



華東師範大學

EAST CHINA NORMAL UNIVERSITY

Seeking Approaches to Support Instructors' Online Instructional/Course Design

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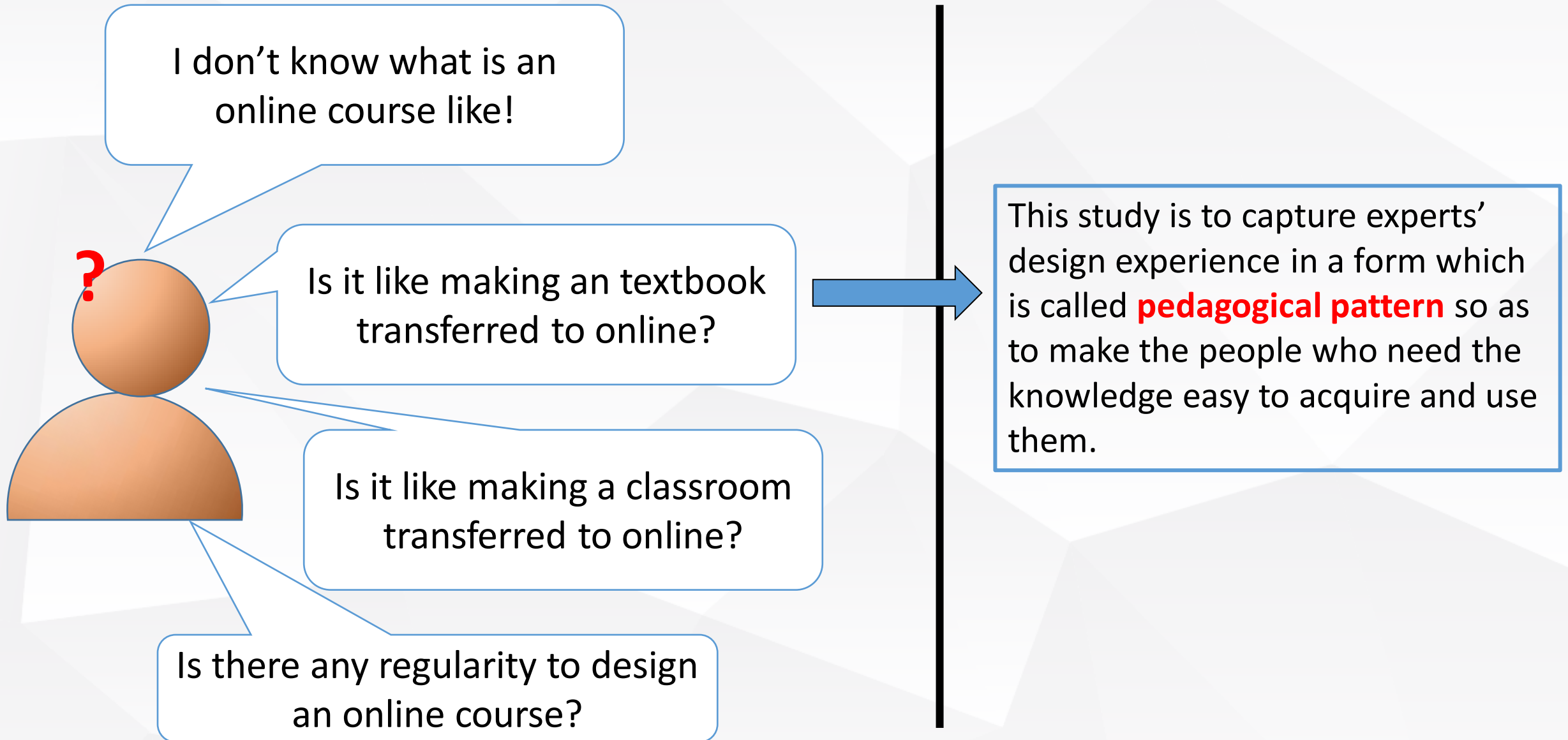
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Contents

- ❑ Background/Research objective
- ❑ Literature Review
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- **Online learning is a new and rapidly developing field**
- **Online course design is a complex and professional activity**
- **Most of instructors are unprepared for online instruction**
- **Most of their instructional experience is from face-to-face teaching , deeply influenced by the concepts of textbook-centered, teacher-centered and classroom-centered**

» Challenges for online instructors





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Literature Review

»» What is pattern?

- **Originated in architecture field, first proposed in 1970s by Alexander, a building theorist.**





➤ Definition of Pattern

- Pattern describes **emerging problem** in the environment, then points out **the key part of the solution** to this problem, so you can use the same **scheme**, without having to reinvent the wheel.

