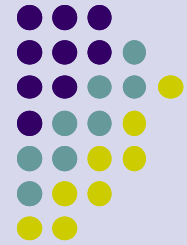
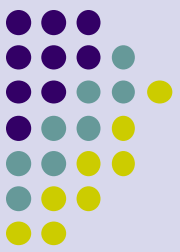


Introduction of the standardization discipline study & Several ideas on the development of Education about standardization



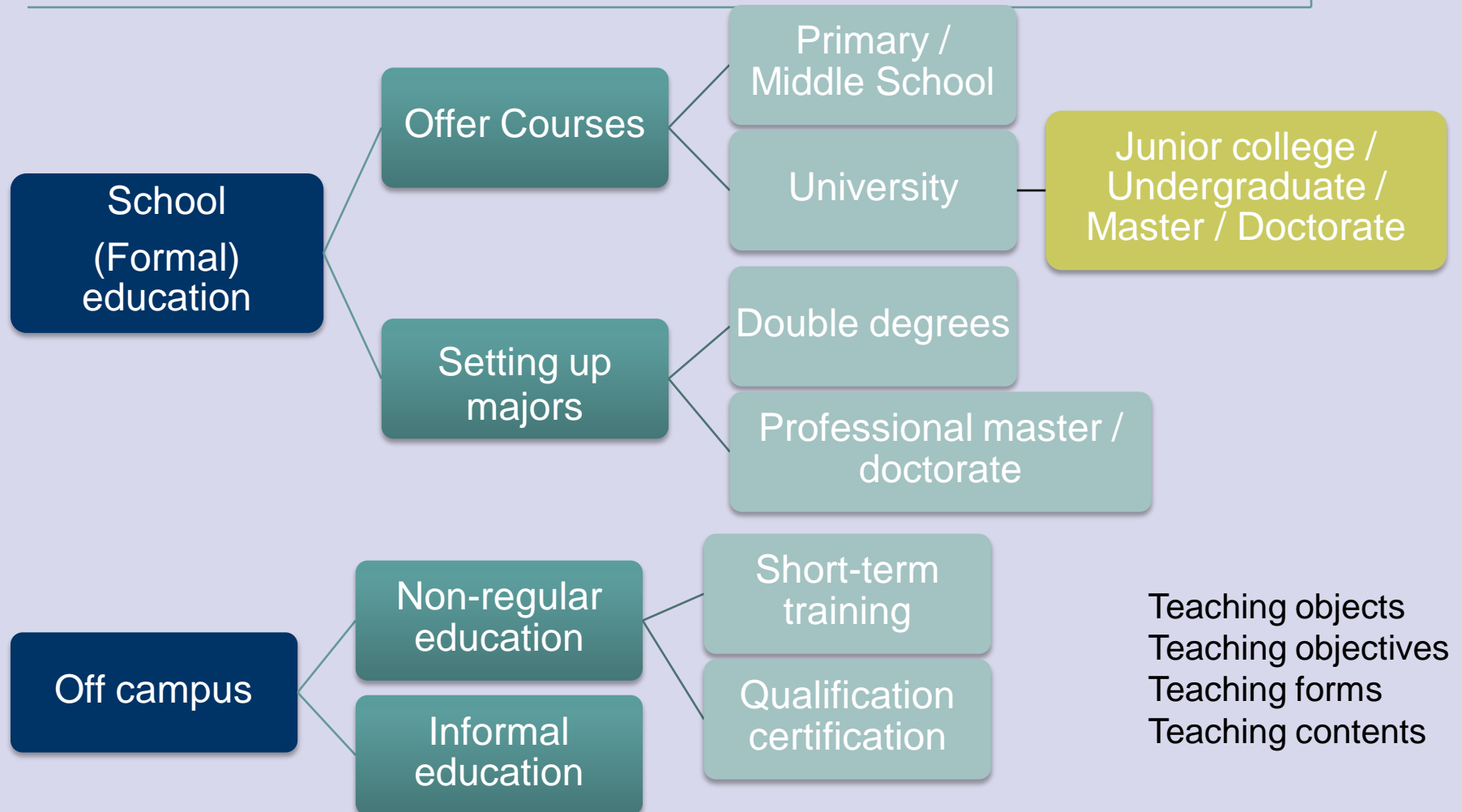
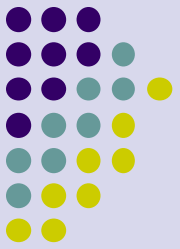
Bai Dian-yi
China National Institute of Standardization
2010-5-27



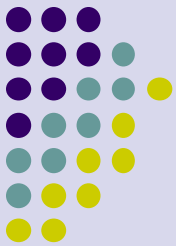
Contents

- The ideal model of standardization education
- Standardization education & standard learning
- The knowledge system of standard learning
- Recommendations on the promotion of the formation of the knowledge system

