

**Washington State University**

**College of Education**

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**Will defend the Thesis on**

**Date: November 16, 2023**

**Time: 9:00 A.M.**

**Pullman Campus – Cleveland Hall 353**

**Zoom by request to [gradstudies@wsu.edu](mailto:gradstudies@wsu.edu)**

*Faculty, students and the general public are encouraged to attend*

**THE EFFECT OF CHOICE OF DIFFERENT CONCEPT MAP FORMATS  
ON CHEMISTRY LEARNING AND MOTIVATION**

**Chair: Olusola Adesope**

Research on the use of concept maps (CM) has relied on randomly assigning participants to their respective CM format activities. Despite the effectiveness of learning with CMs, previous studies have yielded inconclusive results, perhaps due to students' lack of engagement and motivation. To address this, the present study uses a 2x3 factorial design to examine the effect of choice (choice vs. no-choice) and CM format (fill-in-the-blanks vs. map correction vs. map translation) on learning performance and intrinsic motivation in an undergraduate introductory second-semester chemistry class. Results indicated no statistically significant difference amongst the six group conditions on the multiple-choice and short-answer posttest scores after controlling for pretest. However, between the choice and no-choice groups overall, a significant main effect of choice was found in favor of the no-choice group in the multiple-choice posttest, controlling for pretest. No other significant interactions or effects were obtained for intrinsic motivation subscales, indicating that the conditions yielded comparable motivation outcomes. Implications and future directions are discussed.