INNOVATION IN LANGUAGE LEARNING
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Student- Oriented-Learning Strategy for Learning Chinese Numerical Proverbs Based on Natural Language Processing Online Database

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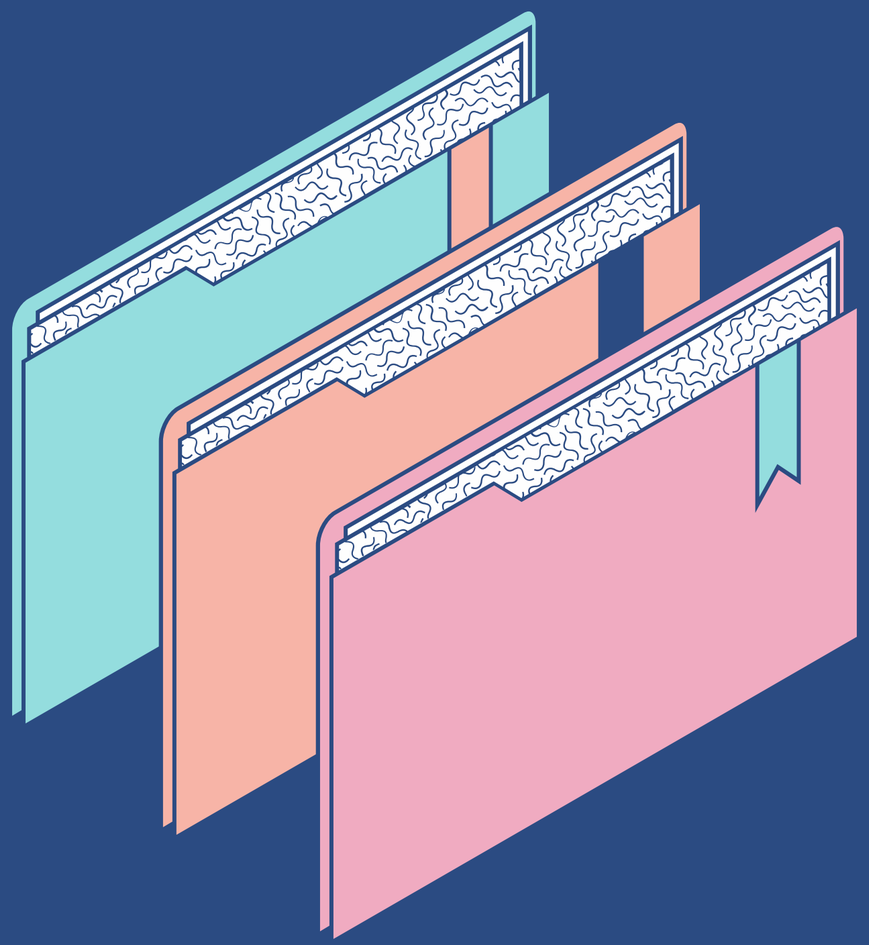

