COURSE: BIBLIOMETRICS AND SCIENTOMETRICS

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GROUP 1

Question 1: **what are the primary advantages of using the h5 index as a metric for evaluating the impact of scholarly journals.**

* Balanced Assessment: By considering both the number of highly-cited articles and the citations received, it provides a more balanced view of a journal's performance compared to traditional metrics that focus solely on total citation counts or impact factor.
* Field Neutrality: Unlike some metrics that may favor certain disciplines, the h5-index can be more universally applied across different fields. It focuses on citation counts within a journal’s own scope, which can help account for variations in citation practices across disciplines.
* Encouragement of Consistency: A higher h5-index requires consistent citation across a journal’s publications over time. This incentivizes journals to maintain a steady output of influential research, rather than relying on a few breakthrough papers.
* Recent Impact Measurement: The h5-index reflects the citation impact of a journal's publications over the past five years, providing a more current assessment of its relevance and influence in the academic community.
* Resistance to Manipulation: While no metric is entirely immune to manipulation, the h5-index is harder to inflate through self-citations or small clusters of highly-cited papers. It provides a more robust measure of overall journal impact.
* Better Reflection of Recent Trends: Since it evaluates citations from the past five years, the h5-index captures recent shifts in research trends, making it especially valuable for journals in fast-evolving fields or those undergoing a growth phase in their influence.
* Simplicity: The h5-index is easy to calculate and understand. It is based on a straightforward principle: how many articles in a journal have received at least a number of citations in the last five years. This makes it a transparent and accessible metric.
* Reduction of Outliers: The h5 index is less prone to being skewed by a few highly-cited articles, as it focuses on a set number of articles those with at least a number of citations. This helps provide a more stable and reliable measure of a journal’s overall impact.

Question 2: **Are there any limitation or demerits associated with relying solely on the h5-index? and if so, what are they?**

* Disregard for Article Quality: The h5-index does not differentiate between articles that are highly influential or of low quality. A journal can have a high h5-index simply because of a few popular papers, even if the overall quality of the journal's content is inconsistent.
* Field-Specific Bias: Different academic fields have different citation patterns. Journals in disciplines with slower citation growth for example humanities may have lower h5-indices compared to journals in faster-paced fields for example biomedical sciences, which can create an unfair comparison across disciplines.
* No Consideration of Journal Reputation or Peer Review: The h5-index does not take into account factors like the reputation of a journal, the rigor of its peer review process, or the diversity of its contributors. These factors can significantly affect the quality of research published but are not captured by the h5-index.
* Potential for Gaming the System: Journals may strategically publish articles with the aim of boosting their h5-index, which could lead to skewed publication practices or a focus on quantity over quality in an effort to increase citations.
* Limited Scope: The h5-index only considers citations from the past five years. This can overlook the long-term impact of a journal's earlier publications, potentially undervaluing journals with a strong historical influence but fewer recent citations.
* Vulnerability to Citation Practices: The metric can be influenced by citation practices, such as self-citation or citation networks within a specific research group. This may artificially inflate a journal's h5-index without reflecting its true impact on the broader academic community.
* **Excludes Non-Citation Factors**: The h5-index doesn’t account for other important metrics such as the reputation of the editorial board, peer review process, or the diversity of published research, which are key indicators of a journal's quality and influence.
* **Risk of Overemphasis on Popularity**: Because the h5-index is based on citations, it can favor journals that publish trendy topics or popular areas of research, potentially undervaluing journals that focus on niche, yet important, topics that attract fewer citations.
* **Potential for Over-Simplification**: Relying solely on the h5-index might lead to an oversimplified view of a journal's impact, overlooking other critical factors like the journal's role in advancing a particular field, its contribution to policy-making, or its educational influence.