

UNDERSTANDING CHILDREN'S GOSSIP FROM DAILY TALK USING AN LLM-ASSISTED FRAMEWORK



Jincheng Wu, Yulong Tang*
College of Education, Zhejiang University of Technology, CHINA

Background

- **Gossip** refers to evaluative information about **absent third parties** and serves important social functions in communication and reputation sharing (Dunbar, 2004 ; Xu et al., 2011) .
- **Young children are capable of gossiping** (Engelmann et al., 2016), but empirical evidence about **how gossip appears in everyday interactions** remains limited.
- Traditional qualitative coding of conversational data is **time-consuming and labor-intensive**, limiting large-scale analysis.
- **Large Language Models (LLMs)** offer a potential tool to assist in identifying and coding conversational transcript (Long et al., 2024) .

Results

Children's Gossip Target and Valence in Everyday Conversation

Valence	Family	Peer/ Friends	School/ Teacher	Social Figure	Food	Others	Sum
Positive	1	8	2	8	5	5	29
Negative	5	30	2	0	1	5	42
Neutral	21	38	23	0	13	31	121
Sum	27	76	27	8	19	41	192

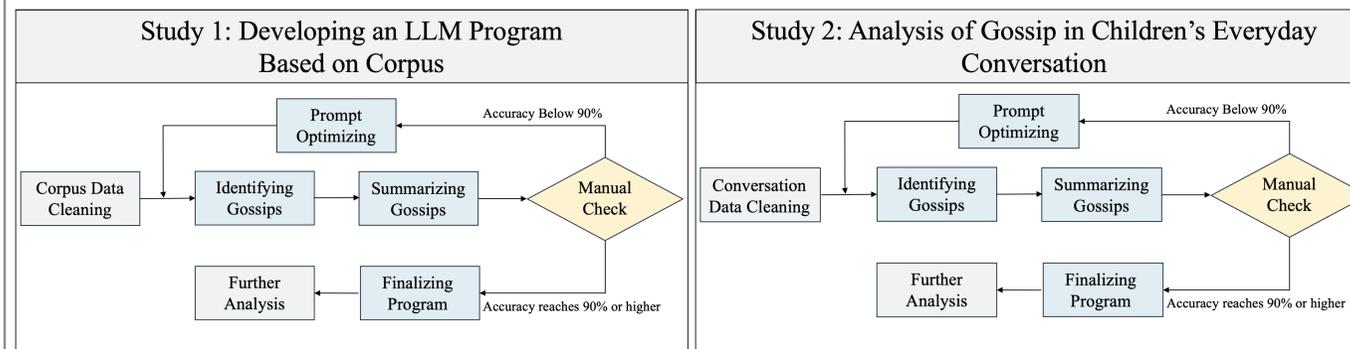
The Development of Children's Gossip Behavior

Age Group	Utterance	Gossips	Frequency of Gossip
5-year-old	1029	122	11.86%
6-year-old	549	73	13.30%

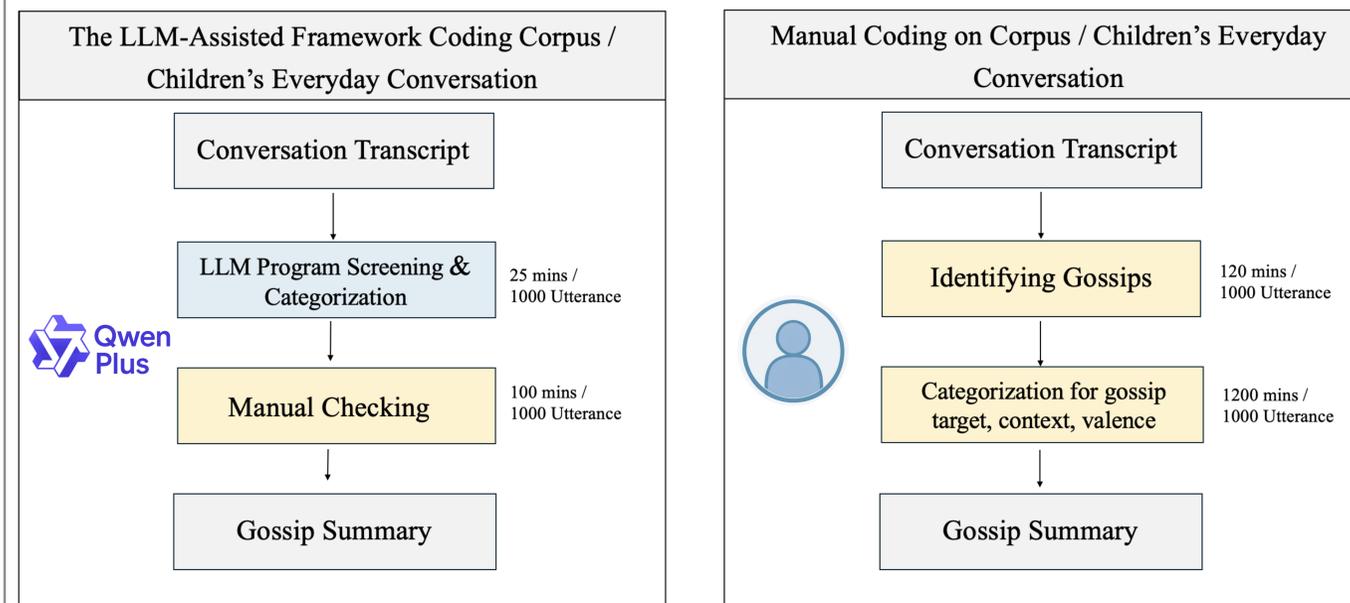
Children's Gossip Frequency in Difference Context

