ANALISIS SIKAP PELAJAR DIPLOMA TERHADAP MATEMATIK MENGGUNAKAN MODEL PERSAMAAN BERSTRUKTUR DAN REGRESI LOGISTIK

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ANALISIS SIKAP PELAJAR DIPLOMA TERHADAP MATEMATIK MENGGUNAKAN MODEL PERSAMAAN BERSTRUKTUR DAN REGRESI LOGISTIK

HUSNIZAAINA BINTI ABDUL MANAN

Oktober 2013

Pengerusi	: **Professor. Madya Wan Muhamad Amir bin W Ahmad, Ph.D**
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Pencapaian pelajar dalam mata pelajaran Matematik pada peringkat diploma program kerjasama institusi pengajian tinggi awam (IPTA) kian membimbangkan dan meninggalkan kesan ke atas reputasi sesebuah institusi pengajian tinggi swasta (IPTS) di Malaysia. Justeru itu, permasalahan ini perlu diselesaikan dengan segera dan ditangani dengan sebaik mungkin dengan mengambil pelbagai langkah proaktif dalam memastikan keberkesanan pendidikan yang berkualiti tinggi. Mohamad (1994) menyatakan bahawa pencapaian pelajar dalam mata pelajaran Matematik mempunyai hubungan yang kuat dengan sikap mereka. Sehubungan dengan itu, satu kajian dijalankan dengan tujuan meninjau sejauh mana tahap sikap pelajar IPTA dan IPTS terhadap mata pelajaran Matematik dan mengenalpasti faktor-faktor yang mempengaruhi sikap pelajar dalam proses pembelajaran matematik. Seramai 403 orang pelajar program diploma kerjasama IPTA dan IPTS terlibat dalam kajian ini. Kajian yang dijalankan berbentuk tinjauan menggunakan kaedah soal selidik. Terdapat 40 item dalam borang soal selidik yang terdiri daripada enam subkonstruk iaitu *keyakinan diri, sikap ke arah kejayaan, sikap ke arah*

kegagalan, pengaruh ibu bapa dan *pensyarah* serta *pengurusan masa*. Data dianalisis menggunakan statistik deskriptif seperti kekerapan dan peratusan, ujian *Mann Whitney U*, analisis faktor dan analisis regresi logistik serta model persamaan struktur (SEM). Dapatan kajian menunjukkan bahawa, peratus pelajar diploma kerjasama IPTA dan IPTS daripada kalangan perempuan adalah lebih tinggi berbanding lelaki yang terdiri daripada jurusan sains (59.1%) dan bukan sains (40.9%). Daripada hasil penelitian, didapati bahawa tidak terdapat perbezaan skor sikap pelajar terhadap pembolehubah peramal seperti jantina ($U = 13350.5$, $p = 0.074$), minat ($U = 8369.00$, $p = 0.095$) dan program ($U = 19257.50$, $p = 0.742$). Berdasarkan analisis faktor, *keyakinan diri* menyumbang sebanyak (62.33%), *sikap ke arah kejayaan* (62.80%), *sikap ke arah kegagalan* (52.36%), *pengaruh ibu bapa* (63.21%), *pengaruh guru* (55.70%) dan *pengurusan masa* (62.29%) varians secara keseluruhan. Dapatan kajian juga menunjukkan bahawa melalui analisis regresi logistik, minat signifikan terhadap sikap pelajar diploma dalam mata pelajaran Matematik ($\beta = 0.971$, 95% CI = 1.093, 6.379). Selain itu, analisis model persamaan struktur (SEM) memaparkan bahawa faktor yang signifikan adalah sikap ke arah kegagalan ($\beta = 0.123$, $p < 0.05$). Pendekatan yang bersesuaian diikuti dengan penambaikan yang berterusan harus dipergiatkan bagi meningkatkan pencapaian mata pelajaran Matematik di kalangan pelajar program diploma kerjasama IPTA dan IPTS.

Abstract of thesis presented to the Senate of Universiti Malaysia Terengganu in fulfillment of the requirement for the degree of Master of Science

ANALYSIS OF DIPLOMA STUDENT'S ATTITUDE TOWARDS MATHEMATICS USING STRUCTURAL EQUATION MODELING AND LOGISTIC REGRESSION

HUSNIZAAINA ABDUL MANAN

October 2013

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School	**: Informatics and Applied Mathematics**

Student achievement in mathematics of IPTA diploma level is a growing concern and leaves an impact on the reputation of the private's higher education institutions (IPTS) in Malaysia. Hence, this problem should be resolved promptly and dealt with as soon as possible by taking proactive steps to ensure the effectiveness of high-quality education. Mohamad (1994) says that student achievement in mathematics has a strong relationship with their attitude. In this regard, a study was conducted with the purpose of reviewing the extent of the IPTA and IPTS student's attitudes towards mathematic and identify the factors that influence the attitudes of students in learning mathematics. A total of 403 students IPTA and IPTS collaborative diploma programs were involved in this study. A survey was conducted using a questionnaire. The questionnaire consists of 40 items comprising with six sub-constructs such as *self-confidence, attitude toward success, attitude towards failure, the influence of parents and lecturers* as well as *time management*. Data were analyzed using descriptive statistics such as frequency and percentage, *Mann Whitney U* test, factor analysis and logistic regression analysis then structural equation modeling (SEM). The results

showed female students' were higher than men in science (59.1%) and non-science (40.9%). From the research results, it was found that there was no difference in score of students' attitudes towards predictor variables such as gender ($U = 13350.5$, $p = 0.074$), interest ($U = 8369.00$, $p = 0.095$) and programs ($U = 19257.50$, $p = 0.742$). Based on the factor analysis, the *confidence* contributed (62.33%), (62.80%) *attitude toward success, attitude towards failure* (52.36%), (63.21%) *parental influence,* the *influence of teacher* (55.70%) and *time management* (62.29%) of overall variance. The results showed that through logistic regression analysis, *interest* is significant on attitudes in Mathematics ($\beta = 0.971$, 95%CI $= 1.093, 6.379$). However, the structural equation modeling (SEM) show that the significant factors is attitudes towards failure ($\beta = 0.123$, $p < 0.05$). Any suitable approach followed by continuous improvement should be intensified to increase mathematics achievement among students of diploma programs.