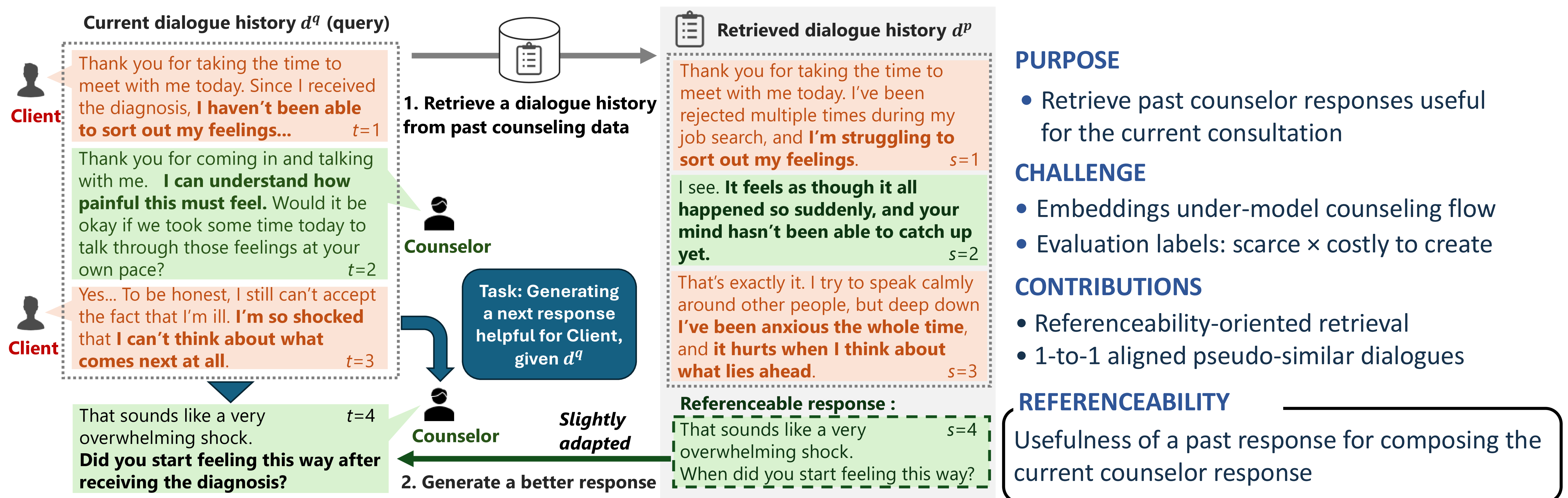


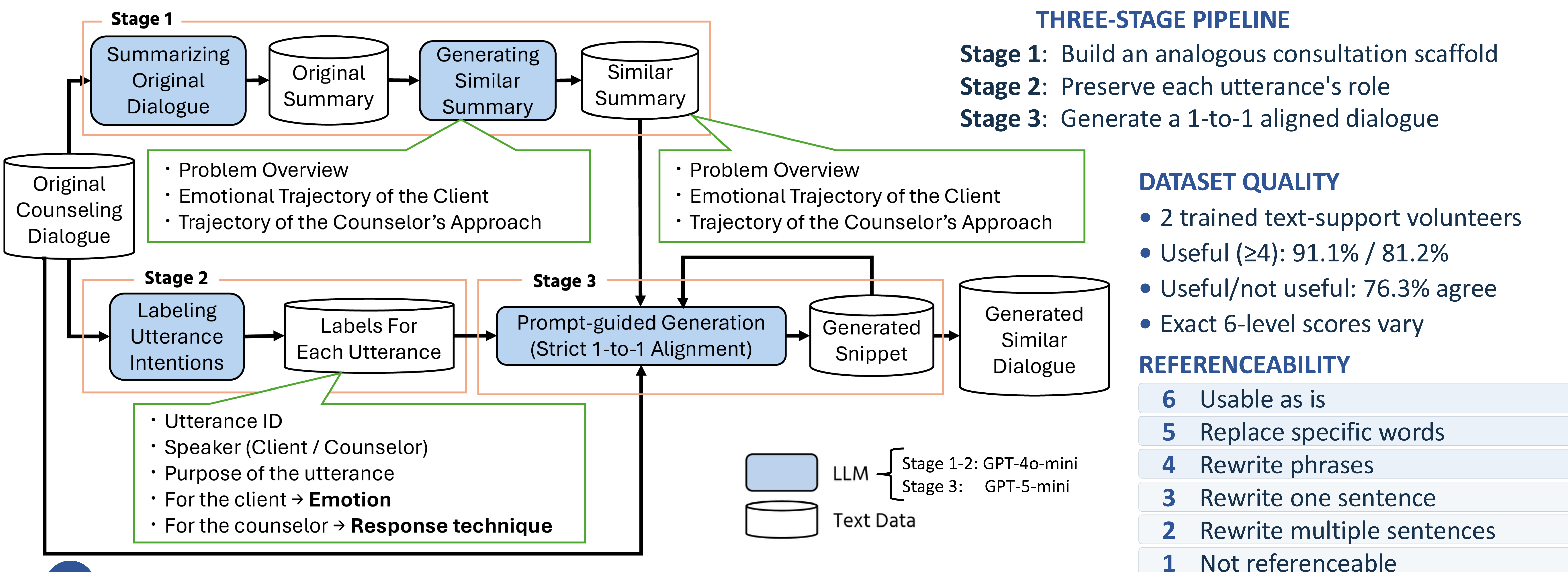
Retrieving Responses Useful as References in Counseling via LLM-Generated Structurally Analogous Dialogues