-- Alexander

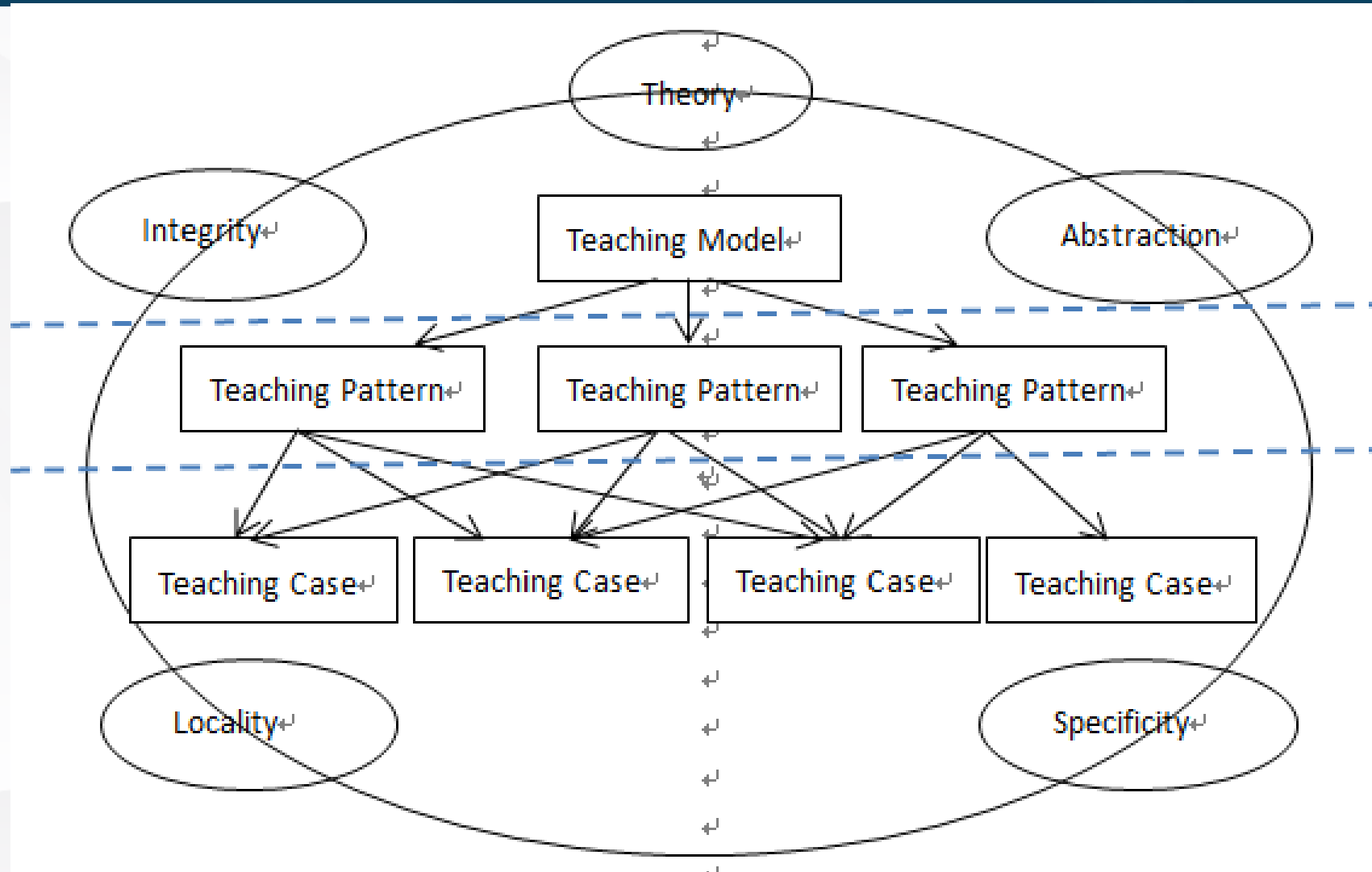
➤ Pattern thinking used in software design

- **Gamma** and other software engineering scholars published a book named "*Design Pattern*", a detailed presentation of the success of the application of information systems, as the foundation for the application of the patterns in the **software industry**.

