Interaction Equivalency Theorem: The 64-Interaction Design Model and Its Significance to Online Teaching

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Outline

- The Interaction Equivalency (EQuiv) Theorem
- Brief Overview of the EQuiv Research
- Guidelines for the EQuiv Theorem Research
- The EQuiv 64-Interaction Design Model
- The EQuiv Interaction Design and Cost Issues

EQuiv

= Interaction **Equiv**alency Theorem

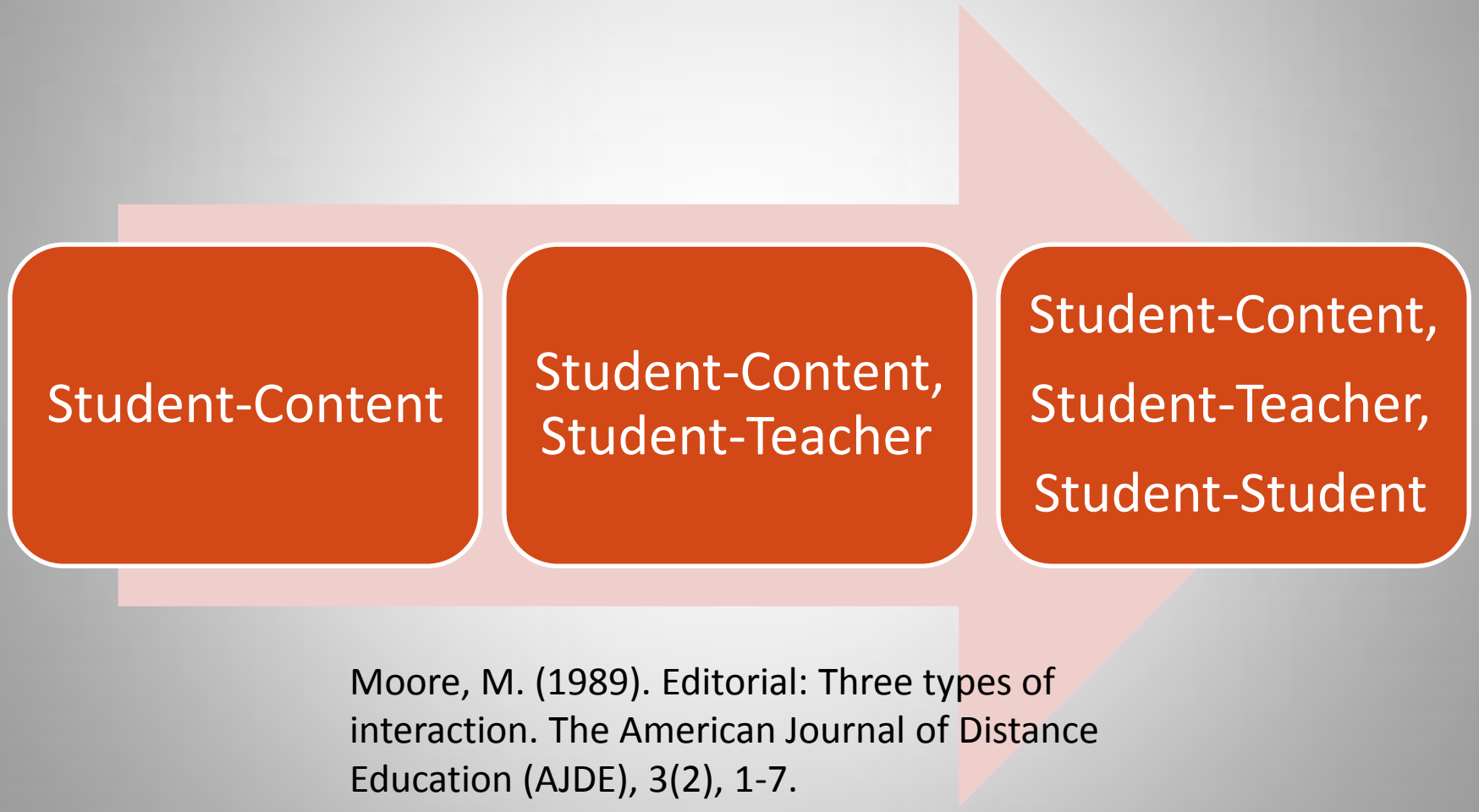
The Interaction Equivalency Theorem by Anderson (2003)

- **Thesis 1.** Deep and meaningful formal learning is supported as long as one of the three forms of interaction (student–teacher; student–student; student–content) is at a high level. The other two may be offered at minimal levels, or even eliminated, without degrading the educational experience.