The Ideal Model of Standardization Education

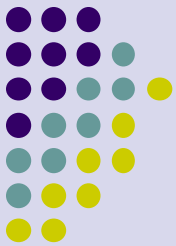


The Ideal Model of Standardization Education



Teaching levels		Teaching objectives	Teaching forms	Personnel targets	
Formal education	Primary School	Knowing about standards of daily life	Various teaching activities, games and etc.	Popularization of the public	
	Middle school	The simple mechanism of the combination of the same primary school stage and the awareness of standardization	Knowledge competition, optional course	Primary level	Service-oriented
	Junior college / undergraduate	The same middle school stage + the comprehension of relationship between standards and technologies, economies and society + the awareness of the importance of standardization + the ability of information search and use	Public courses, professional optional courses, activities & competition and seminars on standard consultation, etc.	Primary / middle class	Professionals + service-oriented
	University courses	Masters	The same undergraduate stage + the ability of the participation in standardization activities (including the formulation of professional standards and reading standards)	Middle/ advanced level	Professionals + service-oriented
		Doctor	The same master stage + deeply clear of the research of the internal mechanism of standard learning + the deep use of standards for the expansion of professional knowledge	Advanced	Inter-disciplinary

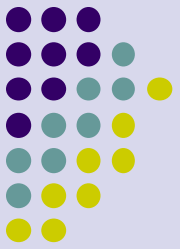
The Ideal Model of Standardization Education



Teaching levels		Teaching objectives	Teaching forms	Personnel targets	
Standardization major	Double degrees	The same master stage + familiar with the system and contents of standardization learning as well as the skilled use of them	The same as master stage	Middle/advanced	Management type
	Professional masters and doctors	The same double degrees + the contents capable of expanding standard learning	The same as master stage	Middle/advanced	Management type

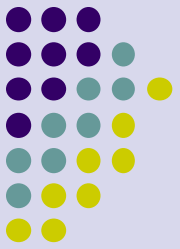
Teaching levels		Teaching objectives	Teaching forms	Personnel targets	
In-service education	Short-term training	Mastering a single skill of standardization and learning about concrete standards	Short-time courses	Primary/Middle/advanced level	Inter-disciplinary
	Qualification certification	Fully understanding of standard learning and achieving social awareness through the acknowledgement	Short-term courses self-taught	Primary/Middle/advanced level	Inter-disciplinary
Public education	Center for post-doctoral studies	To train special talents proficient in standardization with professional knowledge-based in a certain field	Self-taught, instructed by professionals and practice	Advanced level	Inter-disciplinary
	Websites and other medium	To meet the demands of different groups of people for the knowledge of standardization learning	Multimedia information	Primary/Middle/advanced level	—

Standardization Education & Standard Learning



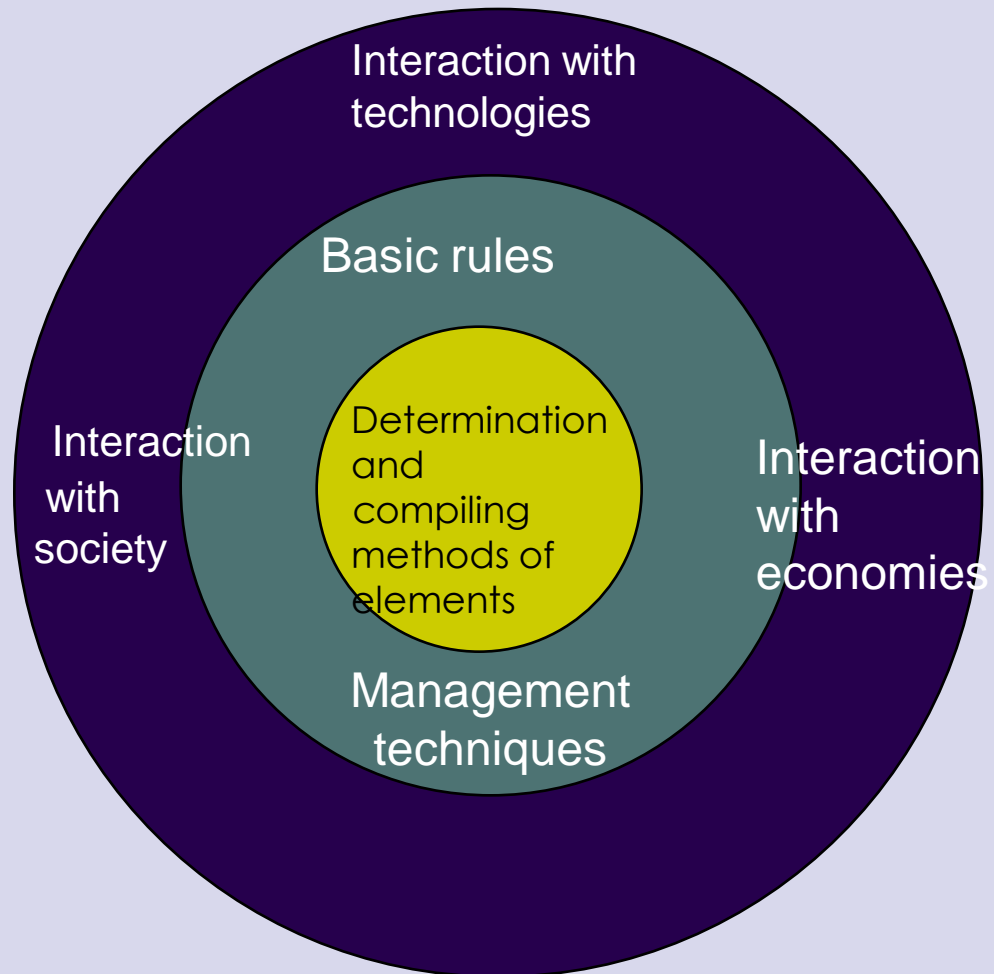
- The concept of standard learning
 - A subject which focuses on the study of standardization principles and methods as well as mechanism of action by taking standards & standardization activities as the research subject.
 - Specific study
 - The Basic rules of Standardization
 - The determination and compiling methods of the elements of standardization
 - Standardization Management Technology
 - The interaction between standards and technologies, economies and society