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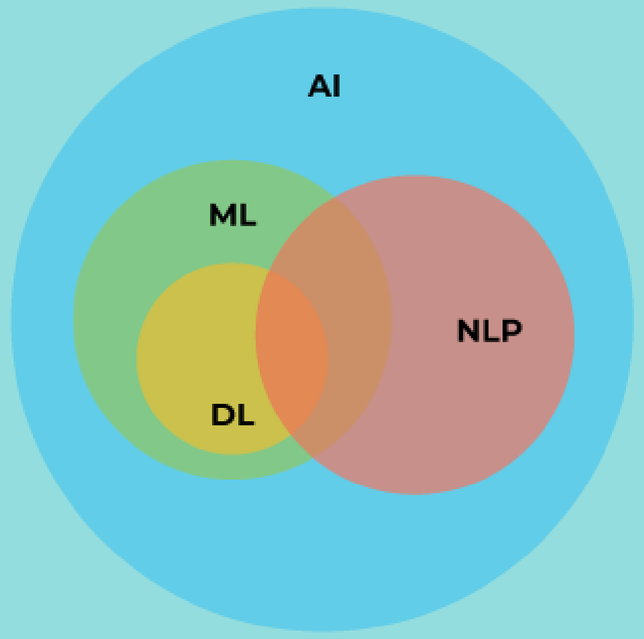
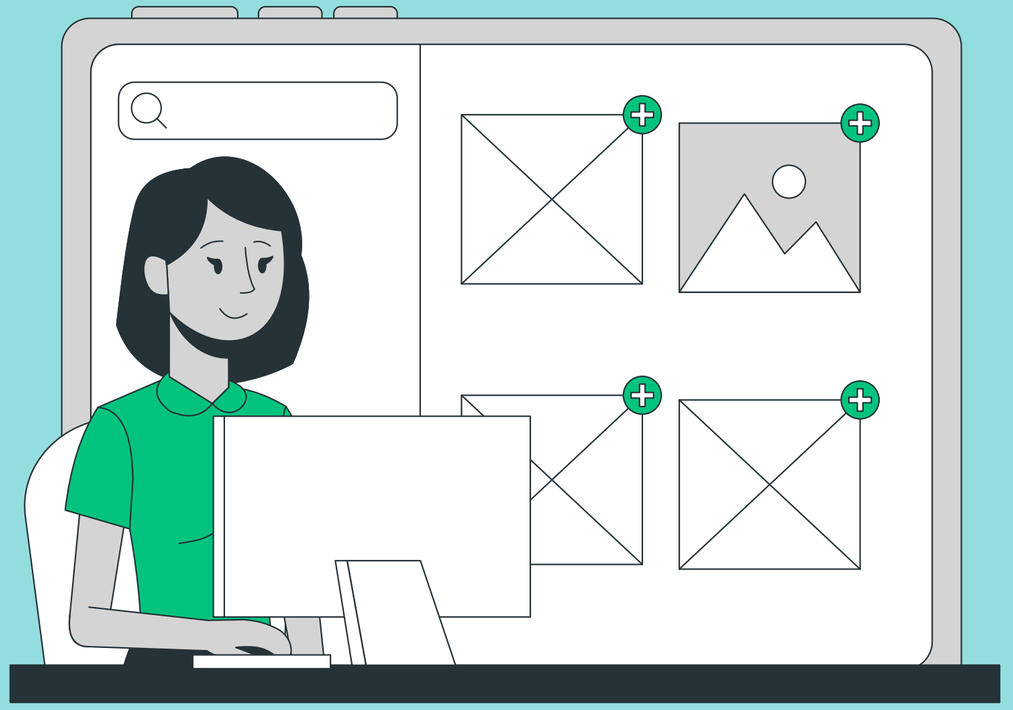
Introduction

Natural Language Processing(NLP)

is a subfield of linguistics, computer science, and artificial intelligence concerned with the interactions between computers and human language, in particular how to program computers to process and analyze large amounts of natural language data. (Chowdhary, 2020)



- Artificial Intelligence
- Machine Learning
- Language Processing
- Deep Learning



Introduction

Chinese numerical proverb

"Chinese proverb" literally translates as "become a saying" or, more idiomatically, "set phrase"(Nall, 2009) .
The number conception has always been used in both language and communication to embody the essential characteristics of Chinese culture. The recognition of numbers in proverbs and the profound connotations reflect Chinese ancestors' thoughts on many important issues (primarily philosophical and sociological ones) (James Trapp, 2011).

九九归一
9 9 back to 1 :
In the end

九故十亲
9 old friends 10 relatives :
Relatives and friends

九行八业
9 lines 8 industry :
Industry of all sorts

九牛一毛
9 cows 1 hair :
unimportant matter

九变十化
9 changes10 transformations :
Constant changes

九霄云外
9 heavens cloud outside :
Faraway land

九江八河
9 large rivers 8 small rivers :
All the rivers

Research Objectives

- To **explore** formations and structures of Chinese numerical proverbs
- To **analyze** numerical conceptions conveyed by Chinese numerical proverbs
- To **examine** non-native learners in comprehending literal, semantic, and cultural meanings in Chinese numerical proverbs through enhancement Task.

Literature Review- Nature Language Processing

the NLP translation of Chinese numerical proverbs lacked cultural contexts since the translator ignored the cultural meaning of numerical conception.

E.g. "低三下四" (humble) - drop 3 or 4 pegs

【成语】： 低三下四 低的成语、四的成语接龙

【拼音】： dī sān xià sì

【解释】： 形容态度卑贱低下也指工作性质卑贱低下。

【出处】： 清·吴敬梓《儒林外史》第四十回： “我常州姓沈的，不是甚么低三下四的人家。”

