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**PENILAIAN PROGRAM IJAZAH SARJANA MUDA
PERGURUAN (PISMP) MATEMATIK DI INSTITUT
PENDIDIKAN GURU MALAYSIA ZON UTARA**

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Abstrak

Program Ijazah Sarjana Muda Perguruan Matematik (PISMP) merupakan salah satu program pengajian yang ditawarkan di Institut Pendidikan Guru Malaysia (IPGM). Kajian lampau menunjukkan guru Matematik menghadapi masalah pengetahuan isi kandungan dan pedagogi Matematik dalam sesi pengajaran dan pembelajaran. Penilaian program latihan guru perlu dilaksanakan bagi menyediakan maklumat untuk tambah nilai program dan meningkatkan kualiti latihan guru. Kajian ini bertujuan menilai Program Ijazah Sarjana Muda Perguruan Matematik menggunakan Model Konteks-Input-Proses-Produk (CIPP) dengan memberi fokus kepada aspek kesesuaian kurikulum, kemudahan asas pembelajaran, sokongan pembelajaran, sumber pendidikan, kualiti pengajaran, pentaksiran, kemahiran, pengetahuan dan kepuasan guru pelatih terhadap program. Kaedah penyelidikan yang digunakan ialah kaedah gabungan iaitu kaedah kuantitatif dan kaedah kualitatif. Tinjauan dan temu bual digunakan untuk mendapatkan data persepsi guru pelatih daripada lima buah IPG di Zon Utara mengenai pelaksanaan program PISMP Matematik di IPG. Seramai 187 orang iaitu keseluruhan populasi guru pelatih PISMP Matematik terlibat menjawab soalan soal selidik. Temu bual menggunakan temu bual separa struktur melibatkan lima orang guru pelatih. Dapatan kajian menunjukkan penilaian responden terhadap aspek kesesuaian kurikulum adalah tinggi, aspek kemudahan asas, aspek sokongan pembelajaran, aspek sumber pendidikan yang disediakan oleh IPGM adalah sederhana, aspek kualiti pengajaran dan aspek pentaksiran adalah tinggi, aspek pengetahuan, kemahiran dan kepuasan guru pelatih adalah tinggi. Ujian Regresi Berganda menunjukkan terdapat pengaruh kemudahan asas, sokongan pembelajaran, sumber pendidikan, kualiti pengajaran, dan pentaksiran terhadap pengetahuan, kemahiran dan kepuasan. Kesan pengaruh kualiti pengajaran dan pentaksiran terhadap kemahiran adalah 36.0%, terhadap pengetahuan adalah 33.2% dan terhadap kepuasan adalah 29.0%. Begitu juga dengan kesan pengaruh kemudahan asas, sokongan pembelajaran dan sumber pendidikan terhadap terhadap kepuasan adalah 32.1%, terhadap pengetahuan adalah 14.4% dan terhadap kemahiran adalah 11.7%. Implikasi kajian ini menunjukkan kepentingan kurikulum, kemudahan asas, sokongan pembelajaran, sumber pendidikan, pengajaran pensyarah dan pentaksiran terhadap pengetahuan, kemahiran dan kepuasan kepada guru pelatih yang mengikuti Program PISMP Matematik di institut latihan perguruan. Kajian ini juga menyediakan maklumat pelaksanaan program PISMP Matematik di IPG. Data kajian dapat digunakan dalam program latihan perguruan untuk pemantapan guru pelatih kerana latihan perguruan yang baik akan melahirkan guru yang baik.

