

SERVICE-LEARNING AND TRANSFER: ROLES OF COGNITIVE CONFLICT AND BEHAVIORAL ENGAGEMENT

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SERVICE-LEARNING (SL) IN CHINA

- Voluntary activities
- How SL is carried out in the United States

Our goals:

To examine the effects of SL in Chinese higher education context

To explore the mechanism of SL

Students' transfer of learning

- Cognitive conflict
- Behavioral engagement
- Gender

SL & TRANSFER

- **Transfer of Learning:** The process of applying what one knows in one situation to a novel situation (Dinsmore, Baggetta, Doyle, & Loughlin, 2014)
- **Service-Learning (SL):** “service, combined with learning, adds value to each and transforms both” (Honnet & Poulsen, 1989, p. 1)

SL can enhance students’ transfer of learning

- SL group were more likely to report that they gained the abilities to apply principles learned from class to new situations (Markus, et al., 1993)
- One of the most important cognitive outcomes from SL was transferability (Eyler & Giles, 1999)
- SL helps students to understand and apply the course material better than studying in the traditional classroom (Prentice & Robinson, 2010)

LIMITATIONS OF PREVIOUS STUDIES

Self-report
data



Actual
performance

Self-selection
bias



Quasi-
experiment

MECHANISM OF SL

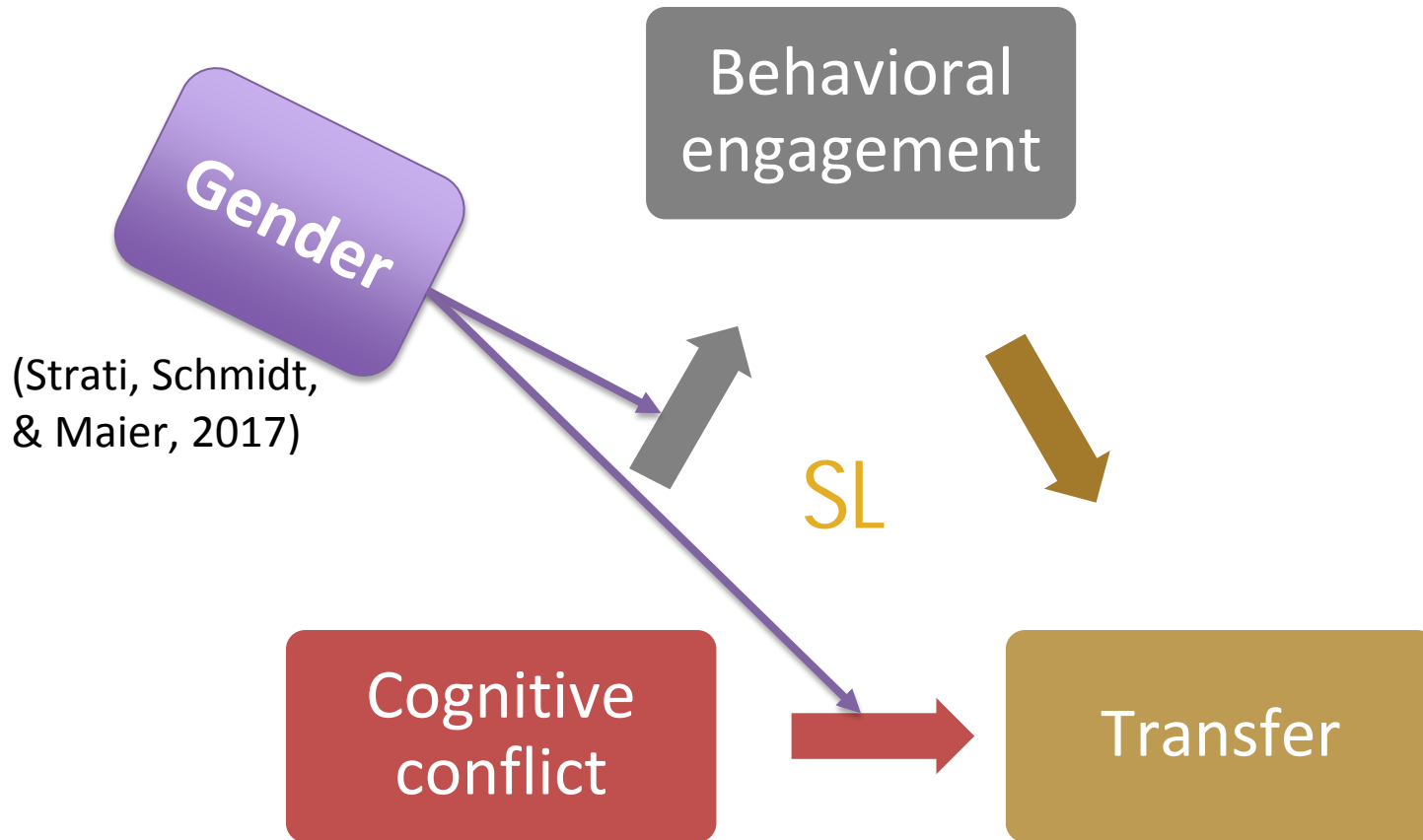


Figure 1. Hypothesized mediation model

OVERVIEW OF THE STUDY

- In Phase 1, we used a quasi-experiment to examine the effects of SL on college students' transfer of learning.
- In Phase 2, we focused on the SL group to further explore the mechanism of SL.

PHASE 1: EFFECTS OF SL ON TRANSFER

METHOD

- Participants: major in Psychology, take Psychology of Learning

	SL group	Control group
N	96 (75 females, 21 males)	90 (63 females, 27 males)

- Procedure:

	SL group	Control group
Task	Participate in SL activities on weekends for 9 weeks.	<ul style="list-style-type: none">• Read and translate four academic papers;• Complete a research proposal.