【举例造句】： 想当初，我在城里头作艺，不肯低三下四地侍候有势力的人，教人家打了一顿。 ★老舍《龙须沟》第一幕

【拼音代码】： dsxs

【近义词】： 低眉顺眼、俯首帖耳、奴颜婢膝

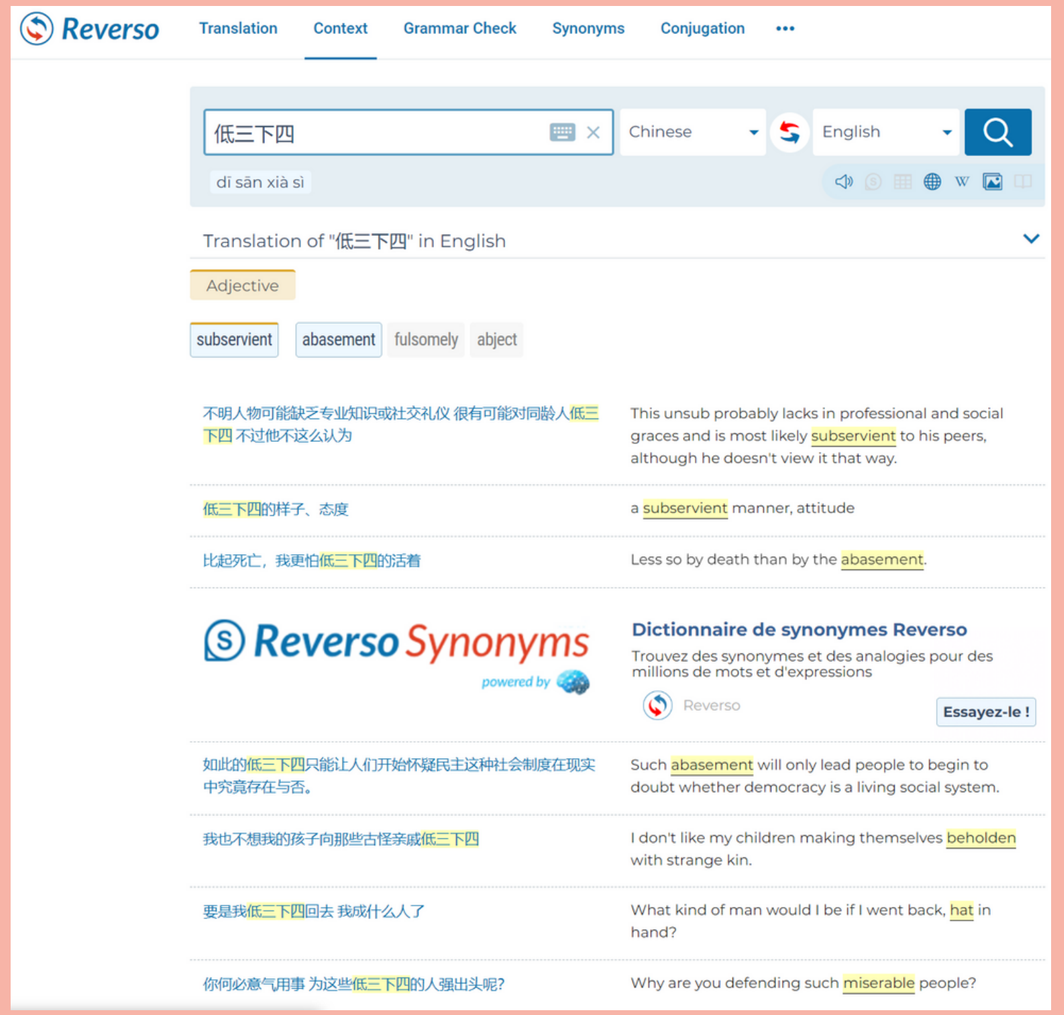
【反义词】： 不可一世、神气活现、盛气凌人

【歇后语】： 七个人通阴沟；老爷家里当差的

【灯谜】： 二五

【用法】： 作谓语、定语、状语；指对人的态度

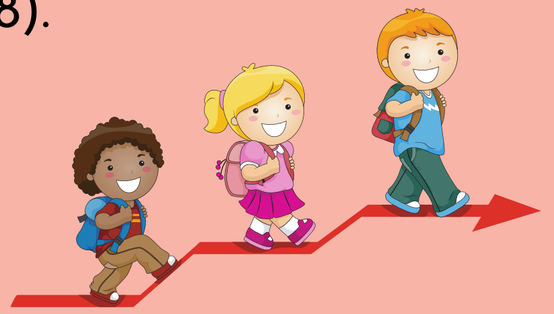
【英文】： servile



Meta-Learning Strategy

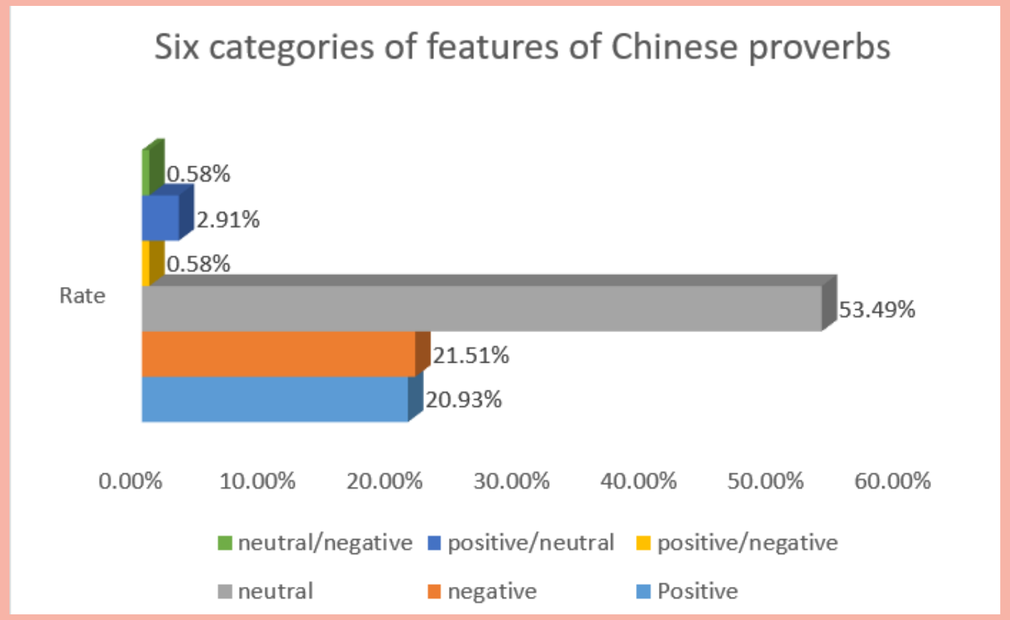
Meta learning refers to the processes and skills that we use to learn.
While it's mostly used when discussing how to optimize and improve artificial intelligence (AI) systems, the term can also be applied to humans. Simply put: they're the techniques we use to learn more efficiently and effectively(Gu et al., 2018).

