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**the First International Conference of School as Learning Community:
Educational Innovation through renovating school to learning community in Asia**

**The case study on the math research institution as
learning community in Elementary Schools**

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- Background
- Research question
- Method
- Findings of the research
- conclusion



- The system of teaching research is one of the most important reasons why the achievements of Shanghai was ranked as the No.1 in PISA.(Gu. 2014)
- The system of teaching research is organized as the bureaucratic levels: provincial, regional, county, district and school-based, but not national
- As a fact, the school-based math research institution as learning community promoting the development of math teachers
- School as learning community consisting of students learning together , teacher learning together and parents learning together(Sato, 2013)
- This presentation is focusing on the teacher learning together



Research question

- What is the school-based math research institution as learning community?
- **Learn what? why learn? how learn?**
- **Why learn?** How does the school-based math research institution as learning community promote the development of Math teachers
- **How learn?** What mechanisms does the school-based math research institution as learning community form from the case study?
- How is the school-based math research institution as learning community featured as the administration organization changed to the more professional one.



- Cases:

Beijing Primary School

Shijia Primary School

Primary School affiliated with People's
University of China

HuangChenggen Primary School

This research analyses the original texts



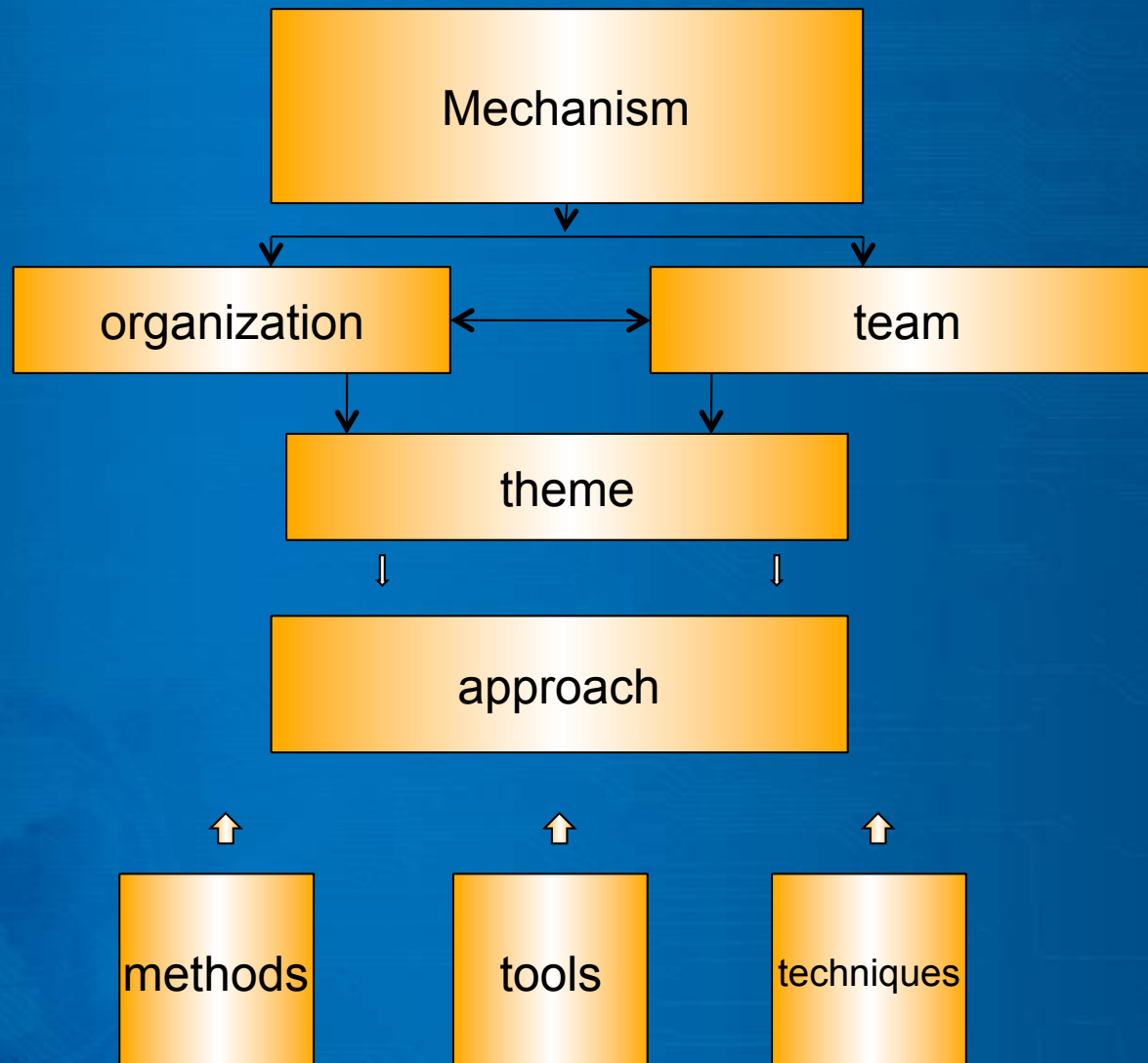
- **Common discourses:**
- learning community, professional learning community
- School-based teaching research
- Team
- Teaching research panel
- Mathematical example (数学例题)
- Key teaching point, focal point ; teaching difficult point
- **Metaphor:** family