Kata kunci : Penilaian Program Ijazah Sarjana Muda Perguruan Matematik, Guru pelatih, Institut Pendidikan Guru Malaysia, Matematik, Model CIPP

Abstract

Bachelor of Teaching Mathematics (PISMP) is one of the programmes offered at Teachers Trainee Institute. Previous studies have shown there are Mathematics teachers who encounter problems with the content knowledge and Mathematical pedagogical knowledge in teaching and learning sessions. The reevaluation of teacher training programmes needs to be conducted in order to prepare data to add value to the programmes and to improve the quality of teacher trainings. The objective of this study is to evaluate the implementation of PISMP programmes using CIPP Model by focusing on the suitability of the curriculum, basic learning facilities, learning support, educational resources, teaching quality, assessment, skills, knowledge and satisfaction of trainee teachers towards the programmes. The research method used is a mix method (MMR) which is quantitative and qualitative method. Survey and interviews were used to obtain data from five IPG in Northern Region on the perception of trainee teachers on the PISMP programmes. Whole population of Northern Region PISMP Mathematics which is 187 trainee teachers were involved in answering questionnaires while five were involved in semi-structured interviews. The findings show that the respondents' assessment of the suitability of the curriculum is high. The quality of teaching, assessment, knowledge, skills and satisfaction of trainee teachers are also high. Assessment of basic facilitation aspects, learning support and the educational resources provided by IPGM is moderate. Multiple Regression testing indicate the influence of teaching quality and assessment on skills (36.0%), on knowledge (33.2%) and on satisfaction (29.0%). Similarly, the influence of basic facilities, learning support, and educational resources on satisfaction (32.1%), on knowledge (14.4%), and on skills (11.7%). The study indicates the importance of curriculum, basic facilities, learning support, educational resources, teaching quality and assessment towards knowledge, skills and satisfaction of trainee teachers which studied PISMP Mathematics programmes in teacher training institutes. This study also provides data on the implementation of the PISMP Mathematics programmes at IPG. Research data can be used in teacher training programmes since well conducted teacher trainings will produce great teachers.

Keywords : Evaluation of Bachelor Teaching Mathematics programmes, Teacher Trainees, Teachers Trainee Institute, Mathematics, Model CIPP

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Senarai Singkatan

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| PISMP | Program Ijazah Sarjana Muda Perguruan |
| IPG | Institut Pendidikan Guru |
| IPGM | Institut Pendidikan Guru Malaysia |
| IPGK | Institut Pendidikan Guru Kampus |
| IPT | Institut Pengajian Tinggi |
| CIPP | Context Input Process Product |
| NPQH | National Professional Qualification for Headship |
| SMA | Sekolah Menengah Agama |
| SABK | Sekolah Agama Bantuan Kerajaan |
| KPLI | Kursus Perguruan Lepas Ijazah |
| PROSPEN | Program Sokongan bagi Pensarjanaan Pensyarah |



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BAB SATU

Pengenalan

1.1 Pendahuluan

Pada 13 Julai 2005, Jemaah Menteri telah meluluskan 27 buah maktab perguruan dinaik taraf menjadi Institut Pendidikan Guru (IPG). Maktab perguruan yang hanya melahirkan guru berkelulusan sijil dan diploma pada satu ketika dahulu, kini diberi pengiktirafan melahirkan graduan dengan Ijazah Sarjana Muda Perguruan. Nama maktab perguruan telah ditukar kepada Institut Pendidikan Guru (IPG) sejak 2005. (IPGM, 2011). Impaknya IPG adalah sebuah institusi pendidikan tinggi yang bertaraf universiti dan graduan sulungnya telah menamatkan pengajian pada tahun 2010. Sehingga Disember 2012, Kohort Keempat Program Ijazah Sarjana Muda Perguruan (PISMP) telah berjaya menamatkan pengajian di Institut Pendidikan Guru dan telah menerima ijazah mereka pada bulan Mac 2013 di PICC Putrajaya. Perubahan nama institut ini bertujuan mengangkat institusi latihan perguruan dari segi kualiti keluaran bukan hanya peningkatan kelulusan sahaja. Malah ia bertujuan memberi nilai kepada misi IPG dalam melahirkan guru yang profesional.