Standardization Education & Standard Learning

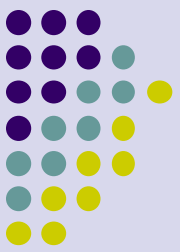


The concept of standard learning

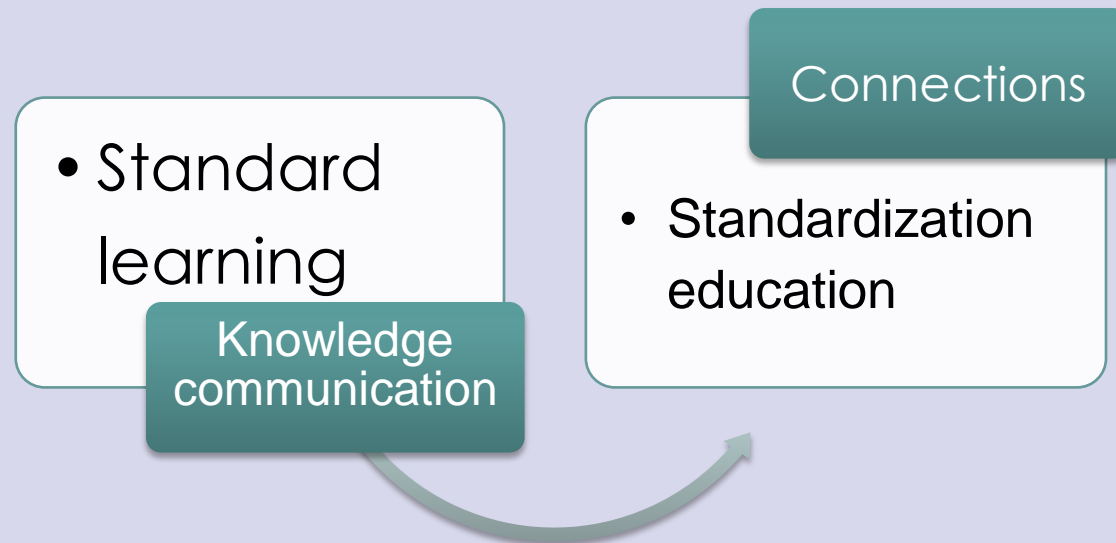
- Standards
- Standardization activities
- Interaction with technologies, economies and society



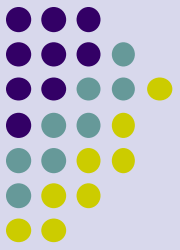
Standardization Education & Standard Learning



- Dissemination of standard learning - standardization education
- Standardization education needs theory – the support of standard learning
- Standardization education can exert feedback effects on the development of the theory of standard learning
- Interaction——the establishment of standard learning