Student-centered learning



Student-centered learning, also known as learner-centered education, broadly encompasses methods of teaching that shift the focus of instruction from the teacher to the student. In original usage, student-centered learning aims to develop learner autonomy and independence by putting responsibility for the learning path in the hands of students by imparting to them skills, and the basis on how to learn a specific subject and schemata required to measure up to the specific performance requirement(Hoidn, 2016).

Literature Review- Chinese numerical proverbs



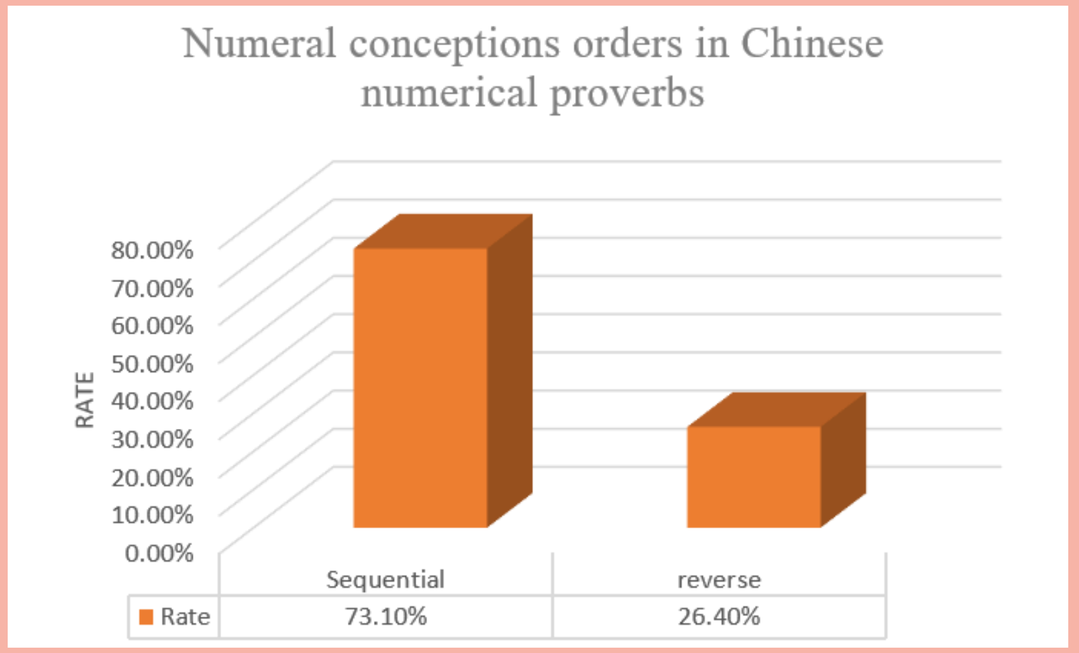
Characteristic examples:

