COPS (Collaborative Online Problem Solving) is an online multiplayer game which was developed using a computer supported collaborative learning (CSCL) game based model. COPS aims to improve the problem solving skill of novice programmers by requiring them to collaboratively build program flowcharts. This paper presents the results and challenges of an experiment conducted using secondary school students between the ages of 14 and 17 who are preparing to write the Caribbean Secondary Education Certificate (CSEC) information technology exam. Initial findings indicate students prefer COPS to paper based, traditional problem solving exercises and that students were encouraged to work through the assigned tasks to completion.