Misi IPG ialah melaksanakan sistem pendidikan guru bertaraf dunia dan melahirkan guru profesional yang kompeten dan berwatak, bersedia menjunjung aspirasi Kementerian Pelajaran Malaysia serta menyanjung warisan budaya negara (Buku Panduan Program Ijazah Sarjana Muda Perguruan Dengan Kepujian, 2010). Pelaksanaan program pengajian di IPG hendaklah selaras dengan misi IPG iaitu program yang ditawarkan mempunyai kualiti dan dapat membentuk modal insan guru yang kompeten dan berwatak. Guru berwatak bermaksud sentiasa melakukan peningkatan kemahiran, kebolehan, kerjaya yang boleh dicapai melalui usaha

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LAMPIRAN A

Analisis Menggunakan Fuzzy Delphi Bagi Ujian Keperluan (Need Analysis)

LANGKAH 1: PENENTUAN PAKAR, BILANGAN PAKAR YANG TERLIBAT ADALAH 20 ORANG.

Pemilihan 20 orang pakar adalah berdasarkan Jones & Twiss, 1978 yang menyatakan bagi delphi method bilangan responden adalah 10-50 responden.

LANGKAH 2 PEMILIHAN FUZZY SCALE

Pemilihan skala fuzzy mengikut soalan kajian:

| ARAS PERSETUJUAN | SKALA FUZZY | | |
|---------------------|-------------|-----|-----|
| SANGAT SETUJU | 0.6 | 0.8 | 1 |
| SETUJU | 0.4 | 0.6 | 0.8 |
| SEDERHANA SETUJU | 0.2 | 0.4 | 0.6 |
| TIDAK SETUJU | 0 | 0.2 | 0.4 |
| SANGAT TIDAK SETUJU | 0 | 0 | 0.2 |

LANGKAH 3: MENDAPATKAN NILAI PURATA (m1 , m2 , m3)

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 1 | | | 2 | | | 3 | | |
| 1 | 0.6 | 0.8 | 1 | 0.2 | 0.4 | 0.6 | 0.6 | 0.8 | 1 |
| 2 | 0.6 | 0.8 | 1 | 0.2 | 0.4 | 0.6 | 0.4 | 0.6 | 0.8 |
| 3 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 4 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 5 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 6 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.2 | 0.4 | 0.6 |
| 7 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 |
| 9 | 0.6 | 0.8 | 1 | 0.2 | 0.4 | 0.6 | 0.4 | 0.6 | 0.8 |
| 10 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 11 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 12 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 13 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 14 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 15 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |

| PAKAR | ITEM | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 1 | | | 2 | | | 3 | | |
| 16 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 17 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 18 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 19 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 20 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| PURATA | 0.510 | 0.710 | 0.910 | 0.430 | 0.630 | 0.830 | 0.470 | 0.670 | 0.870 |
| | m1 | m2 | m3 | m1 | m2 | m3 | m1 | m2 | m3 |

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 4 | | | 5 | | | 6 | | |
| 1 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 2 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 3 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 4 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 5 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 6 | 0 | 0 | 0.2 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 7 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |

| PAKAR | ITEM | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 4 | | | 5 | | | 6 | | |
| 8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 9 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 10 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 11 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 |
| 12 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 13 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 14 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 15 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 16 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 17 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 18 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 19 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 20 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| PURATA | 0.470 | 0.660 | 0.860 | 0.480 | 0.680 | 0.880 | 0.490 | 0.690 | 0.890 |
| | m1 | m2 | m3 | m1 | m2 | m3 | m1 | m2 | m3 |

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 7 | | | 8 | | | 9 | | |
| 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 2 | 0.6 | 0.8 | 1 | 0.2 | 0.4 | 0.6 | 0.2 | 0.4 | 0.6 |
| 3 | 0.6 | 0.8 | 1 | 0 | 0.2 | 0.4 | 0 | 0.2 | 0.4 |
| 4 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 5 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 6 | 0.4 | 0.6 | 0.8 | 0.2 | 0.4 | 0.6 | 0.2 | 0.4 | 0.6 |
| 7 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 9 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 10 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 11 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 |
| 12 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 13 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 14 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 15 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 16 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 17 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |

| PAKAR | ITEM | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 7 | | | 8 | | | 9 | | |
| 18 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 19 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 20 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| PURATA | 0.520 | 0.720 | 0.920 | 0.430 | 0.630 | 0.830 | 0.440 | 0.640 | 0.840 |
| | m1 | m2 | m3 | m1 | m2 | m3 | m1 | m2 | m3 |