- Positive: 独一无二 (the one and only)
- Negative: 低三下四 (servile)
- Neutral: 万无一失 (no risk at all)
- Positive/Negative: 千奇百怪（a great variety of fantasies）
- Positive/Neutral：一笑千金（an enchanting smile）
- Neutral/Negative：五花八门（all kinds of）

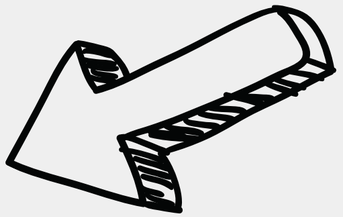
Order examples:

Sequantial: 一呼百应 (a hundred responses to a call)

Reverse: 千钧一发 (in a most dangerous condition)

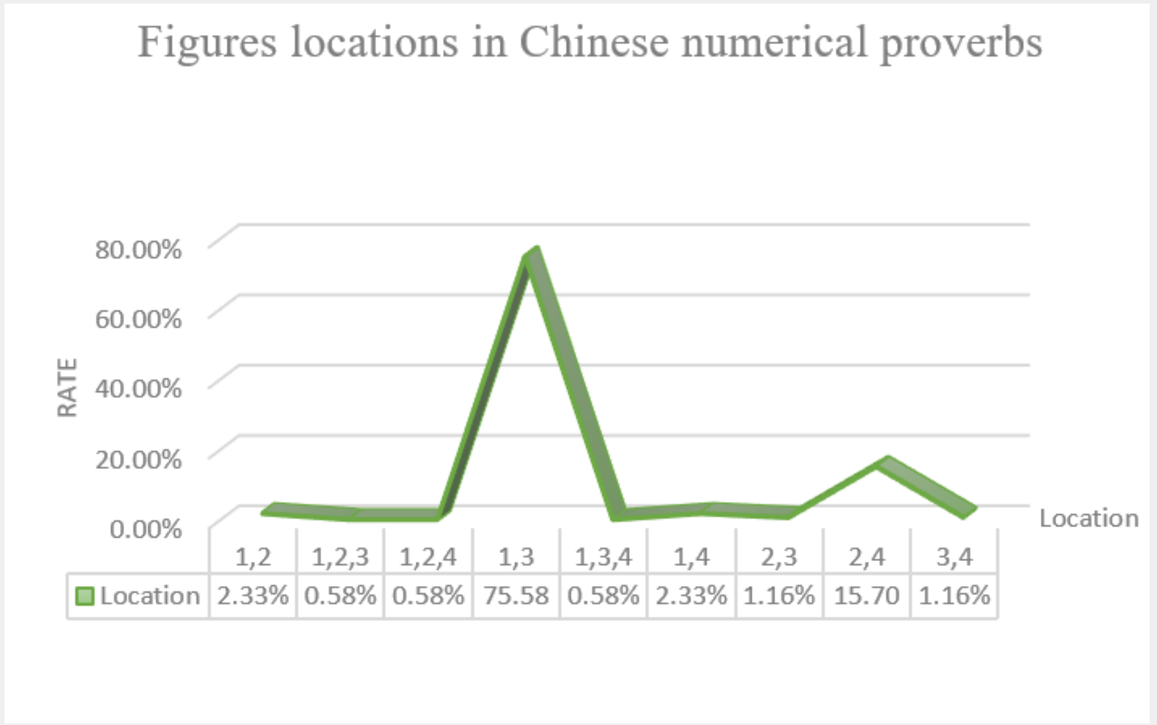


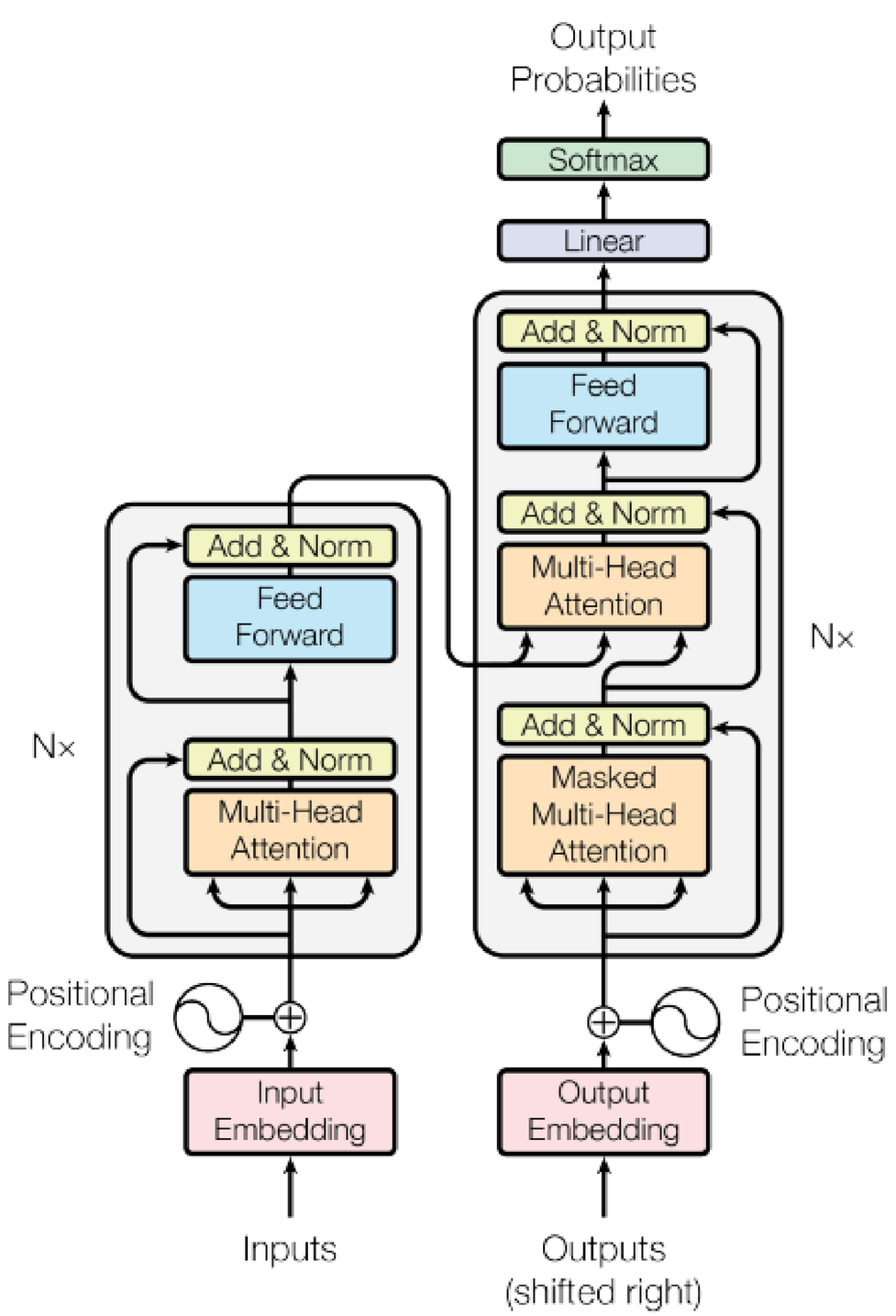
Location examples



the numbers in Chinese numerical proverbs have nine locations:

- 1, 2: 亿万斯年（billions of years）
- 1，2，3：三六九等（various grades and ranks）
- 1，2，4：九九归一（when all is said and done）
- 1，3：五大三粗（big and tall）
- 1，3，4：七老八十（very old people）
- 1，4：一般无二（exactly alike）
- 2，3：乌七八糟（in a horrible mess）
- 2，4：不三不四（neither one thing nor the other）
- 3，4：略知一二（know a little）





Methodology

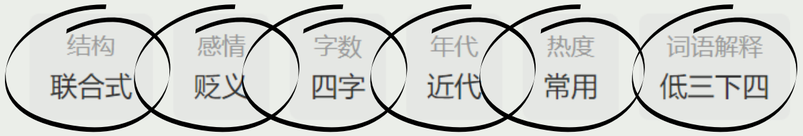
Natural Language Processing Method

First, computers were used to translate human languages like Chinese to English. Information is sent via the combined symbols of data. Converting human language to computer language made communicating with machines easier(Indurkhya & Damerau, 2010).

