ABSTRACT

Development of the FASTER Learning Model in Programming Language Courses.

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This research applied FASTER *Learning Model in Programming Language Course. Programming Languague is a course that is studied by students in the Computer Science Faculty, Information System Study Program. This course to fulfil problem solving skills and creative thinking because the problems faced were different for each programming case. Developed skills were directed to HOTS (High Order Thinking Skills) with specifications in analyzing, rationalizing, designing and creating skills. This research aims to produce a learning process that is fast, meaningful, easy to understand, the learning is fun, interactive, the formation of teamwork and can produce a product.*

The FASTER Learning model was developed from a collaboration of model the Cooperative Learning type Jigsaw and Project Based Learning using the MASTER strategy of the Accelerated Learning model. The model development process follows the ADDIE, (Analysis, Design, Development, Implementation, and Evaluation) development procedure and the type of research was a Research and Development.

The development of the model produces 6 syntax namely: Find, Accumulate, Strategy, Take Action, Evaluate, and Result, which have been statistically tested through the construct model of syntax with the Confirmatory Factor Analysis (CFA) approach using Lisrel tools. Syntactic test results meet the criteria for goodness-of-fit-models with RSMEA values <0.05 and p-values> 0.05. so the FASTER Learning model was declared valid. *To test the practicality and effectiveness of the model, a practicality test was carried out on users, namely lecturers and students. The results of the practicality of lecturers on product models: 1). book models at 89.99%, 2). lecturer manuals by 90.09%, 3). module books and student guides are 91.20% and can be declared Very Practical. The results of practicality tests by students on product models: module books and student guides amounted to 89.14% and were declared Very Practical. While the effectiveness test results in the experimental class using the FASTER Learning model obtained student learning outcomes higher than the control class.*

Keywords: *FASTER Learning, Cooperative-Project Based Learning, Pemrograman Language.*

ABSTRAK

Pengembangan Model FASTER *Learning* Pada Mata Kuliah
Bahasa Pemrograman

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Penelitian ini mengembangkan model pembelajaran dengan nama model FASTER *Learning* pada Mata Kuliah Bahasa Pemrograman. Bahasa Pemrograman merupakan Mata Kuliah yang dipelajari mahasiswa pada Prodi Sistem Informasi Fakultas Ilmu Komputer. Mata Kuliah ini membutuhkan keterampilan pemecahan masalah dan berpikir kreatif karena masalah yang dihadapi berbeda untuk setiap kasus pemrograman. Keterampilan yang dikembangkan diarahkan pada level HOTS (*High Order Thingking Skills*) dengan spesifikasi pada keterampilan menganalisis, merasionalkan, merancang dan menciptakan. Penelitian ini bertujuan untuk menghasilkan proses belajar yang cepat, bermakna, mudah dipahami, pembelajarannya menyenangkan, interaktif, terbentuknya kerjasama tim dan dapat menghasilkan suatu produk.

Model FASTER *Learning* dikembangkan dari kolaborasi model *Cooperative Learning* tipe *Jigsaw* dan *Project Based Learning* menggunakan strategi MASTER model *Accelerated Learning*. Proses pengembangan model mengikuti prosedur pengembangan ADDIE (*Analysis, Design, Development, Implementation, and Evaluation*) dan jenis penelitian adalah penelitian pengembangan (*Research and Development*).

Pengembangan model menghasilkan 6 sintak yaitu: *Find, Accumulate, Strategy, Take Action, Evaluate,* dan *Result,* yang telah diuji secara statistik melalui konstruk sintak model dengan pendekatan *Confirmatory Factor Analysis* (CFA) menggunakan *tools* Lisrel. Hasil uji konstruk sintak memenuhi kriteria *goodness-of-fit-models* dengan nilai RSMEA<0.05 dan nilai *p-value* >0.05. sehingga model FASTER *Learning* dinyatakan valid. Untuk menguji kepraktisan dan efektifitas model, maka dilakukan uji praktikalitas kepada pengguna yaitu dosen dan mahasiswa. Hasil uji praktikalitas dosen terhadap produk model: 1) buku model sebesar 89.99%, 2) buku panduan dosen sebesar 90.09%, 3) buku modul dan panduan mahasiswa sebesar 91.20% dan dapat dinyatakan Sangat Praktis. Hasil uji praktikalitas oleh mahasiswa terhadap produk model: buku modul dan panduan mahasiswa sebesar 89.14% dan dinyatakan Sangat Praktis. Sementara hasil uji efektifitas pada kelas eksperimen menggunakan model FASTER *Learning* diperoleh hasil belajar mahasiswa lebih tinggi dari kelas kontrol.

Kata Kunci: FASTER *Learning*, *Cooperative-Project Based Learning*, Bahasa Pemrograman.