

# Integrating Numerical and Cultural Literacies in Reading Classroom: Students' Perspectives

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## Abstract

Most students choose English Department because they want to avoid numbers. This phenomenon also happens in English Department, Petra Christian University (PCU). The students do not want to deal with numbers. However, when working later on, they have to deal with numbers. The numbers can be in the forms of chart or table. They need to be numerically literate. At the same time, when learning a language, students have to learn cultures. One of the classes where numbers and cultures can be integrated in the learning process is Reading class. In English Department, PCU, all students must take Reading 4 in which they learn to analyze academic articles. In this class, students discuss various topics. Some of the articles use charts and tables to present the data, and some others discuss cultural issues. In this qualitative study, the data were taken from twenty students who have taken Reading 4. This paper will discuss the students' perspectives on numerical and cultural literacies and the effectiveness of numerical and cultural literacies in the materials.

Keywords: cultural literacy, numerical literacy, reading classroom

## Introduction

One of the reasons why most high school students choose English Department is because they want to avoid numbers. This phenomenon also happens in English Department, Petra Christian University (PCU). The students do not want to deal with numbers. They do not realize that when working later on, they have to deal with numbers. The numbers can be in the forms of chart or table. Thus, they need to be numerically literate.

When choosing to study at English Department, students have to learn cultures. It is because learning a language cannot be separated from the culture of the language. There were several studies discussing the importance of cultural literacy (Pishghadam, 2009 & Naqeeb, 2012). In PCU to be specific, students have to learn Indonesian, Asian and English cultures, as well as the cultures of people around the world since PCU also welcomes international students from many countries.

In English Department, students take both skill courses and content courses. There are few courses that can integrate both numbers and cultures. One of the classes where numbers and cultures can be integrated in the learning process is Reading class. Reading classes must be taken for four semesters. The integration of numbers and cultures can be seen in the materials of Reading 4 in which all students must take and learn to analyze academic articles from scientific journals.

In this class, students discuss various topics in the fields of culture, language and literature. Some of the articles use charts and tables to present the data, and some others discuss cultural

issues. The aims of this study are to find out the students' perspectives on numerical and cultural literacies and the effectiveness of numerical and cultural literacies in the materials.

There are several reasons why numeracy is important. The first reason is "society depends largely on quantitative measures to present patterns and trends in current issues" (Steen, 1999 in Agnello, 2018). Next, "day-to-day personal issues present people with data and the need to interpret it to make the best decision" (Agnello, 2018).

## Method

In this qualitative study, the data were taken from seventeen students who have taken Reading 4. They filled in 8 questions related to numerical literacy and 8 questions related to cultural literacy. The data were taken in one week using Google Forms. After collecting the data, the writer classified the data into a table.

## Findings and Discussion

### Numerical Literacy

From the findings, it was found out that 82.4% of the students disliked numbers and math. They read the material that included a chart for the first time on the fifth meeting when discussing the Speech Acts of the Brontes's novels.

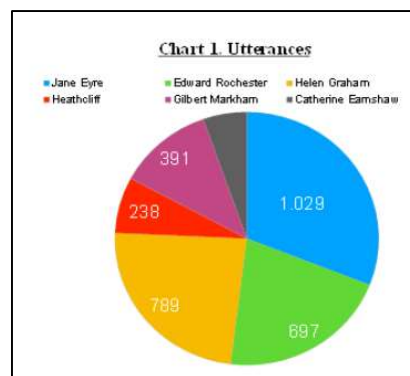


Figure 1. Utterances of Main Characters

Even though most of them disliked numbers, 64.7% thought that the chart was easy to understand. It means that they could relate the numbers with the text they were reading. Meanwhile, 17.6% of the students felt confused when looking at the chart. It might happen because they were not able to relate the chart and the text.

The second encounter with numbers happened in the thirteenth meeting. It was in the form of a table discussing translations.

**Table 1.** Total results of the acceptable translation of reduplications (in percentage)

Phrases	Lecturer Students Employees		
	(n = 20)	(n = 50)	(n = 30)
<i>semata-mata hanya</i>	100	46	97
<i>ide-idenya</i>	100	86	100
<i>(tidak bisa melakukan) apa-apa</i>	95	100	100
<i>secara diam diam</i>	95	100	93
<i>jauh jauh hari</i>	95	88	93
<i>mudah-mudahan</i>	95	98	93
<i>nilai-nilai</i>	90	42	80
<i>masing-masing</i>	90	98	97
<i>malah marah marah</i>	85	64	57
<i>seakan akan terkenal</i>	85	52	67
<i>sehari-hari</i>	85	100	93
<i>berulang ulang</i>	85	94	90
<i>tahun-tahun sebelumnya</i>	75	86	90
<i>diserang habis-habisan</i>	75	70	77
<i>berkali-kali</i>	70	92	90
<i>mengacung-acungkan pistol</i>	70	90	77
<i>nggak mau main-main</i>	60	96	30
<i>tindakan-tindakan</i>	55	90	77
<i>(bola mata) berkaca-kaca</i>	35	46	63
<i>mbok-mbok (jamu)</i>	25	46	17
<i>benar-benar</i>	20	56	83
<i>bekas-bekas jahitan</i>	15	0	13
<i>sama-sama (sibuk)</i>	15	74	33
In Average	70	75	74

Figure 2. Acceptable Translation of Reduplications

The article discussed the acceptable translation of reduplications from Indonesian to English. Interestingly, the number of students felt the table was easy to understand was the same as the previous data (64.7%). However, more students felt confused reading the table compared to reading the chart (29.4%). Even though more students were confused when seeing the table, it turned out more students were able to analyze the chart and table (76.5%).

### Cultural Literacy

In terms of cultural literacy, there were two texts discussed. The first text was about identity construction and the second one was about Dash Akol in the short story and in the movie. From these two texts, it was easier for the students to identify the cultural issues discussed in the texts. Almost all of them (95%) could explain well the cultural issues in both texts. It means that the students could relate well the cultural issues in the texts and their daily life; thus, they could understand the texts better.

### Effectiveness of Numerical and Cultural Literacies

After having numerical literacy in Reading 4, it was interesting to find out that most students thought that it was important to know how to read tables/charts (88.2%). There were two reasons why they thought it was important:

1. It is for future careers in business.
2. It is a basic skill for doing research.

Another interesting finding is there was a shift of perspective on how they saw math or numbers. After taking Reading 4, 29.4% thought that numbers were easy.

In terms of cultural literacy, all of the students agreed that it was important to learn other cultures because they were going to deal with many people from different cultures and they could be more open-minded. Moreover, all of them agreed that it was important to discuss cultural issues in the classroom even though there were 17.6% who did not like to discuss cultural issues in the classroom.

## Conclusion

In conclusion, students were aware of the importance of learning numbers and cultural issues for their future. Also, integrating numbers and cultural issues in Reading 4 is effective since they can discuss deeper with their peers and teachers. Furthermore, there was a change of perspective related to numbers. This is a good change and it can make them see numbers as something fun to learn.

For the limitation, the study did not use the final grade of the respondents as the criterion; thus, for further study, the final grades can be used as the criterion to see the different perspectives.

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