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3. **Name of Topic:** PCK for NOS: Development and Evaluation of a Need-Based Module with specific Reference to its Impact on Pedagogical Practices
4. **Keywords:** Nature of Science, Pedagogical Content Knowledge, PCK for NOS, Science Education, Teaching-Learning
5. **Abstract**

One of the goals of science education is to help learners understand the Nature of Science (NOS). Learning about NOS contributes to conceptual understanding and scientific literacy growth among learners. The school science curriculum makes both overt and covert references to NOS. Addressing NOS in classrooms is the responsibility of teachers. To accomplish this, they need Pedagogical Content Knowledge for teaching the Nature of Science (PCK for NOS). However, the Teacher Education curriculum does not emphasize this component of teacher readiness. Based on this realization, the purpose of the present study was to develop a need-based module on PCK for NOS and evaluate how well it equips pre-service teachers with both understanding of NOS and the ability to teach it. The study was conducted in two phases. Phase 1 of the study was conducted to determine the needs that could form the basis for the module. This phase followed a survey design in which a self-developed questionnaire was administered to the in-service science teachers. Then, the module was developed using findings from phase 1 and given to pre-service science teachers. A quasi-experimental design was used in phase 2. The

effectiveness of the module was evaluated using a pre-test, a post-test, and an observation schedule. All of these tools were self-developed. The statistical methods employed to analyze the data included Pearson's correlation, t-test, and ANCOVA. The experimental group outperformed the control group, according to the findings of the study.