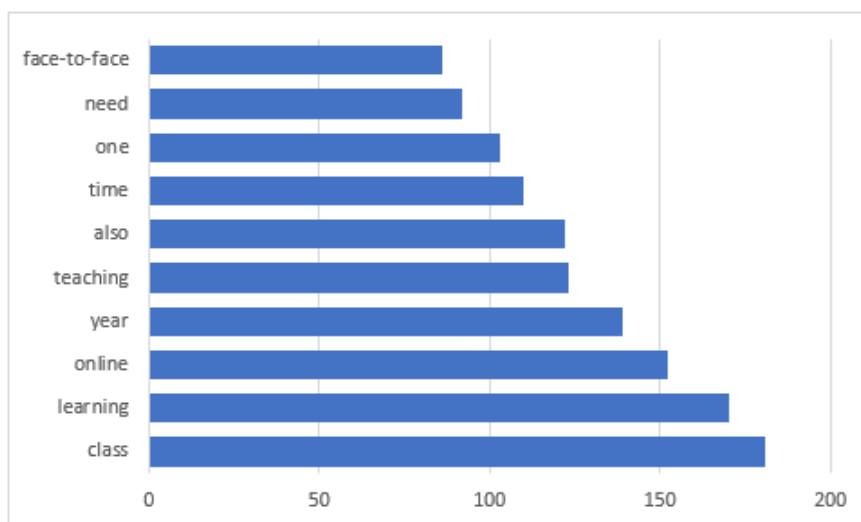

Figure 2: Top ten most frequently appeared words in the corpus

4.2. Overall Emotion Sentiments

Figure 3 illustrates the emotional affect scores detected using the NRCLex library. Positive emotion (n = 2,111) scored the highest among the ten emotions reported by NRCLex. This was followed by trust (n = 1,265), surprise (n = 322), anticipation (n = 968), negative (n = 664), sadness (n = 364), anger (n = 215), fear (n = 533), joy (n = 581), and disgust (n = 88). These results indicated that, despite the threat and potential setbacks due to COVID-19 pandemic, preservice teachers are generally leaning positive, optimistic, and looking forward towards their student teaching practicum. As stated by Rappler (2022) based on their recent poll. Students are eager to return to face-to-face classes despite multiple challenges ahead. Not to mention that students viewed this learning modality particularly when COVID-19 was not an issue (Mali & Lim, 2021). An earlier study further showed that preservice teachers under normal circumstances prefer teaching in traditional face-to-face classroom rather than in virtual setting (Sepulveda-Escobar & Morrison, 2020).
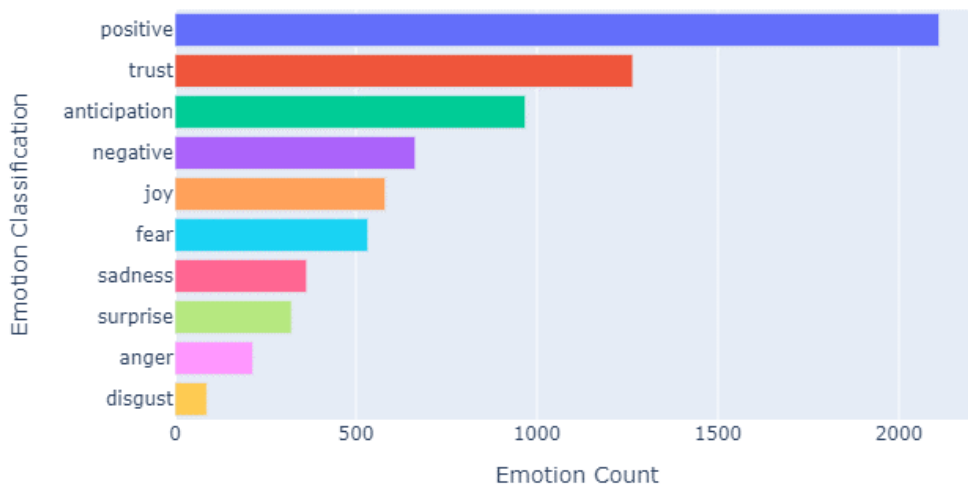
Figure 3: Emotional affect scores of the corpus using NRCLex

4.3 Participants' Apprehension

When subjected to interview to ask about their apprehension relative to their student teaching amid the pandemic, the following themes were formed:

4.3.1 Lack of Actual Exposures

Student teaching program which is a combination of in-campus and off-campus is expected to provide actual teaching practice to preservice teachers through observation and handling of classes. However, due to the pandemic all practicum activities of students were also handled virtually. Because of this, preservice teachers were deprived of the chance to handle classes which may help them develop a "true feel" of the profession. Their lack of exposures would thus, mean lack of chance to see teaching in real scenario. Some of the responses of the participants are:

