

Washington State University

College of Education

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Will defend the dissertation

Date: October 29, 2018

Time: 1:00 P.M.

Location: Pullman - Education Addition 202

TriCities - E. Floyd 209

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

EXPLORING SCIENCE LITERACY OF ENGLISH LEARNERS IN K - 16 LEARNING ENVIRONMENTS

Co-chairs: Thomas Salsbury and Yuliya Ardasheva

This dissertation explores science literacy for English learners (ELs) in secondary and university contexts. The two studies conducted for this dissertation demonstrate the reading comprehension abilities of secondary school ELs, and the writing of ELs for a university introductory biology course. The first study reveals some inequity in public school education that ELs face when they arrive at the secondary school level. ELs can be placed into low-track streams limiting their options for college preparatory courses, and thus limiting their access to university. The transition chapter between the two studies highlights some areas where English for academic purposes (EAP) or intensive English program (IEP) books may not prepare students for the linguistic rigor of university writing course work. The second study identifies that ELs perform in between the work of their non-EL peers at the top 10% and the bottom 10% of the course. The study also indicates that all students could benefit from more genre instruction before writing lab reports. As all three groups of students struggled in similar areas of the lab report format, the study indicates that it takes time for all students to develop the skills needed science writing. The final chapter highlights areas to improve science literacy instruction for ELs at both the secondary and university levels. These suggested ways to improve science literacy for ELs would also benefit all students to develop science literacy. Overall, this dissertation gives insight to the needs of ELs at secondary and university level science instruction.