- **Thesis 2.** High levels of more than one of these three modes will likely provide a more satisfying educational experience, although these experiences may not be as cost- or time effective as less interactive learning sequences.

Anderson, T. (2003). Getting the mix right again: An updated and theoretical rationale for interaction. The International Review of Research in Open and Distance Learning (IRRODL), 4(2).

History of Interaction in DE



Moore, M. (1989). Editorial: Three types of interaction. The American Journal of Distance Education (AJDE), 3(2), 1-7.

Getting the Mix Right History…

- Daniel, J., & Marquis, C. (1979). Interaction and independence: Getting the mixture right. *Teaching at a Distance, 15*, 25-44.

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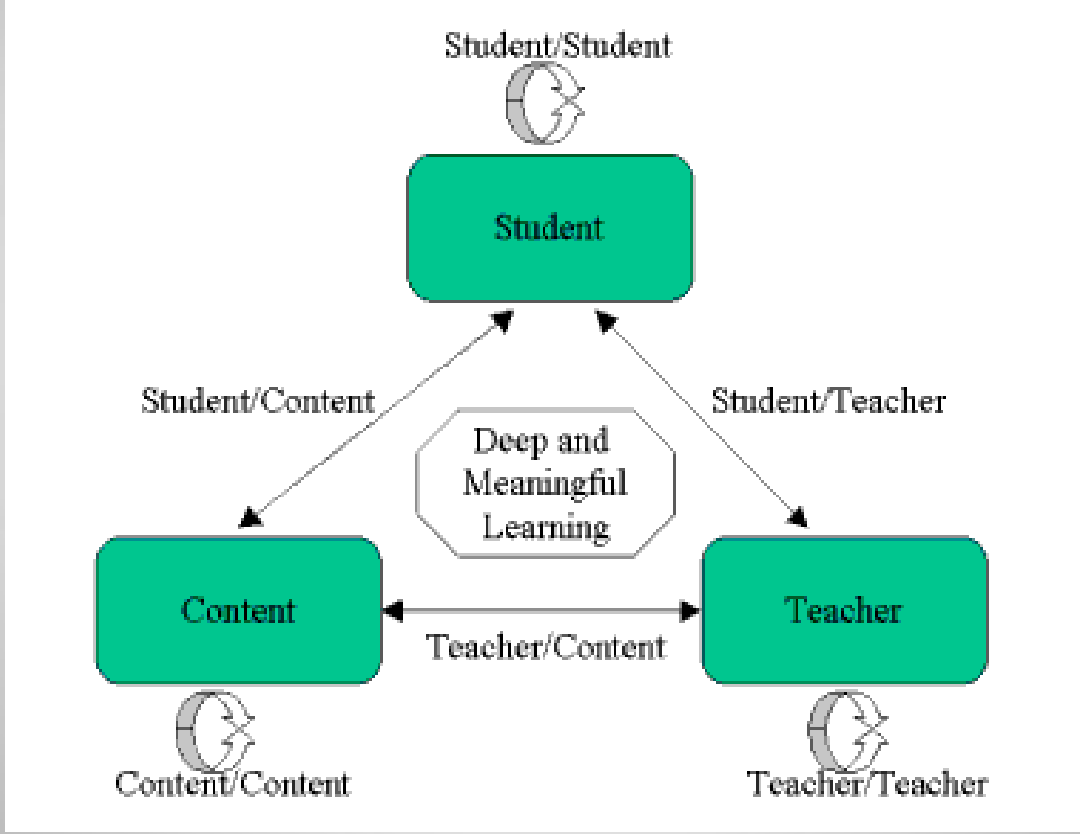
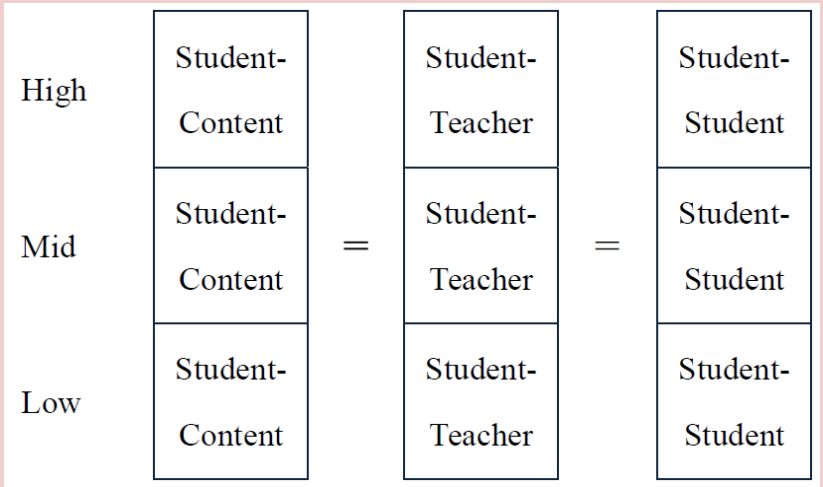
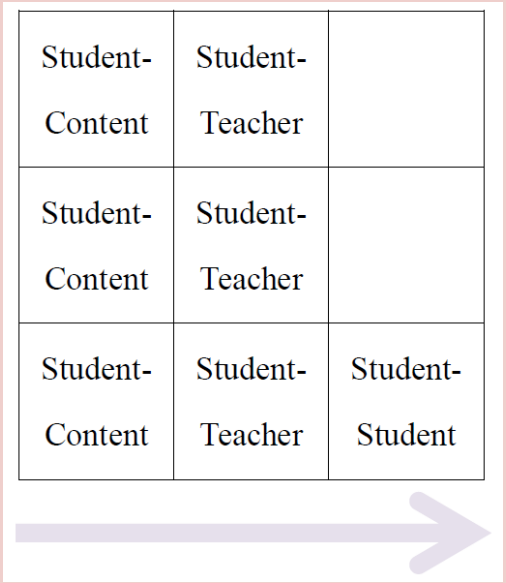
- (Miyazoe, T. (2012). Getting the Mix Right Once Again: A Peek into the Interaction Equivalency Theorem and Interaction Design. ALT Online News Letter.)