"Am afraid that we will not be able to teach in actual." – P2

"Obviously, our student teaching is different from the usual. We will not be able to teach in reality and meet students in actual." – P 4

4.3.2 Failure to Develop Rapport

To develop a harmonious relationship with people which is rapport can take one a long one. Rapport makes work easier and faster no matter how challenging it can be. The assistance of others belonging in the same group allows every encounter to be meaningful and productive. Due to the pandemic, the participants were not able to enjoy their student teaching with their classmates whom they did not also see face to face for almost two years which aggravated the situation. After all teaching is a profession which is heavy on relationship; relationship between teachers and students, teachers and teachers, students and students. Their testimonies include:

"I look forward to meeting and establishing friendship with my classmates finally but, obviously this will not happen because everything is virtual." – P7

"I am a relationally intelligent person but if we will not be given the chance to establish relationship with our cooperating teachers, classmates, and students, this will greatly affect our output or performance." – P5

4.4 Participants' Expectation

Student teaching is a new journey to every education student. It is one of those exciting parts of their schooling which is looked forward to with excitement and great expectation. However, the pandemic inversely affected such journey. Despite this, the participants still have expectations formed through the themes below:

4.4.1 New Learning amid Challenging Situation

Challenges bring about not the worst but the best in almost everyone. Those who say yes to challenges are usually the ones coming out better and more developed persons. The participants still consider the situation as an opportunity to learn new things. The pandemic caught everyone unaware. No one was prepared. No one saw it coming. Nevertheless, the pandemic still teaches the world how to be adaptable, flexible, resourceful, more understanding, and compassionate towards others. The responses of the participants include:

"At first I was afraid but then I realized that the pandemic could still be a blessing in disguise. I will definitely learn things that may improve me as a person and a future teacher." - P1

"I am still expecting that I will learn new things. I don't know how and when but for sure there will be and it will happen." - P3

4.4.2 More Developed and Capable Self to Address Challenges

A lot of times, people fear challenges. Not because they are not capable to address it but because they are new to them. When asked about their expectations in their student teaching, the participants were unanimous in saying that their student teaching though amid pandemic could still make them a better and more developed individual to face other challenges. To support this theme are the testimonies below.

"Challenges are normal. We should not be overwhelmed by them. Instead, let us focus on what benefits we can get out of it. Am expecting that this pandemic could make me more capable to carry on." - P6

"The truth is I am expecting to be more developed in everything because of our practice teaching in the midst of the pandemic." – P8

5. CONCLUSION AND RECOMMENDATIONS

This study was able to show the top ten frequently appearing words and using sentiment analysis, the participants' emotion expressed in their essays showed that they are generally positive and forward looking despite setbacks posed by COVID-19 pandemic. In addition, the participants' apprehensions in their practice teaching amid adversity-triggered situation are lack of exposures and failure to develop rapport and despite the situation when they had their student teaching, the participants' expectations include new learning amid challenging situation and more developed and capable self to address challenges.

Based on the findings, the participants are eager to return to traditional face-to-face classes for their practicum despite the threat posed by the on-going pandemic. They are fully aware of what student teaching requires of them and can do for them which are highly technical and social in nature. Finally, optimism and resiliency of participants were surfaced when asked about their expectations in their student teaching amid the pandemic.

It is recommended to apply new and other existing text mining analytical techniques to further analyze the text datasets in this study. A large dataset is also recommended for future analysis. Also, in the midst of a very challenging situations, schools may come up with contingency plan to not disrupt any important part of students' education like student teaching. Meanwhile, teachers may sustain giving motivation to their students especially I the face of an adversity-triggered situation like a pandemic to somehow meet instead of sacrificing latter's expectations. Further, future researchers may make a follow-up study relative to the teaching experiences and performance of those who had their student teaching program during the pandemic.

6. PRACTICAL IMPLICATIONS

One of the practical implications of this study is that it provided a glimpse on the areas where virtual teaching can be improved. By conducting both sentiment analysis and qualitative data, educators and policymakers may gain valuable insights into the apprehensions and expectations of students towards virtual teaching. For example, educators and those in-charge in virtual teaching may develop and devise strategies to support the students-teachers not only through technological support (e.g., ICT hardware/software access, help desks, digital technologies etc.) but also psychological matters (e.g., counselling, mental health services, stress management training etc.) that promotes positive mental well-being and mitigate the negative impact of virtual teaching in an adversity-triggered situations. Furthermore, future educators, may use the findings in this study to make informed decisions about the appropriate teaching methods relative to the context of virtual teaching and learning. In addition, this study highlights the role of educational institutions and its educators in providing timely support to their students during adversity-triggered situations like the COVID-19 pandemic.

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