➤ Pattern thinking used in pedagogical field

- EU ELEN project(2003)
- IMS Global learning alliance UNFOLD projects -put forward some **online learning design patterns**, summarizing the design experience from the content to the teaching organization in online learning environment
- Diana Laurillard(2012)- a new book named **“Teaching as a Design Science——Building Pedagogical Patterns For Technology”**

➤ Pattern VS Model, VS Cases





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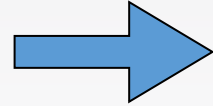
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Research Methodology & Process

➤ Research Methodology (Design-Based Research)

**Seven
Pedagogical
patterns are
proposed**

PHASE 1



PHASE 2

**Practice
&
Revision**



**Tryout
Applied → Revision →**



PHASE 3

**Polishing
&
Finalizing**

➤ Phase one – seven pedagogical patterns proposed

- Through *literature review*
- *Content analysis* into the representative online courses evaluated out by Chinese National Department of Education since 2003 (totally 3845 until 2010)
- MOOCs design style in Coursera platform
- Our more than ten-year designing experience in online learning

➤ Seven pedagogical patterns

- **Content-Based Design**
- **Skill-based Design**
- **Problem-based Design**
- **Case-based Design**
- **Scenario-based Design**
- **Inquiry-based Design**
- **Experimental Design**

➤ Structure of a pattern

- **NAME**
- **CONTEXT**
- **PROBLEM**
- **SOLUTION**
- **CONDITIONS**

NAME: Skill-based Design⁴

CONTEXT: This pattern focuses on the learners' skill training, too much emphasis on learners' participation and experience, so a series of drills and simulation experience provided to learners. Usually, the operation, training and practice courses can use this design style, such as *Computer Software, Computer Hardware Assembly, Automobile Assembly, Football or Swimming*.⁴

PROBLEM: How to achieve the goal of skill training in online learning?⁴

SOLUTION:⁴

Step1: Learning Guidance;⁴

Step2: Experiencing; ⁴

Step3: Lecturing; ⁴

Step4: Re-experiencing; ⁴

Step5: Consolidation exercises⁴

From the examples above, we can see that for different learning content and learning objectives, the activity type and sequence in each Learning Module can be different.⁴

➤ Phase two – practice & refine

- These patterns are on trial in the School of Open Learning and Education of East China Normal University.



Table 1 Basic Information of the Instructors and Courses[↗]

Course Name [↗]	Teaching Experience (Years) [↗]	Professional Rank [↗]	Number of online course constructing [↗]	Have you taken part in or host a national top quality online course? [↗]	Do you have online teaching experience? [↗]
Early Intervention for Special Children [↗]	10-19 [↗]	Associate Professor [↗]	1 [↗]	Yes [↗]	No [↗]
College Chinese [↗]	10-19 [↗]	Associate Professor [↗]	1 [↗]	Yes [↗]	No [↗]
Preschool Education [↗]	10-19 [↗]	Assistant Professor [↗]	1 [↗]	No [↗]	No [↗]
Preschool Language Education [↗]	>=20 [↗]	Associate Professor [↗]	2-5 [↗]	Yes [↗]	Yes [↗]
Preschool Children's Mental Health and Counseling [↗]	6-9 [↗]	Associate Professor [↗]	1 [↗]	No [↗]	Yes [↗]
Infant Food and Nutrition [↗]	10-19 [↗]	else [↗]	0 [↗]	Yes [↗]	Yes [↗]
Kindergarten Creative Handmade [↗]	10-19 [↗]	Associate Professor [↗]	0 [↗]	No [↗]	No [↗]

➤ Data Collection

1. **Questionnaires and interviews** to the online instructors in the beginning of course design.
2. **Questionnaires and interviews** to the online instructors in the end of course design.
3. The **communication records** between instructors and facilitator (such as the email, telephone content), and also stage artifacts.
4. **Heuristic evaluation** about the completed course.
5. **Observation data** by the researcher.

➤ Finding1

- In the trial of these patterns, we found that these patterns acted as a very good **bridge/language** between facilitators and instructors.

➤ Finding2

- The seven trial teachers in their pre design stage of online courses can choose a variety of reasonable design patterns according to the characteristics of the curriculum under the guide of the facilitator.



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➤ Finding3

From the interview, we know that these patterns are **welcomed and understood easily** by the teachers, but these teachers also hope that the facilitator could give a big hand during their designing especially in technical aspects.

Along with the line of thought, teachers are still with sense of strange to online teaching, **tendency to depend on the facilitator due to habitual thinking**, so how to transfer this dependence on facilitator to the pedagogical patterns is the ultimate goal of this study.

conclusion

- Each pattern has its own philosophy, reflecting specific teaching objectives, philosophical assumptions, curriculum and values.
- Seven design patterns can **be mixed use** in an online course
- The type or the sequence of activities in a pattern is good **design references** for the teachers /designers, especially for those novices.

*Thanks For Your
Listening !!!*

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