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1 Introduction



2 Dataset Expansion & Quality



3 Experimental Setup

TRAINING

- KokoroChat^[1] · 1,000 sessions + 1,000 generated dialogues
- Last 5 messages
- Ruri-v3-310m^[2] (Japanese Encoder) + Supervised Contrastive Learning

AUTOMATIC RETRIEVAL EVALUATION

- KokoroChat: 3,469 queries / 195,527 messages
- Proprietary: 1,997 queries / 316,081 messages
- Targets: aligned histories from 100 generated sessions each
- Train on KokoroChat → evaluate on both datasets

HUMAN EVALUATION

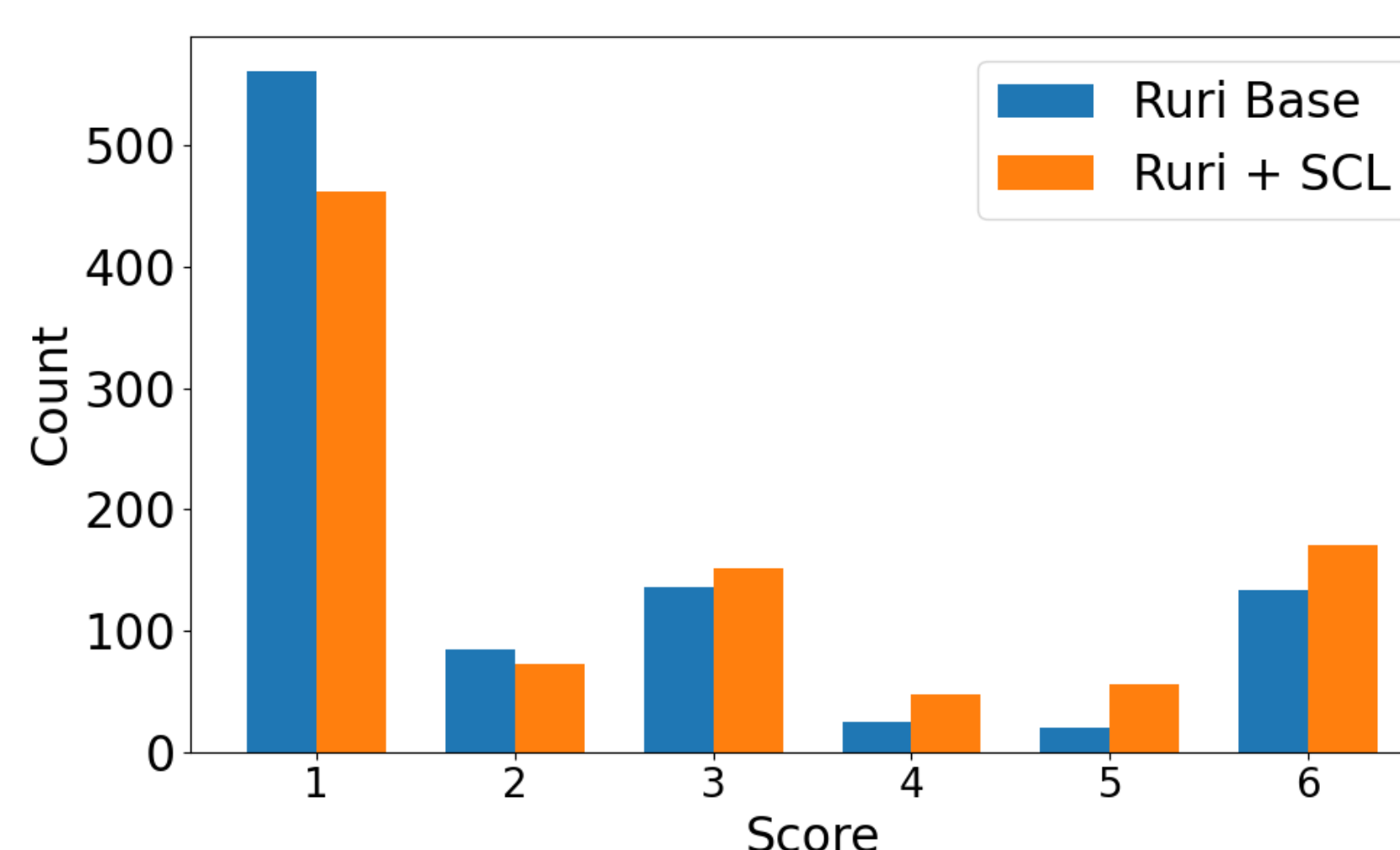
- KokoroChat · 960 queries
- Top-1 · real histories only
- Generated data excluded
- 1 trained text-support volunteer

4 Results

AUTOMATIC RETRIEVAL

Dataset	Model	Hit@1	MRR
KokoroChat	Ruri Base	0.167	0.232
	Ruri + SCL	0.500	0.576
Proprietary	Ruri Base	0.253	0.321
	Ruri + SCL	0.444	0.507

HUMAN EVALUATION



MEAN 2.22 → 2.66

Many score-1 cases remain

5 Future Work

- Identify factors behind high referenceability—and reflect them in models and criteria.
- Use referenceable responses for counselor support and retrieval-augmented generation.

References

- [1]: Qi et al. (ACL 2025). KokoroChat: A Japanese Psychological Counseling Dialogue Dataset Collected via Role-Playing by Trained Counselors.
- [2]: Tsukagoshi and Sasano (arXiv:2409.07737.). Ruri: Japanese General Text Embeddings.