

**EFFECT OF SOCIAL CONSTRUCTIVIST LEARNING ENVIRONMENT ON  
STUDENT PERFORMANCE IN ONLINE COMMUNITY PHARMACY COURSE**

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**A Dissertation Submitted in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy Program in Social and Administrative Pharmacy  
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ผลของสภาพแวดล้อมการเรียนรู้ตามหลักโภชนาการตามหลักโภชนาการ  
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นันทลักษณ์ สถาพรนานนท์: ผลของสภาพแวดล้อมการเรียนรู้ตามหลักโซเชี่ยลคอนสตรัคติวิสต์ ที่มีต่อสัมฤทธิ์ผลการเรียนในระบบออนไลน์ของวิชาเภสัชกรรมชุมชน (EFFECT OF SOCIAL CONSTRUCTIVIST LEARNING ENVIRONMENT ON STUDENT PERFORMANCE IN ONLINE COMMUNITY PHARMACY COURSE)

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โซเชี่ยลคอนสตรัคติวิสต์ เป็น ทฤษฎีการเรียนรู้ที่เน้นว่านักเรียนจะเรียนรู้ได้อย่างมีประสิทธิภาพโดยการใช้ปฏิสัมพันธ์ การประนีประนอม และการช่วยยกระดับการเรียนรู้ซึ่งกันและกัน ทฤษฎีนี้ได้ถูกกล่าวถึงมากขึ้นในการเรียนในระบบออนไลน์ซึ่งเอื้อประโยชน์ต่อการแลกเปลี่ยนความรู้มากขึ้น แต่มีการศึกษาเชิงทดลองจำนวนไม่มากนัก ที่เกี่ยวกับรูปแบบการสอนในภาพรวมเพื่อที่จะก่อให้เกิดสภาพแวดล้อมการเรียนรู้ที่เอื้อต่อโซเชี่ยลคอนสตรัคติวิสต์ โดยเฉพาะอย่างยิ่งในด้านเภสัชศาสตร์ศึกษา การศึกษานี้เพื่อที่จะพัฒนารูปแบบการสอนออนไลน์ ตามทฤษฎีโซเชี่ยลคอนสตรัคติวิสต์ และเปรียบเทียบค่าสภาพแวดล้อมการเรียนรู้ที่เอื้อต่อโซเชี่ยลคอนสตรัคติวิสต์ที่เกิดขึ้น (SCLE) จากการเรียน 2 วิธีคือ วิธีการเรียนแบบร่วมมือจากเพื่อนความสามารถระดับเดียวกัน (Collaborative, CLG) และการเรียนด้วยวิธีร่วมกันเรียนจากเพื่อนที่มีความสามารถต่างระดับ (Scaffolding, SCG) นอกจากนี้ยังเปรียบเทียบผลสำเร็จในการเรียนของนิสิตทั้งสองวิธีด้วยเช่นกัน. การศึกษานี้ ออกแบบเป็น การวิจัยเชิงทดลองที่วัดผลเฉพาะหลังการทดลอง และมีการแบ่งกลุ่มโดยวิธีสุ่ม เครื่องมือที่ใช้ในการศึกษาเพื่อประเมินค่า SCLE คือ แบบสำรวจ Constructivist Online Learning Environment Survey (COLLES) ผลสำเร็จในการเรียนที่เกิดกับนิสิตนั้น วัดได้จาก 1) ผลลัพธ์ วัดผลการเรียนที่เกิดขึ้นและผลที่เกิดขึ้นเมื่อเวลาผ่านไป จากข้อสอบที่ได้พัฒนาขึ้น 2) ระยะเวลาการเรียน ซึ่งวัดเวลาที่ใช้ในการเรียน กระบวนการมีส่วนร่วม จากการเก็บข้อมูลโดยตรงผ่านเวปรายวิชา และ 3) ความยอมรับและพึงพอใจของนิสิตที่เกิดขึ้น โดยแบบสอบถามที่ผู้วิจัยจัดทำขึ้น ในที่นี้วิชาเภสัชกรรมชุมชนของจุฬาลงกรณ์มหาวิทยาลัย ได้ถูกเลือกและพัฒนาให้เป็นรูปแบบออนไลน์ โดยมีนิสิตเภสัชศาสตร์ชั้นปีที่ 5 ที่สมัครใจลงทะเบียนทั้งสิ้น 45 คน ในการศึกษาจะถูกแบ่งออกเป็น 2 กลุ่มเท่าๆกัน แต่ละกลุ่ม จะถูกกำหนดให้มีวิธีการเรียนคือ CLG หรือ SCG วิธีใดวิธีหนึ่ง ในกลุ่ม CLG นิสิต 22 คน จะเรียนทุกบทเรียน ส่วนนิสิต 23 คนของ SCG แต่ละคนจะเน้นศึกษาเพียงหนึ่งบทเรียน ท้ายที่สุดจะมีช่วงเวลาให้สำหรับนิสิตทุกคนที่จะแบ่งปันข้อมูลความรู้ของตนให้แก่เพื่อนคนอื่น นิสิตทุกคนควรจะต้องช่วยเหลือเพื่อนคนอื่นให้เข้าใจในบทเรียนทั้งหมด ผลการศึกษาพบว่า ค่าเฉลี่ยของ SCLE ที่นิสิตรับรู้เองจากแบบสอบถาม COLLES คือ  $3.75 \pm 0.52$  จาก ตัวเลือกทั้งหมด 5 ค่าของ แบบวัด Likert โดยไม่มีความแตกต่างอย่างมีนัยสำคัญระหว่าง CLG และ SCG ( $3.71+0.53$  vs.  $3.79+ 0.53$  ตามลำดับ;  $p=0.584$ ) ผลการศึกษาไม่พบความแตกต่างอย่างมีนัยสำคัญของตัวแปรใดๆที่วัดผลสำเร็จในการเรียนของนิสิต ระหว่าง CLG และ SCG เลย ดังนั้นวิธีการสอนที่พัฒนาขึ้นทั้งในรูปแบบ CLG และ SCG สามารถที่จะก่อให้เกิดสภาพแวดล้อมการเรียนรู้ที่เอื้อต่อโซเชี่ยลคอนสตรัคติวิสต์ และ นำไปสู่ผลสำเร็จทางการเรียนของนิสิตได้