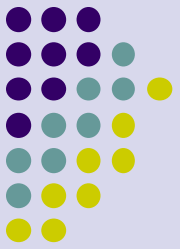


The Knowledge System of Standard Learning

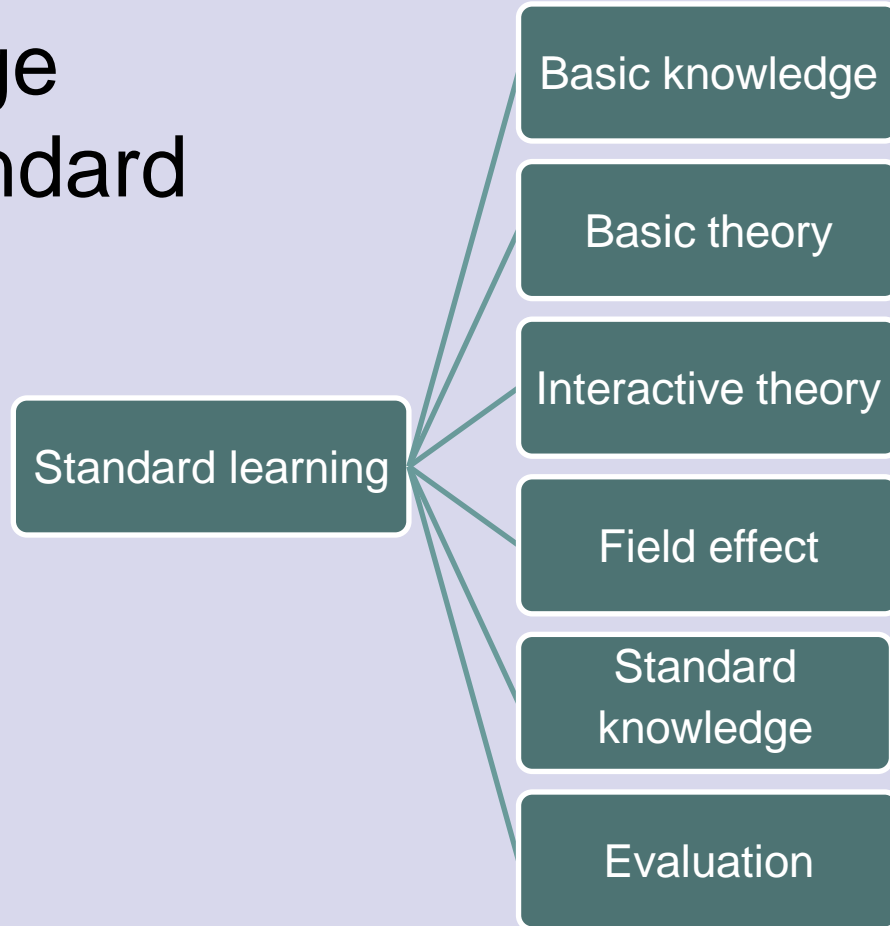


- Subject knowledge system
 - Knowledge structure which is the formation of the organic combination of knowledge intrinsically related to research objects
 - Basic knowledge
 - Basic theory
 - Basic methodology

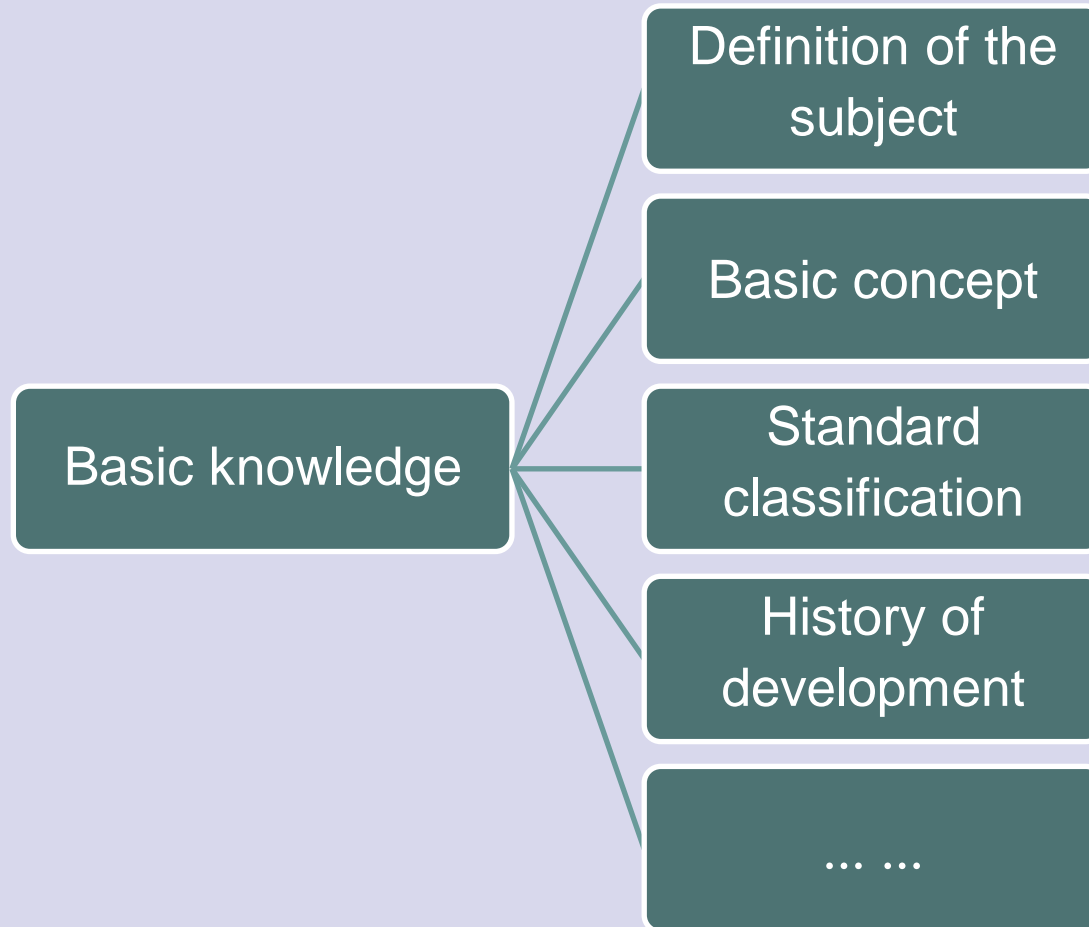
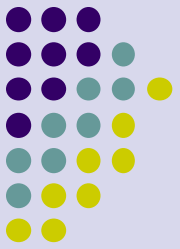
The Knowledge System of Standard Learning



