# Introduction

## Rationale

Technological advancement has led to the emergence of big data (Gould & Çetinkaya-Rundel, 2014) making data inevitable in our daily life. In addition, powerful computers are now easily available (Finzer, 2013). These developments gave way to the emergence of data science as a field. As a result, the practice of statistics dramatically changed (Wood, Mocko, Everson, Horton, & Velleman, 2018). To cope up with these changes, in 2005, Franklin et al. (2007) put forth some recommendations as framework for statistics education both in the k to 12 and college level. In 2016, the GAISE College Report ASA Revision Committee (2016) revisited the effectiveness of the framework and still found it effective.

One of the recommendations in the Guidelines for Assessment and Instruction in Statistics Education (GAISE) College Report 2016 is the use of technology to explore concepts and analyze data (GAISE College Report ASA Revision Committee, 2016). Studies show that the use of technology can really improve statistics education (Chance, Ben-Zvi, Garfield, & Medina, 2007; Chance & Rossman, 2006; Çetinkaya-Rundel & Rundel, 2017; Doi, Potter, Wong, Alcaraz, & Chi, 2016; Harraway, 2012; Stander & Dalla Valle, 2017). R (R Core Team, 2018)

New Zealand who adopted the framework, has benefited .

A recommendation brought out by the GAISE College Report ASA Revision Committee (2016) is the use of technology to explore concepts and analyze data.

The impact of technology in teaching statistics

Reproducible

The gap between statistical practice and statistics education.

Zeiffler, Garfield, & Fry (2018) pointed out that New Zealand adopted the GAISE report and has now benefited.

R and RStudio

Efforts in the Philippines

## Statement of the Problem

## Statement of the Hypothesis

## Significance of the Study

## Research Framework

## Scope

## Definition of Terms

# Review of Related Literature and Studies

# Methodology

## Research Design

## Research Environment

## Respondents

## Research Instruments

## Data Gathering Procedure

## Data Analysis

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