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ปีการศึกษา 2549

ลายมือชื่ออาจารย์ที่ปรึกษา.....

ลายมือชื่ออาจารย์ที่ปรึกษาร่วม.....

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NUNTHALUXNA STHAPORNANON: EFFECT OF SOCIAL CONSTRUCTIVIST  
 LEARNING ENVIRONMENT ON STUDENT PERFORMANCE IN ONLINE  
 COMMUNITY PHARMACY COURSE. THESIS ADVISOR: ASST. PROF.  
 RUNGPECH SAKULBUMRUNGSIL, PH.D., THESIS COADVISOR:  
 ASST.PROF. ANUCHAI THEERAROUNGCHAI SRI, PH.D. , 198 pp.

Social constructivist learning theory emphasize that students learn effectively from interaction, negotiation and scaffoldings. . It is more concerned in an online instruction, which has emerged its role in promoting effective knowledge sharing. However, there were few experimental studies about the online instructional strategy to achieve social constructivist learning environment as a whole, particularly in pharmacy education. This study was to develop online instructional course according to the social constructivist learning theory and to compare the social constructivist learning environment (SCLE) of the two different strategies; collaborative (CLG) and scaffolding (SCG) strategy. Moreover, student performances of those two strategies were also compared. Experimental research; posttest-only randomized groups design was conducted. In this study, the tool applied to assess SCLE was Constructivist Online Learning Environment Survey (COLLES). Student performances measured as 1) the outcomes as immediate and retained learning achievement by developed examination 2) the process as time spent on the course, participation process by direct observation from the web course and 3) student perception and satisfaction by developed questionnaire. Community Pharmacy course at Chulalongkorn University was selected and developed to be online. There were 45 fifth year pharmacy students who voluntarily enrolled in this online course. The students were equivalently allocated into 2 groups. . Each group was assigned to study through either CLG or SCG. There were 22 students of CLG that were assigned to study all of the contents. Each of 23 students of SCG was designed to focus on only one unit of the course. Finally, there were some times available for all students to practice sharing their own knowledge with others. All students should help each other to learn and develop their understanding of all contents. The result revealed that average perceived SCLE by COLLES was  $3.75 \pm 0.52$  on the 5 point Likert scale with no significant difference between CLG and SCG ( $3.71 \pm 0.53$  vs.  $3.79 \pm 0.53$  respectively;  $p=0.584$ ). The result did not demonstrate any significant difference of those variables measuring student performances between CLG and SCG. Therefore, developed online instructional strategies, both CLG and SCG were concluded to facilitate SCLE, and achieve student performances.

Field of study Social and Administrative Pharmacy  
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## LISTS OF ABBREVIATIONS

CLG	Collaborative group
CMS	A Course Management System
COLLES	Constructivist Online Learning Environment Survey
GPAX	Accumulative grade average
MPI	Maudsley Personality Inventory
PSCE	Perceived Social constructivist environment
SCG	Scaffolding group
SCLD	Social constructivist learning development
SCLE	Social constructivist learning environment

### Cognitive domain of Bloom' Taxonomy

Kn	Knowledge
Cp	Comprehension
Ap	Application
An	Analysis
Ss	Synthesis
Ev	Evaluation