In this study, NLP can facilitate non-native Chinese learners to learn Chinese numerical proverbs through online data resources.

dī sān xià sì

低三下四



拼音　dī sān xià sì

注音　ㄉㄧ ㄙㄢ ㄒㄧㄚˋ ㄙˋ

解释　指地位、工作等很卑下；低人一等。也指神态恭顺卑屈。

出处　清 孔尚任《桃花扇 听稗》：“你嫌这里乱鬼当家别处寻主，只怕到那里低三下四还干旧营生。”

例子　我常州姓沈的，不是甚么低三下四的人家。（清 吴敬梓《儒林外史》第四十回）

辨析　低三下四和“低声下气”；都形容对人恭顺；没有骨气的样子；但低三下四侧重于人本身没骨气；对人恭顺卑微；并有“卑贱；低人一等”的意思。可用于职业、活儿、作风等；应用范围广；“低声下气”侧重于说话的态度；只用于语言表达方面；应用范围窄。

用法　联合式；作谓语、定语、状语；含贬义，指对人的态度。

歇后语　七个人通阴沟

谜语　二五

感情　低三下四是贬义词。

近义　卑躬屈膝、奴颜婢膝、低眉顺眼、俯首帖耳

反义　不可一世、盛气凌人、神气活现

英语　humble; lowly

俄语　гнуть спину

Natural Language Processing Application

NLP integrates computational linguistics (modelling of human language based on rules) with statistics, machine learning, and deep learning models(Nadkarni et al., 2011). Together, these technologies allow machine to interpret human language in the form of text or speech(Manning & Schutze, 1999). NLP can help non-native Chinese learners understand Chinese numerical proverbs in various aspects. Through this information, non-native learners can understand the formations, structures and semantic meanings.

Reverso Synonyms powered by

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在线成语词典 -> **在线查询三教九流的意思，读音、三教九流的拼音是什么，怎么造句：**

请输入: 三教九流 搜一下 成语 生日祝福 音标 灯谜 疯

前一篇：三脚猫 后一篇：三教一体

三教九流的意思：

【成语】： 三教九流 三的成语、流的成语接龙

【拼音】： sān jiào jiǔ liú

【解释】： 旧指宗教或学术上的各种流派。也指社会上各行各业的人。

【出处】： 宋·赵彦卫《云麓漫钞》卷六： “（梁武）帝问三教九流及汉朝旧事，了如目前。”

【举例造句】： 他是个社会活动家，朋友遍及三教九流。

【拼音代码】： sjjl

【近义词】： 三姑六婆、五行八作

【反义词】： 正人君子

【歇后语】：

【灯谜】：

【用法】： 作主语、宾语、定语；指各种人

【英文】： three religions (Confucianism, Buddhism and Taoism) and nine schools of thought (the Confucians, the Taoists, and so on)

Student-oriented learning

Student-oriented learning aims to build learner autonomy and independence by giving students the skills, foundation, and schemata needed to achieve performance objectives(Hoidn, 2016).
Students will learn how to use Hanyu Daquan（《汉语大全》）(A complete collection of Chinese) search engines to self-study Chinese numerical proverbs online and enhance their skills.

Enhancement Task

Question 1:
Which of the following is the literal meaning of “接二连三”(two after three)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A. one after another	2	28.6	28.6	28.6
	B. two continuously three	3	42.9	42.9	71.4
	C. two near to three	2	28.6	28.6	100.0
	Total	7	100.0	100.0	

Question 2:
What is the Numeral conception of "two...three" in "接二连三" (two after three) ?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A. more than two	3	42.9	42.9	42.9
	B. Few	1	14.3	14.3	57.1
	C. Little	1	14.3	14.3	71.4
	D. Many	2	28.6	28.6	100.0
	Total	7	100.0	100.0	

Enhancement task is adopted to examine the comprehending ability of non-native Chinese learners in perceiving literal, semantic and cultural meanings of Chinese numerical proverbs through NLP searching functions and students-centered learning skill.

