WORLD LAUREATES FORUM
世界顶尖科学家论坛
2026
国际工程智能大会
2026 International Conference on AI for Engineering
World Laureates Foundation
上海世界顶尖科学家发展基金会
工程智能研究院
INSTITUTE OF AI FOR ENGINEERING

KUPAS MASTER: Engineering Traceable Expert Experience for Language Model Agents

KUPAS MASTER Team
Project Team: Changmian Wang, Yuchao Ma, Xuchao Lu, Chen Zhang, Ping Sun, Jiazheng Wang, Shan Wang
Research Team: Qinghua Zheng, Xian-Sheng Hua, Hongzhi Li, Jianqiang Huang, Kaihua Tang, Ziqing Xia, Ziyu Lu, Yihe Sun, Xuanwen Chen
Shanghai Kupas Technology Co., Ltd. and Tongji University

01 ABSTRACT

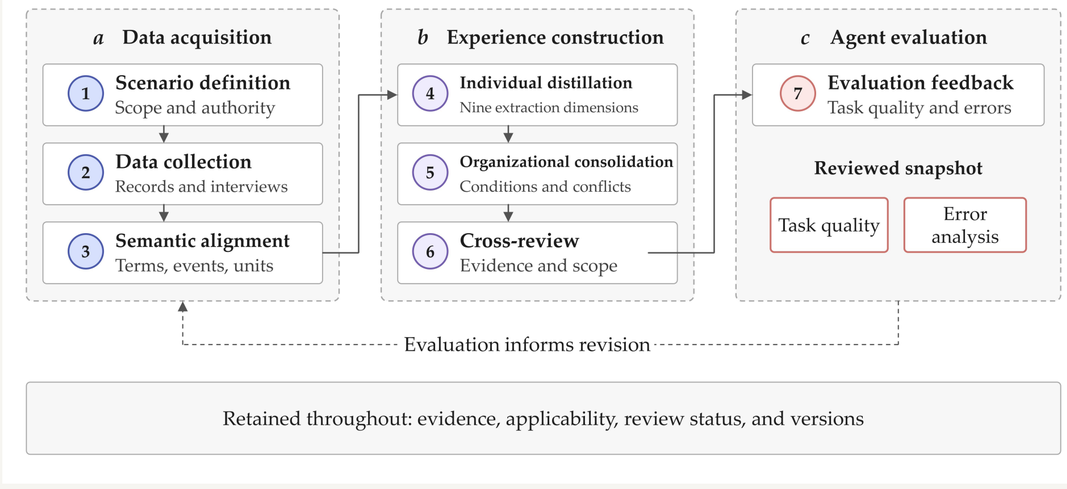
Professional agents need the cues, reasoning and limits behind expert decisions. KUPAS MASTER turns work records and practitioner interviews into traceable experience assets and callable skills.

Research question

Can structured experience and skills improve internal task scores beyond raw-corpus RAG?

02 METHOD

Six case elements preserve the task process. Nine extraction dimensions organize tacit expertise into six libraries of reusable experience assets.



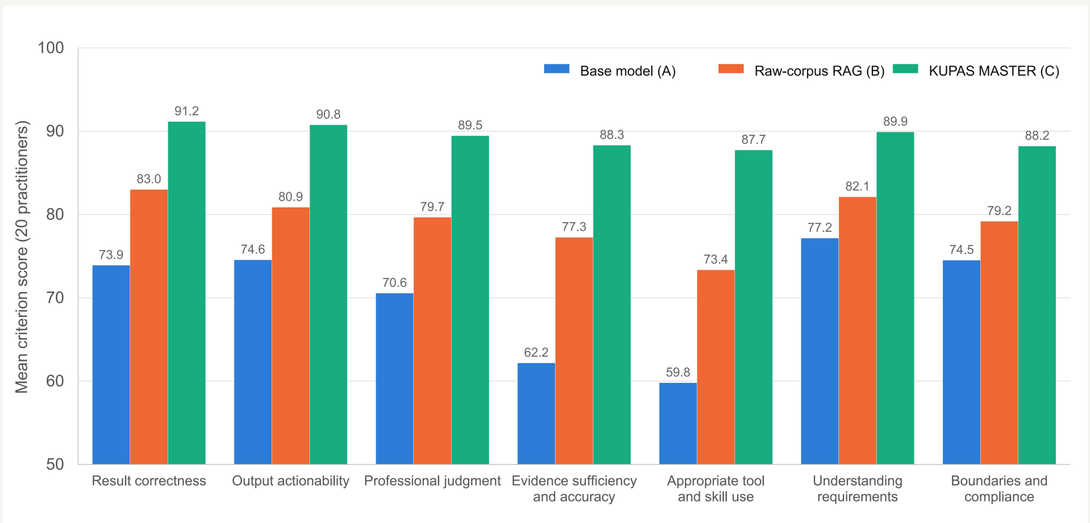
Seven-step pipeline from experience acquisition to agent evaluation.

Callable skills

Experience assets become callable skills with explicit inputs, execution steps, dependencies and stopping conditions.

03 RESULTS

20 practitioners / 177 questions / 531 responses
A: Base model B: Raw-corpus RAG
C: KUPAS MASTER



Mean scores on seven criteria, equally weighted across 20 practitioners.

Overall comparison

Measure	A	B	C
Score / 100	70.62	79.75	**89.59**
Latency (s)	16.2	34.0	**57.1**
Pass ≥60	155/177	175/177	**177/177**

C–B score gain	**+9.83 [9.20, 10.45]***
Latency C/B	**1.68×**
Skills invoked	**46 / 53 logged questions**

*95% descriptive interval for C–B.
Pass = score ≥60, not verified task success.
Non-blind ratings on an outcome-conditioned sample.

04 DISCUSSION

Gains across all seven scoring dimensions provide preliminary evidence for combining structured experience with skills in professional tasks.

05 CONCLUSIONS

KUPAS MASTER provides an implementable path from individual tacit expertise to reusable organizational knowledge assets and agent capabilities.

CONTACT

https://tongjiai4e.github.io/KUPAS-MASTER-Report/
https://arxiv.org/abs/2609.37673
https://lsf.kupasai.com/

REFERENCES / ACKNOWLEDGEMENTS

KUPAS MASTER Team · Technical report, Sept. 2026