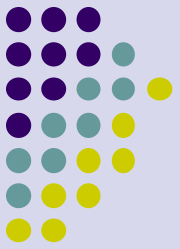
- The Knowledge system of standard learning



The Knowledge System of Standard Learning

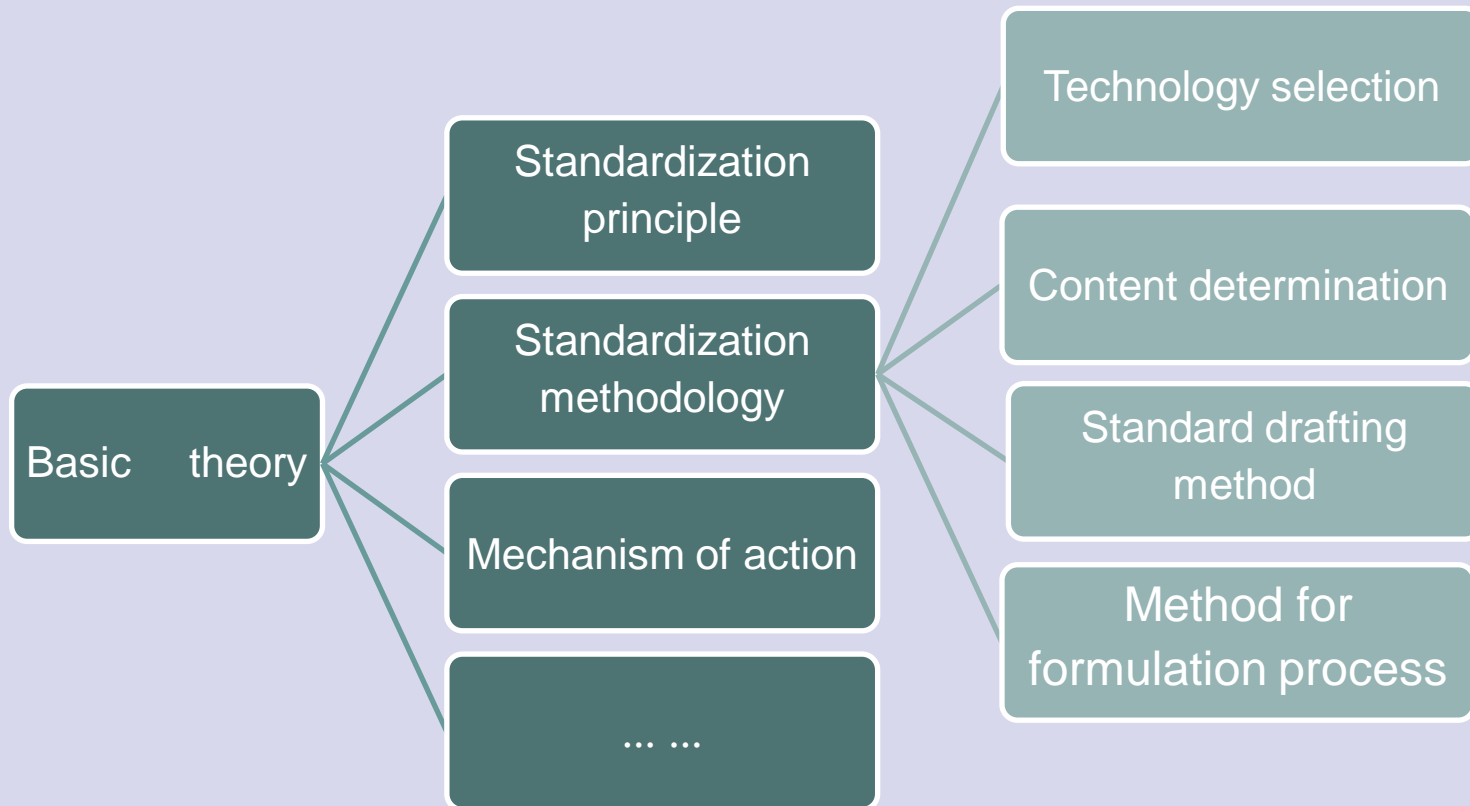
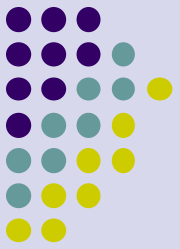