Modes of Interaction



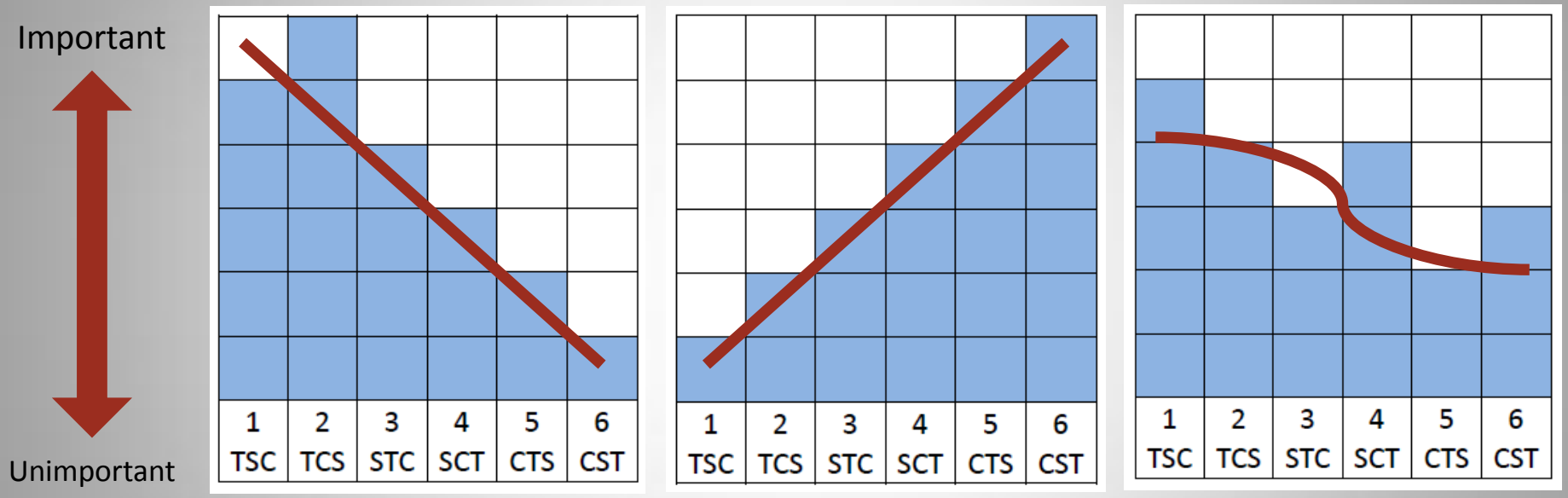
Garrison and Anderson (2003)