Measure	Watch a documentary about education in Singapore and answer to open-ended questions. Near transfer: Identify and evaluate the learning strategies in the documentary; Far transfer: Implications for the educational practices in China.	

SL ACTIVITIES

Criteria of high quality SL (Billig & Weah, 2008)	In our study
Linked to the curriculum	To apply learning principles, especially applied behavior analysis, to serve the children with autism (e.g., teach new skills, reduce interfering behaviors etc.)
Duration and intensity	2.5 hours every weekend for nine weeks
Youth voice	All the interactive activities were planned and conducted by students themselves
Monitor the progress toward meeting specified goals	Students were asked to reflect on their SL experiences by writing weekly reflective journals
Promote deep thinking and analysis	
Enhance students' competence in the activities	Each student was asked to work in a group of 4 people; each service group had a supervisor to provide support

PHASE 1: EFFECTS OF SL ON TRANSFER

Measure and coding: (Ge and Land's (2003) problem-solving assessment system)

- The intercoder agreements on all the 7 indicators were between 79% and 96%.

Construct	Indicator	Definition	Score
Near transfer	Flexibility	Whether students include details, analyses, and comments in the answers	0: no detail, no analysis, no comment
	Accuracy		
	Elaborateness		
Far transfer	Flexibility	Whether students include details, analyses, and comments in the answers	2: include some details, or provide a brief analysis of the strategies
	Suitability		
	Depth		4: include rich details, deep analysis, or provide comments on the effectiveness of the strategies
	Theory		

影片中的人物采用了哪些有效的强化物？

0 Tom 的父亲给 Tom 的手机 (1: 不适合, 不是强化, 不深刻), 符老师的鼓励 (2: 适合, 不深刻), 关爱的语言, Jerry 的爸妈去看 Jerry 表演 (3: 不适合, 不深刻), 符老师称赞校长发型很好看 (4: 适合, 不深刻) 等等。(流畅性: 4; 适当性: 2; 深刻性: 0)

