The Structured Query Language (SQL) has been introduced in 1970, and quickly became the standard query language for Relational Databases. It is ubiquitous in both practice and education. Various researchers have published works on the errors that novices make while writing queries. However, until recently, not much attention was paid to the underlying reasons why novices made so many mistakes. In a previous paper, we explored these underlying reasons, also called misconceptions, from the student perspective. We gave students query formulation problems and asked them to solve those while explaining to us what they were thinking. We followed this up by exploring the perspectives of SQL experts - researchers, practitioners and educators. Their expertise on errors and solutions gave us new insights into other misconceptions that may lead to the same error. The result are 11 lists of misconceptions that novices might hold. Below, we present the top-ranked expert hypothesis and juxtapose it with the student hypothesis.

**Research Question 1:** How do experts interpret the underlying causes of student errors in SQL?

The varying backgrounds of the experts meant that they approached the problem from different angles. We found up to 8 differences in focus, overall the students misconception hypotheses were ranked highly by the experts too. For example, for error 1, the wordings are different but the core of the hypotheses for this error is the same. The only error where the students and experts were not in agreement was error 6.

**Research Question 2:** What are the differences in the perspectives of students and experts on errors in SQL?

Although sometimes there was a difference in focus, overall the students misconception hypotheses were ranked highly by the experts too. For example, for error 2, the wordings are different but the core of the hypotheses for this error is the same. The only error where the students and experts were not in agreement was error 6.

**Conclusion**

The hypotheses types:
- Previous course knowledge
- Generalisations
- Incorrect or incomplete mental model
- Language related

**Errors**
- 1. Using = instead of \( \approx \) or \( \neq \)
- 2. AVG in WHERE instead of HAVING
- 3. JOIN in all tables that you need the primary keys of
- 4. Missing second table for self-join
- 5. Lack of understanding when to apply GROUP BY
- 6. Missing parts of keywords
- 7. Extra condition when not required
- 8. Ambiguous column name because of missing alias
- 9. Using comma instead of AND in WHERE clause
- 10. Thinking DISTINCT will take the first item of a list
- 11. Lack of understanding subqueries

**Delphi protocol**

Students forget the single-valued.

6. Missing parts of keywords

**Hypotheses types**
- Previous course knowledge
- Generalisations
- Incorrect or incomplete mental model
- Language related

**Scores**
- 1. Using = instead of \( \approx \) or \( \neq \)
- 2. AVG in WHERE instead of HAVING
- 3. JOIN in all tables that you need the primary keys of
- 4. Missing second table for self-join
- 5. Lack of understanding when to apply GROUP BY
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