EQuiv Visualization

Thesis 1: Quality	Thesis 2: Quantity
	
If one kind of interaction is at a high level, one of them is ultimately enough?	Increased interaction = Higher satisfaction but more costs and time?

Learning Modes

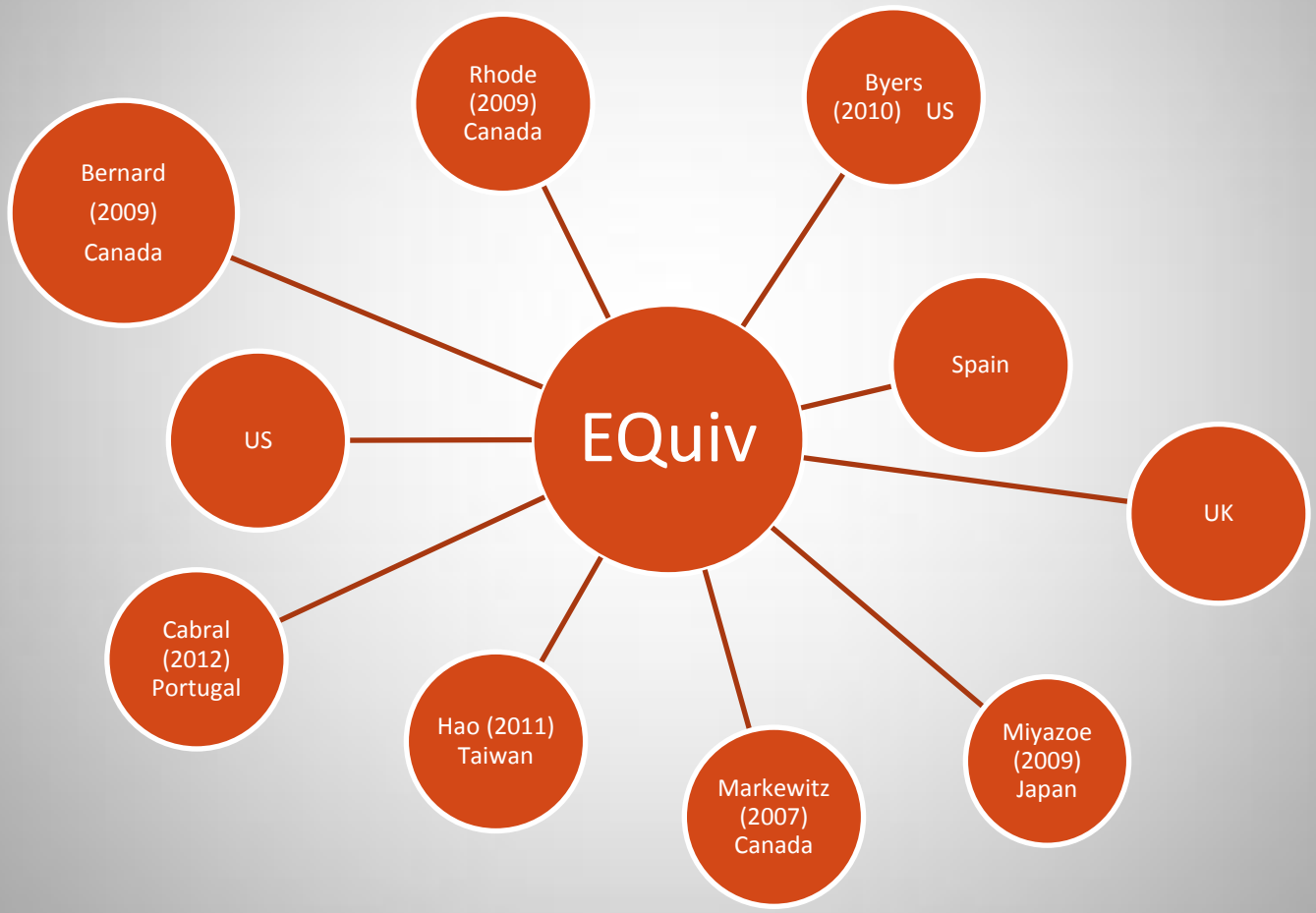
*TSC: Teacher-Student-Content



Face-to-face | Online DE | Blended

Miyazoe, T., & Anderson, T. (2010b). Empirical research on learners' perceptions: Interaction Equivalency Theorem in blended learning, *European Journal of Open, Distance and E-Learning (EURODL).*

The EQuiv Worldwide



The EQuiv Guidelines

1. All three axes (learner–content, learner–teacher, and learner–learner) constitute the research core for the analysis.
2. Research speculates on quality and/or quantity issues in the optimal dose/balance of interaction.
3. Research speculates on the outcomes of learning experiences, such as meaningfulness, learning outcomes, satisfaction, and cost/time issues.

Cost Issues in Interaction Design (ID)