- It finds mechanism of school-based math research institution consisting of the organizations, teams, themes, approaches(methods, tools, techniques) featured saliently by Chinese models.

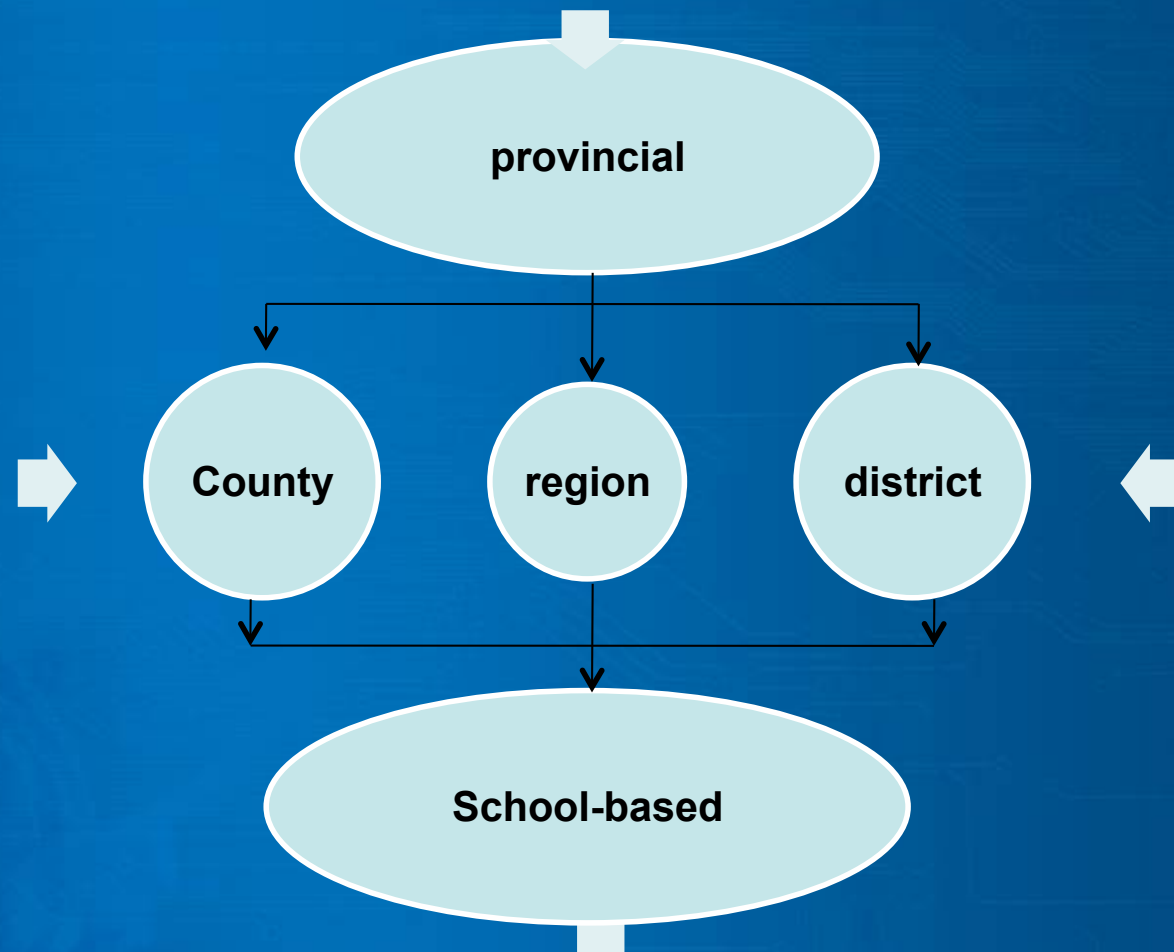


Mechanism framework

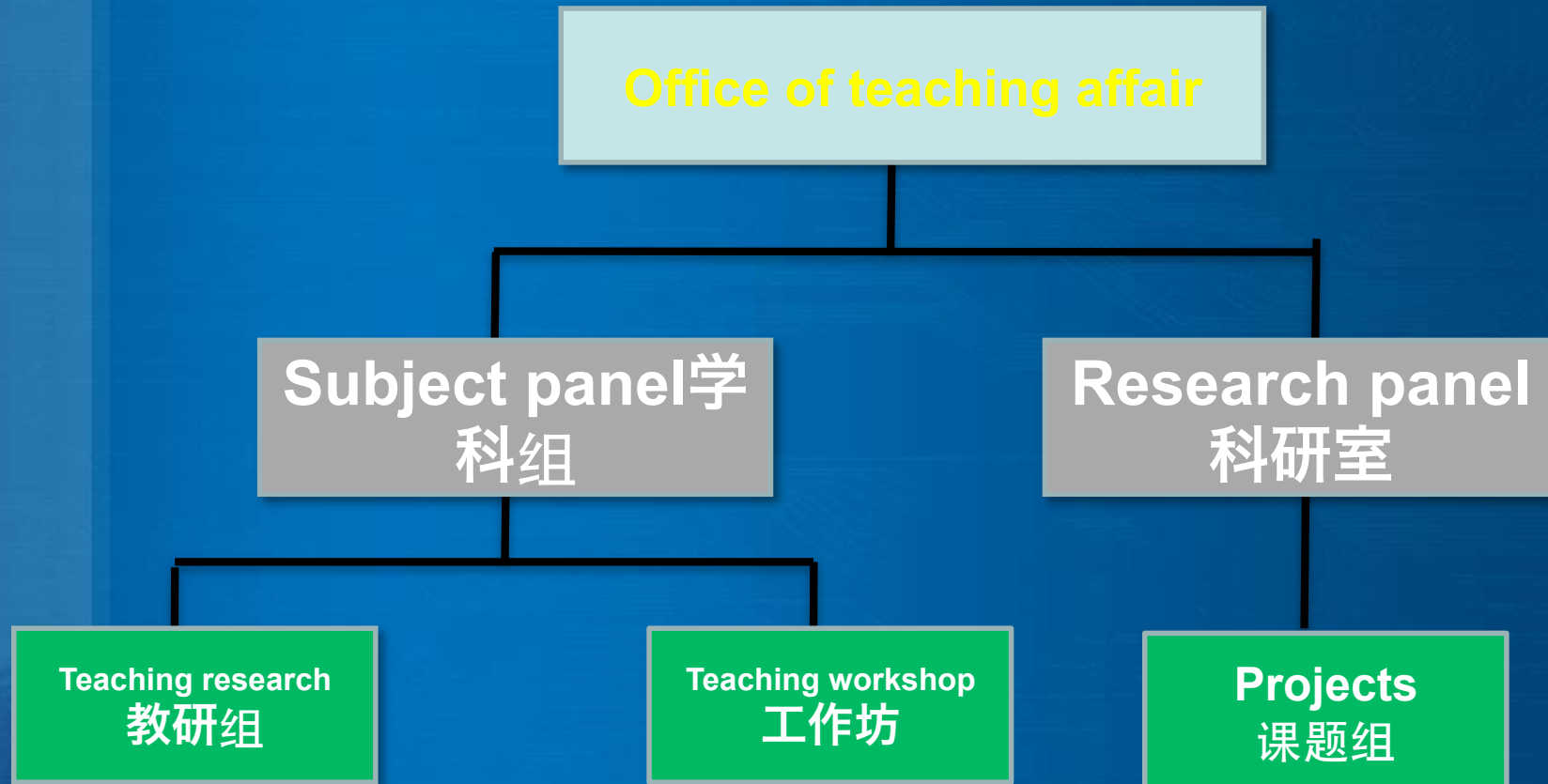




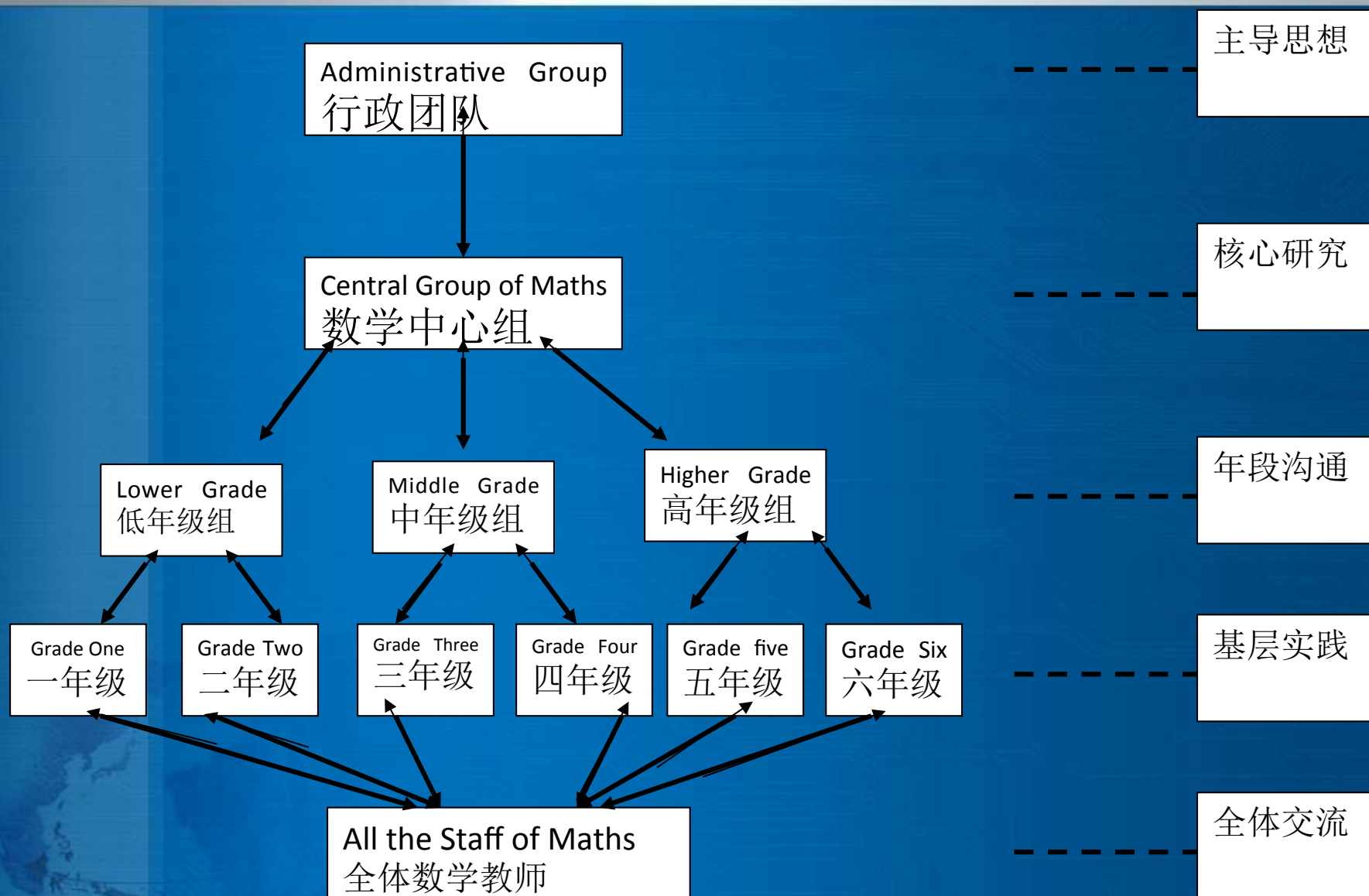
- Teaching research center, room, panel



Without national teaching research organization



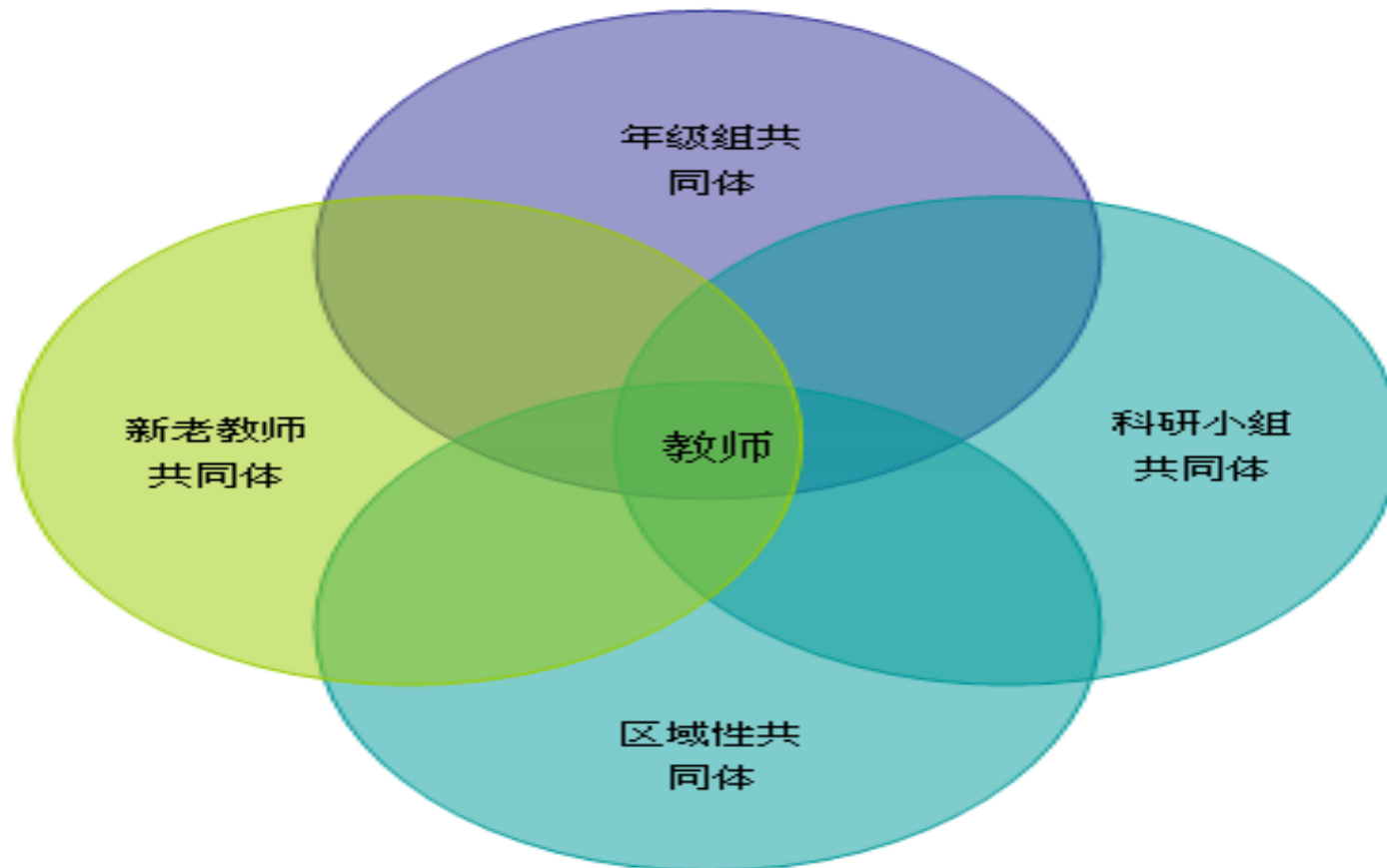
