

## Validity of pedagogical content knowledge instruments

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### ABSTRAK

**Abstract:**

Suitable instruments are needed to measure PCK in environmentally friendly technology materials. This research aims to develop a multiple choice test question instrument and determine its validity. This research uses the Research and Development (R&D) method referring to the 4D model (Define, Design, Development and dissemination). The test instrument was developed using a modification of the Wilson Model and the Oriondo and Antonio Model. The question items were assessed by 7 science learning experts and obtained an average Aiken validity index of 0.94. Improvements to PCK test instrument items were discussed through FGD (Focus Group Discussion). The questions were tested on 145 respondents in two universities. The questions were tested on students who have received environmentally friendly technology material. Data was analyzed using the Rasch model (Winstep). Based on the analysis, item reliability is in the special category. The suitability of the items from the 25 PCK multiple choice questions falls into the "suitable" category in terms of the mean square, Z standard, and point measure correlation.

Kata Kunci: *validity, PCK (Pedagogical Content Knowledge), instruments*