PROFESSIONAL COMPETENCY IMPROVEMENT OF TEACHERS OF SCIENCE IN DEVELOPMENT OF ASSESSMENT IN THE STANDARD OF INTERNATIONAL BENCHMARKING SURVEY (PISA) GLOBAL COMPETITIVE ORIENTATION

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ABSTRACT

The Natural Science (IPA) teacher standard in Indonesia still needs to be improved in quality, especially when linked to international benchmarking surveys. One such survey is the Program for International Student Assessment (PISA), measuring what students know and what they can do (application) with their knowledge. The purpose of this study is to improve the professional competence of IPA teacher candidates in the development of an international benchmarking survey (PISA) standardized assessment in order to be globally competitive, with strategic goals of prospective teacher candidates in the Education Institution of Education Personnel (LPTK). The stages of research carried out include; (1) get the results of testing the validity and reliability of the items for the measurement of the international benchmarking survey (PISA) standard assessment, (2) produce a mapping of the teacher competency academic competencies, especially the ability to develop international benchmarking survey (PISA) standard assessments, (3) improve candidate competencies teachers in the development of an international benchmarking survey (PISA) standard assessment through workshops and mentoring.

The methodology developed in this study is spiral model Research & Development as referenced by Cennamo and Kalk (2005: 6). In this spiral model, there are 5 (five) development phases, namely: (1) define, (2) design (design), (3) demonstration, (4) development, and (5) presentation (deliver). The study was conducted at the Department of Natural Sciences at the Faculty of Mathematics and Natural Sciences, Yogyakarta State University, by involving 2014 class year students who had taken the Science Learning Evaluation course and were preparing the writing of the Final Project Thesis.

The results of this study are; (1) the production of a valid PISA-based HOTS test device based on content and construct validation by the evaluation expert lecturer, (2) the results of mapping the teacher competency academic skills, especially the ability to develop a standard assessment of international benchmarking surveys (PISA) are; 6.06% are in the very good category, 71.21% are good, and 22.73 are in the poor category, (3) there is a significant influence from the workshop and assistance to increase the competence of prospective teachers in the development of international benchmarking survey (PISA) standard assessment based on different test values ??of pretest and posttest with Independent Sample t-Test obtained Sig (2-tailed) value of 0.018 <0.025 and the effect size value of 0.86.

Kata Kunci: *Standardized assessment, international benchmarking survey (PISA), professional competency, science teacher candidates*