2 用。在影片中, 人物采用了的有效的强化物有很多, 在家庭中, 当孩子犯错时, 孩子的父母不是进行心灵的交流和沟通, 而是进行打骂的教育方式, 这样不仅仅起不到教育孩子的作用, 反而会使得孩子更加反感, 强化孩子的犯错误的行为 (1, 不适当, 简单分析)。在学校, 当学生在考试上去的不好的成绩的时候, 老师不去仔细寻找其中的原因, 而仅仅是责怪学生, 把学生放学后留下来补习直到学生全部学会为止。这样做仅仅是强迫学生学习, 为什么老师不能想一想自身是否有不恰当的地方, 这样做只能是强化了学生的厌学情绪 (2, 不适当, 简单分析), 只会让学生下次考的更糟。影片中杰利的哥哥和成才跟别人打架, 学校要开除他们, 父母们苦苦相求, 但是成才还是被开除了, 杰利的哥哥也因此和在全校学生面前受到鞭打, 试问这样的教育方式怎么能够让学生成长, 怎么能够让学生在错误中学习, 从中吸取经验和教训。(流畅性: 2; 适当性: 0; 深刻性: 2) 为什么, 人们不使用、无效使用甚至是

影片中的父母和老师都在有意或无意之间使用了很多的强化手段, 也使用了很多的强化物。其中既有有效的强化物也有无效的甚至错误使用的。

父母从小就认为孩子不乖、调皮、不务正业, 而老师也一样, 认为学生笨, 不好好学习, 不遵守纪律, 虽然父母都有一颗爱自己孩子的心, 老师也为学生的顽皮而伤心不已, 不知所措, 但是他们都存在一个很大的问题, 那就是, 他们都只看到孩子的缺点却看不到他们身上的闪光点, 所以, 其实正如影片的名字一样, 小孩不笨, 他们缺少的只是父母一个温暖的微笑, 一句称赞的话语或者一个肯定的眼神。那么父母和老师的称赞和表扬就自然而然的成为了一个最好最有效的强化物, 因为它是直接针对根本问题的, 切中了要害。比如说, 一开始, 中文课老师只看到班上一个女同学考试分数很低, 然后狠狠的批评一顿, 结果女生当场变得很反叛, 可是当老师改变一种方式, 懂得称赞, 即使学生的成绩很低, 但是老师却倾向于看到她的进步并予以鼓励, 定下目标, 情况就变得很不一样了。称赞、表扬和认可是最有效也最容易给予的一种强化物。(1: 适当; 深刻4, 因为有人评价)

另外, 影片中也使用了一些物质性的强化物。比如说, Tom 爸爸给儿子买的 3G 手机, 虽然最终并没有能够以一个好的结果结束他们的晚餐, 但是若果没有后面的吵闹, 手机等物质性的强化物也将是会很有效的。(2: 不适当; 深刻0)

另外, 还存在着同辈之间的有效强化, 那些所谓的兄弟们对 Tom 的计算机才能的肯定和赞许使得 Tom 欣然的答应了他们并不合法的要求。事实上, 在这个年龄段孩子, 是很容易受同辈群体的影响的, 同辈的欣赏很可能成为一种非常有效地强化物 (3: 适当; 深刻2)。

当然, 还存在很多错误使用的但也有效地强化物。主要指的是老师和父母对孩子的贬低和大妈, 父母总是说孩子不务正业, 调皮捣蛋, 而老师呢, 则总说学生是个烂苹果, 这些言辞都是对强化错误的使用, 原本好好的孩子在这些负性的强化下越来越变成了老师父母口中

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PHASE 1: EFFECTS OF SL ON TRANSFER

RESULT

Construct	Indicator	SL (N=91)	Control (N=83)	F
Near transfer (What kinds of behavior modification strategies were used in the movie?)	Flexibility	1.89 (1.22)	2.33 (1.20)	8.22**
	Accuracy	2.88 (1.38)	2.30 (1.50)	14.50**
	Elaborateness	2.75 (1.57)	2.27 (1.39)	10.09*
Far transfer (What do you think about the implications of the movie for the current educational practices in China?)	Flexibility	2.06 (1.04)	2.16 (0.98)	0.36
	Suitability	2.92 (1.25)	2.88 (1.15)	0.08
	Depth	2.81 (1.26)	2.22 (1.33)	15.44**
	Theory	1.56 (1.60)	1.35 (1.63)	1.93

The results demonstrated the positive effects of SL on transfer of learning.

