# Article information:

Reflection-for-action and the choice or design of examples in the teaching of mathematics | SpringerLink
<https://link.springer.com/article/10.1007/s13394-017-0211-9>

# Article summary:

1. Reflection-for-action is an important concept in teaching mathematics, requiring teachers to anticipate future lessons and reflect on past experiences to improve their practice.

2. The choice or design of examples plays a crucial role in reflection-for-action, with good examples being transparent and generalizable.

3. Tasks are also important in teaching mathematics, with well-designed tasks promoting adaptive reasoning and strategic competence in students.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article "Reflection-for-action and the choice or design of examples in the teaching of mathematics" discusses the importance of teachers' reflection-for-action in improving their teaching practices, specifically in relation to their choice or design of examples in arithmetic and algebra. The article provides a comprehensive overview of the literature on examples and tasks in mathematics education, highlighting their different definitions, attributes, and purposes.

One potential bias in the article is its focus on teachers' reflection-for-action as a means of improving their teaching practices. While this is certainly an important aspect of teacher professional development, it may not be sufficient on its own to address broader systemic issues in mathematics education, such as inequitable access to high-quality instruction or inadequate teacher preparation programs. Additionally, the article does not explore potential barriers to teachers' engagement in reflection-for-action, such as time constraints or lack of support from administrators.

Another potential bias is the article's emphasis on the importance of examples over tasks in mathematics instruction. While examples are certainly a valuable tool for helping students develop generalizations and understand mathematical concepts, tasks can also play an important role in promoting adaptive reasoning and strategic competence (Kilpatrick et al., 2001). The article briefly acknowledges this point but does not fully explore the implications for teachers' choice or design of tasks.

The article also makes some unsupported claims, such as stating that "little research has been done on teachers' choice of examples." While it may be true that there is relatively less research on this topic compared to other aspects of mathematics education, there have been numerous studies examining teachers' use of examples and their impact on student learning (e.g., Bills et al., 2006; Leinhardt, 2001).

Overall, while the article provides a useful overview of the literature on examples and tasks in mathematics education and highlights the importance of teachers' reflection-for-action in improving their teaching practices, it could benefit from a more nuanced and balanced approach that acknowledges potential biases and limitations in the research.

# Topics for further research:

* Barriers to teacher engagement in reflection-for-action in mathematics education
* Systemic issues in mathematics education and teacher professional development
* The role of tasks in promoting adaptive reasoning and strategic competence in mathematics education
* Research on teachers' use of examples and their impact on student learning in mathematics education
* Equitable access to high-quality mathematics instruction in schools
* Teacher preparation programs and their impact on mathematics instruction

# Report location:

<https://www.fullpicture.app/item/aa9dce8d121b3a8629ce15de91e5c24b>