The Knowledge System of Standard Learning

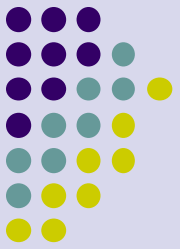


- Basic concept
 - Standard
 - A normative document which is formulated by consensus within a certain limit for the common and repetitive use based on the comprehensive achievements of science, technology and experience to attain the optimum order.
 - The four elements of standard
 - Purposes: to promote the best common efficiency
 - Foundations: science, technology, experience and results are comparatively mature; crucial control points can be quantified or described and the overall results can be fixed within a certain period.
 - Procedures : The consensus which is open and transparent.
 - Expression form: texts for common and repetitive use.

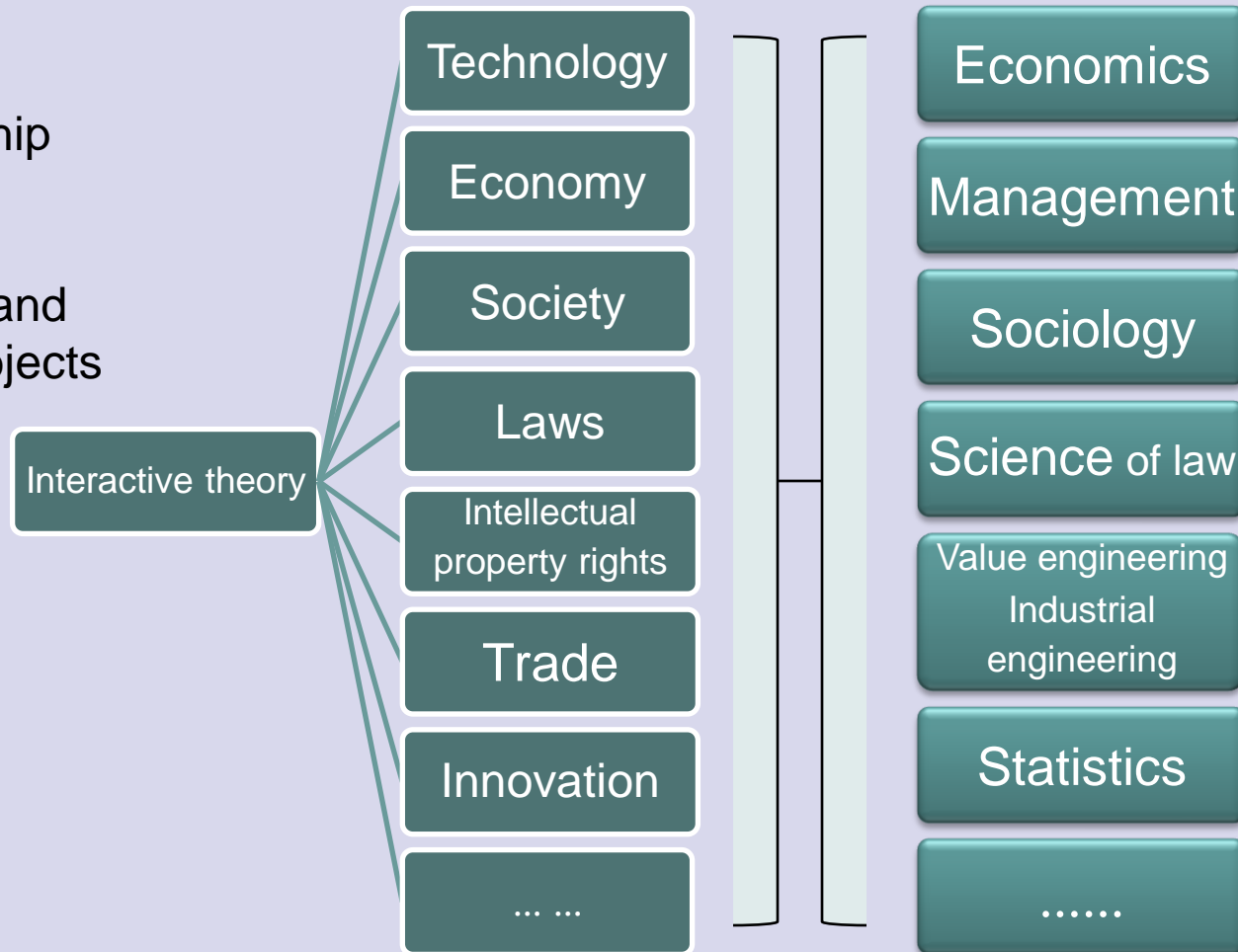
The Knowledge System of Standard Learning