Case:Shijia Primary School



case: Huangchenggen Primary School

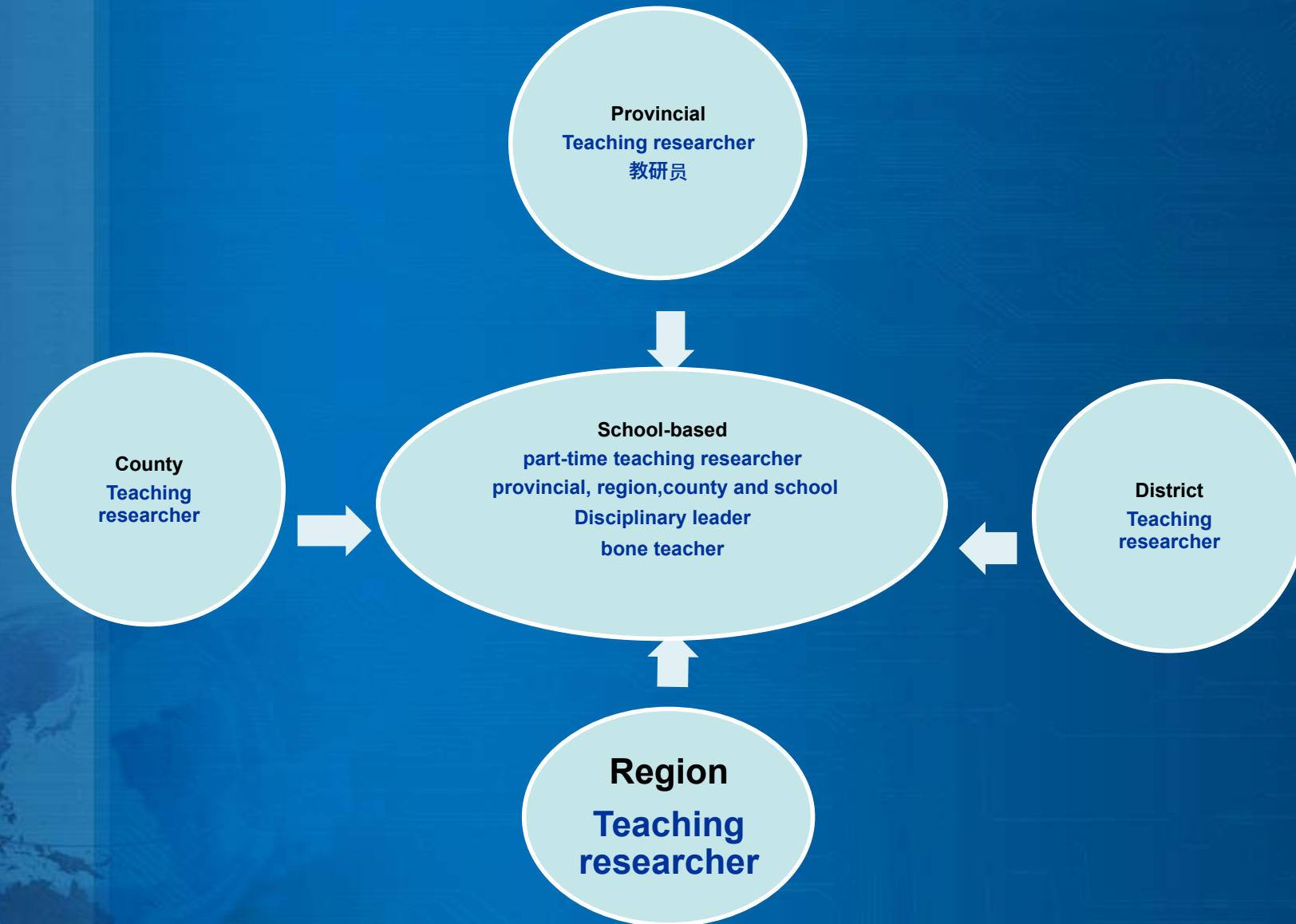


Cross team





Team matched with bureaucratic organization

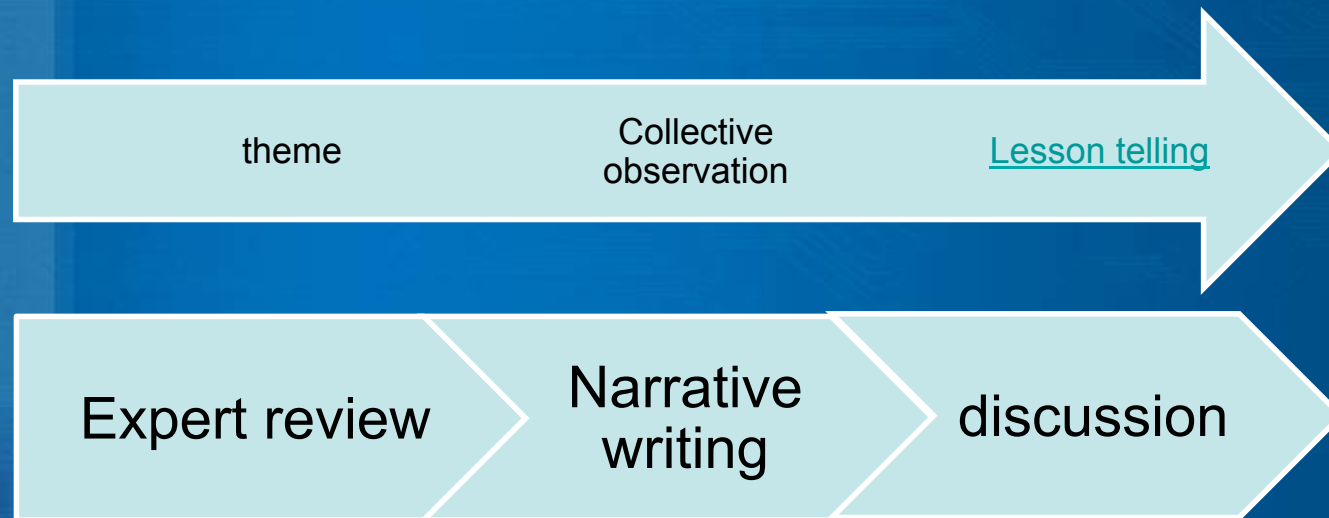




- Math textbook analysis
- Construction of math knowledge logics
- Action research on the math teaching
- Thematic project of math teaching



Theme-collective observation-lesson telling- expert review-narrative writing-discussion



Mathematic game



