

ABSTRACT

The current study aimed to develop and evaluate a self-administered online reading test for screening dyslexic adults in bilingual environment. The motivation of this study was to address two issues met by conventional or existing dyslexia screening approaches: they are, the validity issue in collecting responses through behavior checklist and the administration overhead in screening. An online reading test was implemented, and the participants were asked to enter an online session, developed with web technologies, to pronounce and record a list of consistent/inconsistent English/Chinese words, and the collected digital speech recordings were analyzed to calculate the fluency and accuracy for consistent/inconsistent English/Chinese words. The fluency and accuracy measures were compared with the risk score collected through the Adult Reading History Questionnaire (ARHQ) attempted by the participants before the test. The results found that both the fluency and accuracy in inconsistent English words are valid measures of the risk level of the participants. However, the fluency and accuracy for consistent English words and consistent/inconsistent Chinese words, and the difference in fluency/accuracy in consistent and inconsistent English/Chinese words were proved not to be significant in correlating with the risk level of the participants and this requires further studies. In addition to the empirical results collected, the running of the online reading test provided valuable practical insights for future considerations towards a more automated self-administered online reading test.

Keywords: dyslexia, screening, online reading test, fluency, accuracy