JIGSAW LEARNING VERSUS TRADITIONAL LECTURES: IMPACT ON STUDENT GRADES AND LEARNING EXPERIENCE

Presented by:
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INTRODUCTION

• numerous studies have been done on active learning including Jigsaw Cooperative Learning (JCL)
• most studies found that JCL positively impacted student performance
• studies on JCL and student experience – findings inconsistent
• this study considers impact of JCL as compared to lectures on two different student groups: traditional and international
WHAT IS JIGSAW COOPERATIVE LEARNING?

• instructor introduces topic and sub-components
• home groups are formed with 4-6 students, assigning each student with one of the sub-components of the topic
• students are expected to become an expert on their topic – prepare teaching notes
• formation of expert groups
JIGSAW COOPERATIVE LEARNING – cont’d

• return to home group
• each member of home group will teach their part of the puzzle to other group members
• result is formation of whole puzzle

• concluded with some type of testing
RESEARCH QUESTION 1

Q1: Will student grades be higher when JCL is used as compared to lectures? Will this be true for traditional and international student groups?
Q2: Will students prefer JCL over lecture-style learning? Will this be true for traditional and international student groups?
METHODOLOGY

• introductory insurance course – two different sections of students: traditional and international
• taught 4 modules JCL and 4 modules lecture-based
• each module tested using a multiple choice quiz – 5% weighting of final course mark
• quiz grades used to compare JCL with lecture for all students, traditional group, and international group
• student experience survey was completed by all students (optional)
• results were compared for all students, traditional group, and international group
RESULTS: STUDENT GRADES

• total of 49 students participated: 30 in traditional group and 19 international students
• student mean test scores were analyzed on SPSS using paired t-tests for all participants
• tests were conducted for each cohort separately
• traditional students: grades were slightly higher for JCL modules
RESULTS: STUDENT EXPERIENCE

• validated survey consisted of 15 questions

• same questions for JCL and lecture – optional

• rated on Likert scale from 1 – 5; 1 represented strong disagreement, 5 represented strong agreement
QUESTION GROUPINGS

1) Experience of Autonomy
2) Experience of Competence
3) Experience of Social Relatedness
4) Experience of Intrinsic Motivation
5) Activation of Deeper Level Processing
Experience of Autonomy

Experience of Competence
Experience of Social Relatedness

Experience of Intrinsic Motivation
Activation of Deeper Level Processing

[Box plot showing comparison between Jigsaw and Lecture methods for International and Traditional Cohorts]
CONCLUSION: QUESTION 1

• **Student Grades** – slightly higher for the traditional student group when using JCL over lecture.
CONCLUSION: QUESTION 2

• **Student Experience:** mixed results.

• **International Students:** results show a significant difference in experience of social relatedness when using JCL, and a slight increase in autonomy. Lectures resulted in deeper level processing of material.

• **Traditional Students:** results show a slight increase in experience of competence when lectures were given.