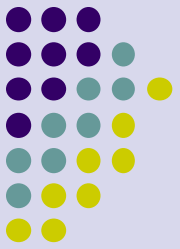
The Knowledge System of Standard Learning



- The relationship between standard learning and other subjects



The Knowledge System of Standard Learning



- According to ICS or Chinese Standard Literature Classification

Field application

Terminology, signs, classification, coding and mapping

Service and logistics

Health & Medicine, environmental protection and safety

Machinery, energy; electricity, electronics; telecommunications and information technology

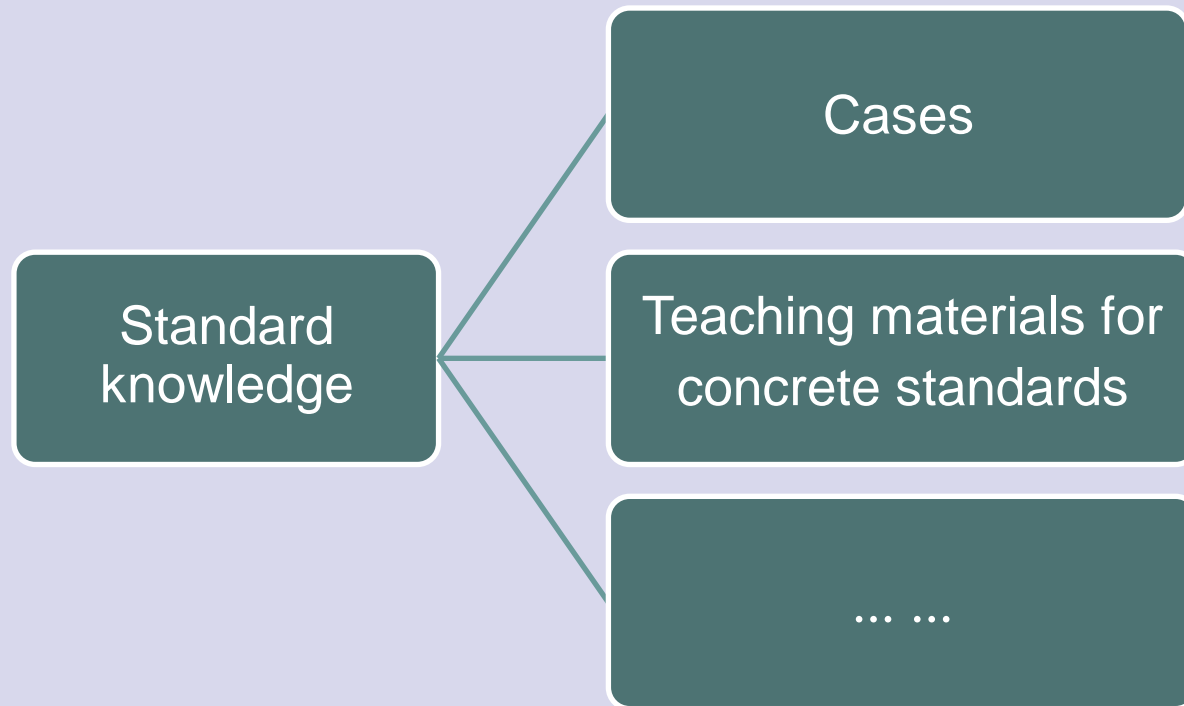
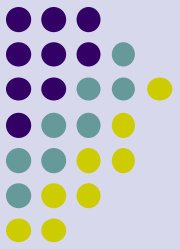
Roads, vehicles, railways, vessels and aerospace