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Case:Elementary school affiliated with Peking U.



- 组内提供备课资源→单元主备教师写出个案→讨论交流达成共识→形成整册教案→个人复备、二度设计→上课实践→教后反思的备课流程。
- Supply of sources in lesson preparation in a panel
- Case of design of lesson provided by Holding teacher
- Discussion/communication/determination of lesson
- Syllabus of the lesson for all the teachers
- Individual re-preparation of lesson
- The second design of lesson
- Teacher representative Action of lesson
- Individual Reflection of lesson



- Elementary school affiliated with PekingU
:形成了三種不同的教研方式：“學術沙龍”
的常態教研方式；“專家引領”的課題研究
方式；“交叉聯合”的合作交流方式。
- Academic salon
- Expert-guiding project
- cross-grades/disciplines/schools/countries

Case: School-based Elementary school with Peking U.



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Expert-guiding project





- the school-based math research institution as learning community will be changed to more professional organization, herein math teachers can be reflective and researchable professionals.
- **Critical review: problems of learning**
 - pedagogy-centred
 - Experience-base
 - Unification
 - Text-book and Knowledge-centred



- 研究重心要实现由以教为主向研究以学为主的转变
 - 研究以经验的教学研究向基于事实和数据的教学研究转变
 - 研究由注重统一性教学要求向注重个性化的服务转变
 - 研究由关注知识传授的研究向关注全程育人、综合育人、全面育人的研究转变
 - 由单纯地关注教材教法研究向加强对教学质量的全要素研究以及服务区域与学校发展转变
 - 由基于传统课堂的传统教育模式向基于开放的信息化教学的现代教育模式的研究转变
-
- Change from focus on pedagogy into learning
 - Change from experience-base into evidence base
 - Change from unification into individuality
 - Change from knowledge into student well-round development
 - Change from text-book and pedagogy into school development
 - Change from traditional teaching model into information-based teaching
 - Change from authoritative ,enforced opinions to dialogue
 - Change from impersonality to collegiality



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- Q&A
- Thanks