Context	Utterance	Gossip	Frequency of Gossip
Child-Parent	484	82	16.94%
Child-Teacher	215	21	9.77%
Child-Peer	879	92	10.47%

The Procedure of LLM Program Development



The LLM-Assisted Framework V.S. Manual Coding in Children's Gossip Identification and Classification



10.56 times FASTER

How Accurate Can Coders Code Children's Gossip? (Study 1)

Coder	Accuracy	Precision	Recall	F1 score
Human Coder 1	98.11%	93.35%	82.38%	87.52%
Human Coder 2	98.07%	90.92%	76.95%	83.35%
LLM (qwen-plus)	93.78%	70.35%	71.30%	70.82%
LLM-Assisted Framework	96.84%	98.76%	71.14%	82.70%

How Consistent Can Coders Code Children's Gossip? (Cohen's Kappa)

Cohen's Kappa	Study 1	Study 2
Coder 1 & Coder 2	0.76	0.90
LLM Program & Human	0.57	0.35
LLM-Assisted Framework & Human	0.82	0.86

Conclusion & Discussion

Can an LLM-Assisted Framework Help Us Understand Children's Gossip?

- The LLM-assisted framework showed strong accuracy and greatly improved coding efficiency, demonstrating its value for large-scale analysis of conversational data.

The Characteristics of Children's Gossip

- Children's **gossip frequency increased from age 5 to 6**, suggesting **early developmental changes** in social information sharing.
- Gossip occurred **more often in Child-Parent conversations** than in Child-Peer/Child-Teacher conversation, highlighting the role of family contexts in early gossip behavior.
- **Most gossip was neutral**, but negative gossip appeared more often about peers, reflecting emerging peer evaluation in childhood.

Contact us:
yulong@zjut.edu.cn



Poster Copy About the Research

Research Question

1. Can a **Large Language Model (LLM)-assisted framework** reliably identify children's gossip in naturalistic conversations?
2. What are the **frequency, targets, and emotional valence** of young children's gossip in everyday interactions?

Methods

Study 1: Framework Development and Validation

- Based on **Qwen-Plus**, developed an LLM-assisted coding framework for identifying children's gossip.
- Data source: Mandarin Zhou Dinner-talk Corpus from the Child Language Data Exchange System, focusing on children's gossip during family dinner conversations (Li & Zhou, 2015) .
- Participants: 5 to 6-year-olds (N=72)
- Compared LLM-generated coding with human-coded data to evaluate reliability and performance.

Study 2: Analysis of Naturalistic Dialogue Data

- Collected **daily conversational recordings** from children using portable audio-recording devices.
- Participants: **5-year-olds (N = 6)** and **6-year-olds (N = 3)**
- Recorded **children's everyday interactions with parents and peers**.

Analytical Focus

- Analysis of gossip coding quality of LLM-assisted framework: **Accuracy; Precision; Recall; F1 Score**
- Analysis of gossip characteristics: **Context; Frequency; Targets of gossip; Valence**