

GUIDANCE

By: Iraê César Brandão

Regarding the question: [Md Muhasin Ali](#)

“How can the usefulness of the T5 paraphrasing approach be objectively validated to ensure that synthetic HRI command data preserve intent, thereby supporting robust model training?”

To facilitate better understanding, I provide a synthesis of the levels of difficulty involved in the activity as a whole, organized progressively. The classification combines cognitive demand, technical expertise, and scientific maturity, which is common in graduate-level and research assessments. Please refer to Table 1:

Table 1 — Levels of difficulty of the activity

Level	Concise description	What the student needs to demonstrate
Basic	Conceptual understanding	Understanding what paraphrasing, semantic intent, and objective validation are
Basic–Intermediate	Knowledge of NLP models	Recognizing the role of T5 in text reformulation tasks
Intermediate	Application of metrics	Knowing how to use metrics such as BLEU, ROUGE, and intent classifiers
Intermediate–Advanced	Experimental evaluation	Relating synthetic versus real data to validate intent preservation
Advanced	Methodological integration	Combining quantitative metrics, classification, and explainability
Advanced	Critical thinking	Objectively justifying why the metrics validate the usefulness of the method
Very Advanced / Research	Scientific rigor	Articulating methods, limitations, and appropriate academic references

Fonte: Elaborado pelo autor.

Thus, it is not merely a technical question; it requires methodological evaluation, going beyond “what to use” and demanding justification of why this objectively validates the approach. It was also adapted, as shown below in Table 2, into a grading rubric aligned with the levels of Bloom’s Taxonomy, in simplified form:

Table 2 — Alignment with Bloom’s Taxonomy

Bloom’s level	Level description	Requirement in the question / answer
Remember	Recall concepts and terms	Knowing T5, paraphrasing, semantic intent, HRI
Understand	Explain core ideas	Explaining why paraphrases can preserve intent
Apply	Use methods and tools	Applying metrics (BLEU, ROUGE) and intent classifiers
Analyze	Relate and differentiate	Comparing real versus synthetic data and analyzing results
Evaluate	Judge using criteria	Objectively justifying the validity of synthetic data
Create	Propose solutions/methodologies	Proposing a validation framework with metrics and explainability

Fonte: Elaborada pelo autor:

I will provide a guiding synthesis: the question reaches the highest level (Create), as it requires a methodological proposal; the answer traverses all levels, culminating in critical evaluation and creation; and finally, the use of metrics + explainability + references characterizes Bloom’s levels from Evaluate to Create.

I hope I have helped you in your decision-making.