Textiles and costume

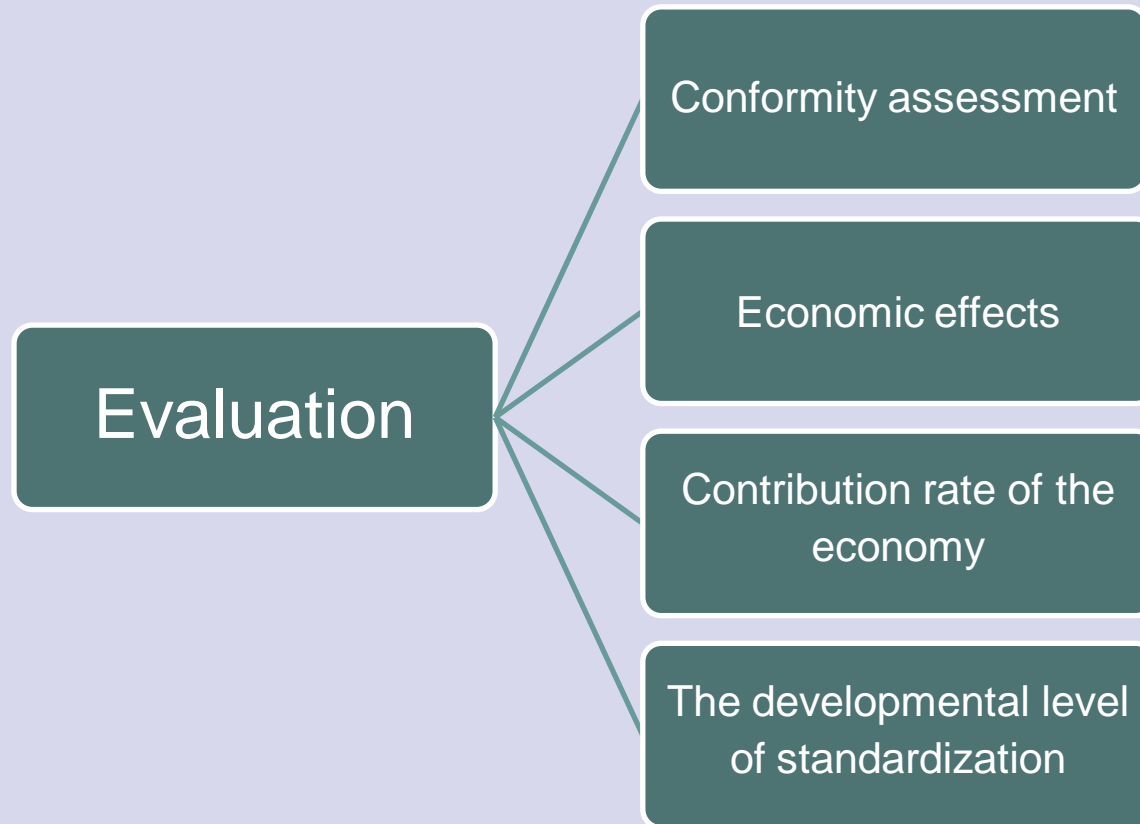
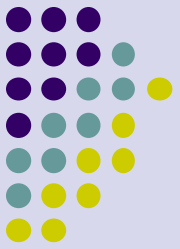
Chemical industry, mining, metallurgy; lumber, plastics, papermaking; architecture

Household management, agriculture and food;

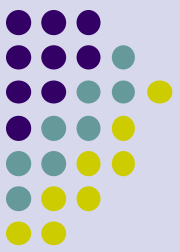
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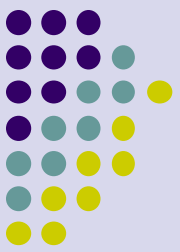
The Knowledge System of Standard Learning



Recommendations



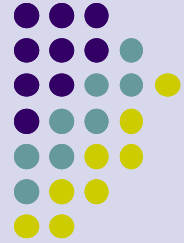
- Carrying out the research of standardization theory and paying attention to the research of basic knowledge, basic theory and mechanism of action.
- During the promotion of the concrete standards' entry into the system of universities and colleges, the education on the basic knowledge and basic theory of standardization shall be cared about. Standardization theory is both the major content of standardization education and the theoretical basis for the guidance of the development of standardization.



Recommendations

- The design of the modularized textbook applicable to all kinds of standardization courses
 - Common textbooks
 - Teaching materials combining with specialty
- To form the system of teaching materials gradually
- To further form standardization theoretical system – Standard Learning
- Standards shall rise to the level of the theory from technical means

Thank you



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