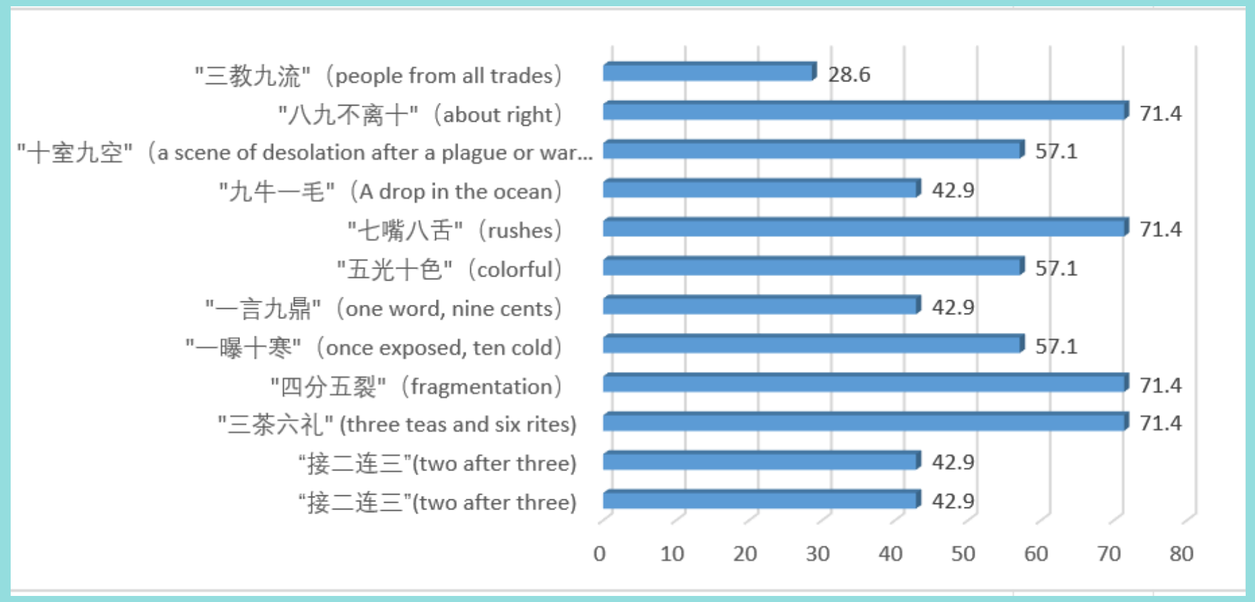
Target Respondents : Malay and Indian learners

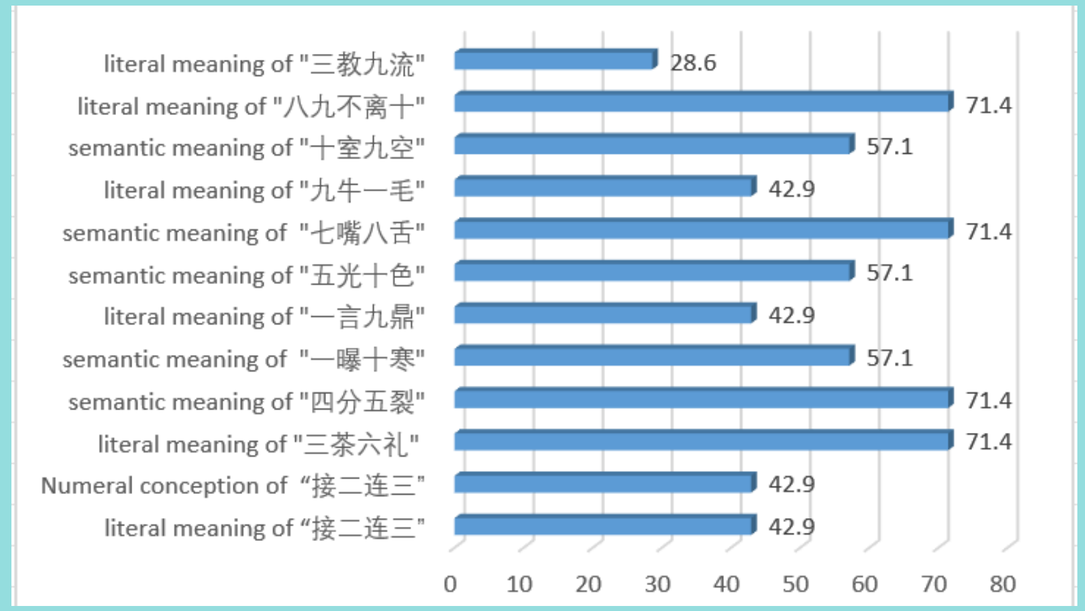
Time Limits: 30 minuts

Number of Questions : 12 questions

Examination Contents:
literal, semantic and cultural meanings of Number conceptions in Chinese numerical proverbs

Research Fingdings and Disccusion





Translation methods- understand number conceptions(literal and semantic meanings)

Students-centered learning- find comprehensive information(formations, structures, two layers meanings of Chinese numerical proverbs)

Meta-learning strategies- Mastering the Abilities how to reflect literal, Semantic and Cultural meanings of Chinese Numerical Proverbs.

Conclusion

This study revealed that non-native Chinese learners were able to comprehend literal and semantic meanings of Chinese numerical proverbs through this learning methods. To enhance comprehending ability of non-native Chinese learners, enquiring knowledge of Chinese numerical proverbs, more enhancement tasks should be designed and developed， In order to guide them more familiar to the searching functions of NLP, meta-learning skills used in reflecting the literal, semantic and cultural meanings of Chinese numerical proverbs through reading online original texts.

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Gracias

GRAZIE

Merci

Thanks for your listening!

Xièxie

obrigada!