PHASE 2: MECHANISM OF SL

METHOD

- Participants:

	SL group
N	96 (75 females, 21 males)

- Measures:

	SL group
Cognitive conflict	Cognitive conflict level test (Lee et al., 2003), 12 items, Cronbach's alpha was 0.74
Behavioral engagement	Behavioral engagement scale (Skinner, Furrer, Marchand, & Kindermann, 2008), 10 items, Cronbach's alpha was 0.79
Transfer in SL	Do you think the course content covered in class was useful for your service activities? If yes, please write down the details

PHASE 2: MECHANISM OF SL

RESULT

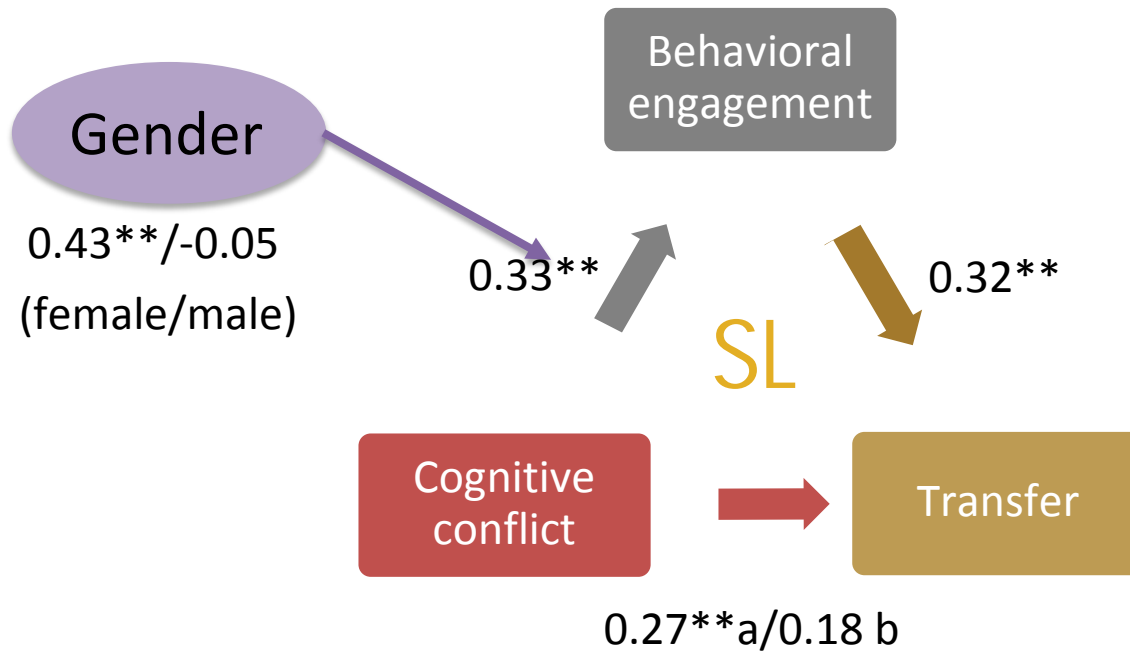


Figure 3. Results of the mediation model

The Sobel's (1982) test indicated that $Z = 2.32$, $p < 0.05$, which indicated that the relation from cognitive conflict to transfer of learning was **fully mediated by behavioral engagement**.

TAKEAWAYS

Findings	Implications
Positive effects of SL on college students' transfer of learning	The applicability of integrating SL into psychology course in China
The advantages of SL are mainly showed in students' deep thinking and proper application rather than the quantity of transfer.	Choose different teaching pedagogies based on different teaching objectives
Cognitive conflict is one of the factors that foster learning in SL; gender moderates the relation between cognitive conflict and behavioral engagement.	Instructors should be more aware of individual's cognitive and emotional states when implementing SL activities.



THANK YOU!

QUESTIONS AND SUGGESTIONS ARE WELCOME.

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