• The circuit activity was submitted for approval six months before other activities commenced (Section 2.1)

• Once approval was received, the electronic circuits were designed (Section 2.2)

• Materials were ordered from suppliers three months before the activity
  • Kits for each student were assembled with components placed in individually labeled bags (Section 2.2)

• Technical references and circuit theory were prepared for student use (Section 2.3)

• The activities occurring in the classroom during the circuit activity were explicitly planned (Section 2.4)

• A conceptual model of learner-feedback loops was used to design the feedback collected from students in the class (Section 2.5)

• The circuit activity was conducted in the class (Sections 4.1, 4.2)
  • Students identified circuit applications (Section 4.3) and modelling applications (Section 4.4) with reference to models in hydrology (Section 3)

• Open-Ended Feedback (Section 5.1)
  • Closed-Ended Feedback (Section 5.2)
  • Feedback was analyzed using the framework designed in Section 2.5

• Hydrology education should be improved by innovative class activities
  • There is a need to distinguish between lecturer and researcher positions
  • Courses should be designed by a joint team considering student needs and emerging topics and technologies in hydrology (Section 6)

Possible Implementation in Other Classrooms