

# A Descriptive Analysis of Teachers' Content Knowledge through the Lens of Students

Jerwin E. Cabanero

Loma de Gato Elementary School  
Marilao, Bulacan

**Abstract:** This paper provides a descriptive analysis of teachers' content knowledge from students' perspectives. The quantitative descriptive design revealed that teachers' content knowledge in Mathematics, Social Studies, Sciences, and Literacy is very satisfactory. According to students' evaluations of teachers' content knowledge, it can be concluded that teachers have substantial literacy teaching expertise. It is recommended that teachers strengthen their content knowledge through continuous professional development, such as officially recognized training, seminars, workshops, and capacity-building programs.

**Keywords**—content knowledge; learners' perspective; learners' lens;

## 1. INTRODUCTION

Content knowledge is essential for quality teaching. Research has demonstrated that a teacher's subject content knowledge enhances students' learning. A teacher's content knowledge is essential to the student's learning process [1]. Content knowledge is the body of knowledge and information that teachers teach, and students are expected to learn in each subject, such as English, math, science, or social studies. Content knowledge refers to academic courses' facts, concepts, theories, and principles.

In today's high standards, teachers must deeply understand their teaching content to address misconceptions and relate ideas together. Teachers must identify how ideas can be connected across everyday life to make these ideas accessible to others. Content knowledge is the teaching process and how students can best learn the subject's concepts, theories, and principles.

Domain 1 of the Philippine Professional Standards for Teachers highlighted teachers' content knowledge and pedagogy. These include seven strands: Content knowledge and its application within and across curriculum areas, Research-based knowledge and principles of teaching and learning, Positive use of ICT, Strategies for promoting literacy and numeracy, Strategies for developing critical and creative thinking, as well as other higher-order thinking skills, Mother Tongue, Filipino and English in teaching and learning, and Classroom communication strategies [2].

Numerous research has been conducted to assess and evaluate teachers' content knowledge. However, there is a scarcity of understanding teachers' content knowledge from the context of learners. This paper aims to describe teachers' content knowledge using the lens and perspectives of learners.

## 2. METHODS

### 2.1 Research Design

The quantitative descriptive design approach was used to describe teachers' content knowledge through the learners' lens.

### 2.2 Population and Sample

Grade five learners were used as the population. Wherein sixty-nine were accepted and recognized through voluntary sampling design.

### 2.3 Instrument

The instrument was an adapted TPACK [3] survey by Schmidt et al. (2009). Content Knowledge domain and statements were extracted from the scale and modified to fit learners' context. The instrument underwent inter-rater reliability testing and had been piloted to selected learners. Validity evidence was provided by Cronbach's alpha of .906.

### 2.4 Data Collection

An online survey was utilized to collect data. Respondents were unknown. It only used codes as identifiers. Data collection was done after the academic year.

### 2.5 Statistical Treatment

The problem is "How may teachers' content knowledge be described through the lens of students in Mathematics, Social Studies, Science, and Literacy?". The mean was used to answer and determine teachers' content knowledge as perceived by the learners.

## 3. RESULTS

**Table 1:** Content Knowledge in Mathematics

Statement	Mean	Interpretation
My teachers have sufficient knowledge about mathematics.	3.59	Very Satisfactory
My teachers can use a mathematical way of thinking.	3.93	Very Satisfactory

My teachers have various ways and strategies of developing my understanding of mathematics.	3.99	Very Satisfactory	My teachers can use a literary way of thinking.	4.06	Very Satisfactory
		Very Satisfactory	My teachers have sufficient knowledge about literacy.	4.25	Very Satisfactory
Overall Mean	3.84	Satisfactory	Overall Mean	4.18	Satisfactory

Table 1 shows learners' perceptions of mathematics teachers' content knowledge. Teachers' mathematical content knowledge is very satisfactory, as evidenced by the 3.84 mean. It can be gleaned that teachers have various ways and strategies for developing mathematical understanding (3.99).

**Table 2:** Content Knowledge in Social Studies

Statement	Mean	Interpretation
My teachers have various ways and strategies of developing my understanding of social studies.	3.93	Very Satisfactory
My teachers have sufficient knowledge about social studies.	3.86	Very Satisfactory
My teachers can use a historical way of thinking.	3.93	Very Satisfactory
Overall Mean	3.90	Satisfactory

Table 2 presents the teachers' content knowledge in Social Studies through the lens of the learners. The historical content knowledge of teachers is very satisfactory, as evidenced by the 3.90 mean. Teachers underscored the historical way of thinking and had various ways and strategies to aid students' historical understanding (3.93).

**Table 3:** Content Knowledge in Science

Statement	Mean	Interpretation
My teachers have various ways and strategies of developing my understanding of science.	3.94	Very Satisfactory
My teachers can use a scientific way of thinking.	3.93	Very Satisfactory
My teachers have sufficient knowledge about science.	3.86	Very Satisfactory
Overall Mean	3.91	Satisfactory

Table 3 presents the learners' perspective on the teachers' scientific content knowledge. Teachers' science-based knowledge is very satisfactory, as evidenced by the 3.91 mean. Likewise, teachers have various strategies to develop learners' understanding of science (3.94).

**Table 4:** Content Knowledge in Literacy

Statement	Mean	Interpretation
My teachers have various ways and strategies of developing my understanding of literacy.	4.25	Very Satisfactory

Table 4 reveals the learners' perception of teachers' content knowledge in literacy. Teachers' literacy knowledge is very satisfactory, as evidenced by the 4.18 mean. It can be noted that among the three indicators, teachers have various ways and strategies of developing the understanding of literacy and have sufficient knowledge about literacy (4.25).

#### 4. DISCUSSIONS

##### 4.1 Summary

The learners described the teachers' content knowledge as very satisfactory in Mathematics (3.84), Social Studies (3.90), Science (3.91), and Literacy (4.18).

##### 4.2 Conclusion

It can be concluded that teachers have significant knowledge in literacy teaching per learners' assessment of teachers' content knowledge.

##### 4.3 Recommendation

It is recommended that teachers must strengthen their content knowledge through continuous professional development, such as but not limited to officially recognized training, seminar, workshops, and capacity-building programs.

#### 5. REFERENCES

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