# Article information:

Research trends in multimodal learning analytics: A systematic mapping study - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S2666920X23000152>

# Article summary:

1. Multimodal Learning Analytics (MMLA) is a field that collects and integrates data from various sources, enabling a better understanding of the different dimensions of learning and learning processes beyond what occurs on the computer screen.

2. A systematic mapping study was conducted to identify MMLA research types, methodologies, and trending research themes. Most mapped papers presented different solutions and used evaluation-based research methods to demonstrate an increasing interest in MMLA technologies.

3. Four themes were identified as contributing to the growth of MMLA: learning context, learning process, systems and modality, and technologies. These themes reflect the state of the art in MMLA and serve as a guiding force for its development in the education research community.

# 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:

该文章是一篇系统性的文献综述，旨在评估多模式学习分析领域的研究趋势和技术发展。文章提出了多模式学习分析的概念，并探讨了其在教育领域中的应用和发展。然而，该文章存在以下几个问题：

1. 偏见来源：文章没有明确说明作者的立场或偏见来源，可能会影响读者对其内容的理解和接受程度。

2. 片面报道：文章主要关注多模式学习分析领域的研究趋势和技术发展，但未涉及该领域可能存在的风险和挑战。

3. 缺失考虑点：文章没有考虑到多模式学习分析对隐私保护和数据安全等方面可能产生的影响。

4. 主张缺失证据：文章提出了一些主张，如“大数据分析可以用于教育机构的战略规划”等，但未提供充足的证据来支持这些主张。

5. 未探索反驳：文章没有探讨可能存在的反驳观点或争议点，导致其内容显得不够全面客观。

6. 宣传内容：文章中存在一些宣传性质的内容，如“多模式学习分析可以提高学习效率和反馈体验”，但未提供充足的证据来支持这些主张。

7. 偏袒：文章可能存在对多模式学习分析领域的偏袒，未能客观地呈现该领域的优缺点和挑战。

综上所述，该文章在介绍多模式学习分析领域的研究趋势和技术发展方面具有一定价值，但存在一些问题需要进一步完善和改进。

# Topics for further research:

* Author's bias or perspective
* One-sided reporting
* Lack of consideration for privacy and data security
* Lack of evidence to support claims
* Failure to explore counterarguments or controversies
* Promotion of certain ideas or technologies

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