3 $s

High	$		
Mid	$		
Low	$		
	SC	ST	SS

Interaction Design A

6 $s

High			
Mid	$	$	$
Low	$	$	$
	SC	ST	SS

Interaction Design B

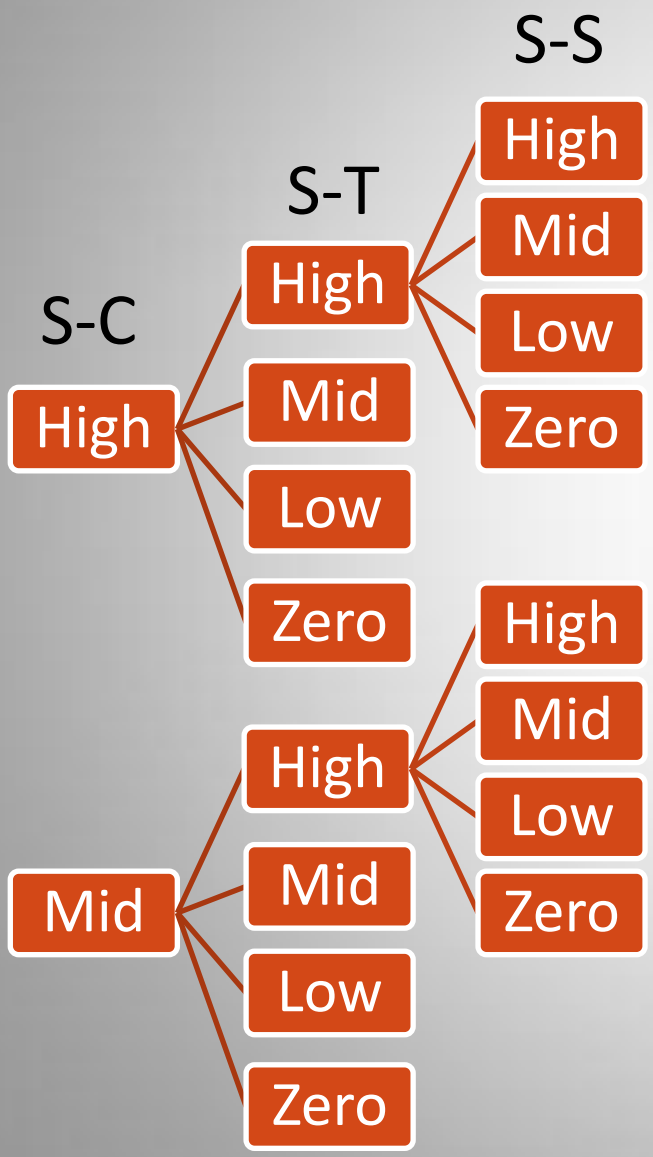
7 $s

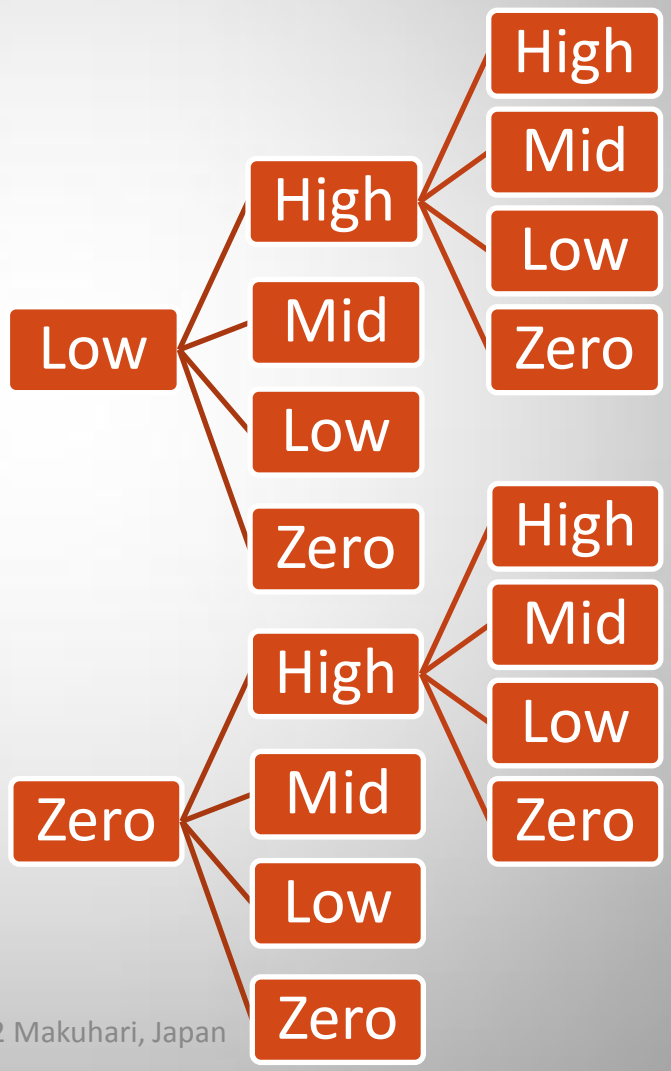
High	$		$
Mid	$		$
Low	$	$	$
	SC	ST	SS

Interaction Design C

*SC: Student-Content, ST: Student-Teacher, SS: Student-Student

The EQuiv 64-Interaction Designs





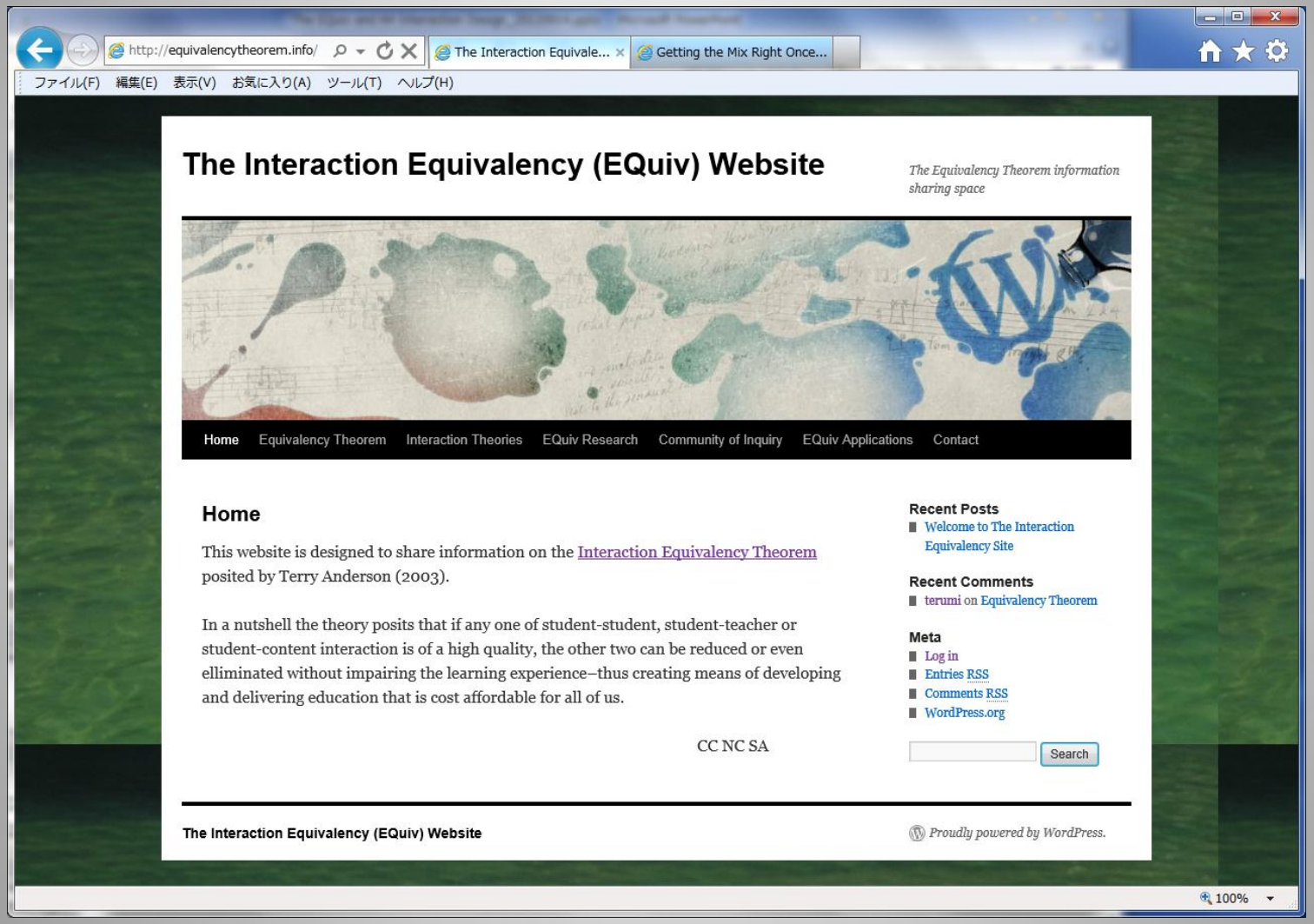
4x4x4
= 64

Appendix:

64 possible interaction designs in terms of quality/quantity

	Quality/Quantity of each interaction type			Thesis situation
1	High SC	High ST	High SS	
2			Middle SS	
3			Low SS	
4			No SS	
5		Middle ST	High SS	
6			Middle SS	
7			Low SS	
8			No SS	
9		Low ST	High SS	
10			Middle SS	
11			Low SS	Thesis 1 situation
12			No SS	
13		No ST	High SS	
14			Middle SS	
15			Low SS	
16			No SS	Thesis 1 situation
17	Middle SC	High ST	High SS	
18			Middle SS	
19			Low SS	

Equivalency Theorem Website



URL: equivalencytheorem.info

Thank you for your attention!

Your Comments/Questions Welcomed

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References

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- Moore, M. (1989). Editorial: Three types of interaction. The American Journal of Distance Education, 3(2), 1-7.