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 10 | | | 11 | | | 12 | | |
| 1 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 2 | 0.2 | 0.4 | 0.6 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 3 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0 | 0.2 | 0.4 |
| 4 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 5 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 |
| 6 | 0.4 | 0.6 | 0.8 | 0.2 | 0.4 | 0.6 | 0.4 | 0.6 | 0.8 |
| 7 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 9 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 |
| 10 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |

| PAKAR | ITEM | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 10 | | | 11 | | | 12 | | |
| 11 | 0.4 | 0.6 | 0.8 | 0.2 | 0.4 | 0.6 | 0.4 | 0.6 | 0.8 |
| 12 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 |
| 13 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 14 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 15 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 16 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 17 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 18 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 19 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 20 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 |
| PURATA | 0.500 | 0.700 | 0.900 | 0.460 | 0.660 | 0.860 | 0.470 | 0.670 | 0.870 |
| | m1 | m2 | m3 | m1 | m2 | m3 | m1 | m2 | m3 |

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 13 | | | 14 | | | 15 | | |
| 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 2 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 3 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0 | 0.2 | 0.4 |
| 4 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 |
| 5 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 |
| 6 | 0.2 | 0.4 | 0.6 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 |
| 7 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 9 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 10 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 11 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 12 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 13 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 |
| 14 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 15 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 16 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 17 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |

| PAKAR | ITEM | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 13 | | | 14 | | | 15 | | |
| 18 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 19 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 20 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| PURATA | 0.480 | 0.680 | 0.880 | 0.490 | 0.690 | 0.890 | 0.470 | 0.670 | 0.870 |
| | m1 | m2 | m3 | m1 | m2 | m3 | m1 | m2 | m3 |

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 16 | | | 17 | | | 18 | | |
| 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 2 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 3 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 |
| 4 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 5 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 |
| 6 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0 | 0.2 | 0.4 |
| 7 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 9 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 10 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |

| PAKAR | ITEM | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 16 | | | 17 | | | 18 | | |
| 11 | 0.4 | 0.6 | 0.8 | 0.2 | 0.4 | 0.6 | 0.2 | 0.4 | 0.6 |
| 12 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 13 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 14 | 0.4 | 0.6 | 0.8 | 0.2 | 0.4 | 0.6 | 0.2 | 0.4 | 0.6 |
| 15 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 16 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 17 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 18 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 19 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 20 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 |
| PURATA | 0.490 | 0.690 | 0.890 | 0.460 | 0.660 | 0.860 | 0.430 | 0.630 | 0.830 |
| | m1 | m2 | m3 | m1 | m2 | m3 | m1 | m2 | m3 |

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 19 | | | 20 | | | 21 | | |
| 1 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.4 |
| 2 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |
| 3 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 4 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.6 |
| 5 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 0.4 |
| 6 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 7 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |
| 8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |
| 9 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |
| 10 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |
| 11 | 0.2 | 0.4 | 0.6 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.2 |
| 12 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 13 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 14 | 0.2 | 0.4 | 0.6 | 0.2 | 0.4 | 0.6 | 0.2 | 0.4 | 0.2 |
| 15 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 16 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 17 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |

| PAKAR | ITEM | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 19 | | | 20 | | | 21 | | |
| 18 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 19 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 20 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| PURATA | 0.450 | 0.650 | 0.850 | 0.470 | 0.670 | 0.870 | 0.480 | 0.680 | 0.880 |
| | m1 | m2 | m3 | m1 | m2 | m3 | m1 | m2 | m3 |

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 22 | | | 23 | | | 24 | | |
| 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 2 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 3 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0 | 0.2 | 0.4 |
| 4 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 5 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 |
| 6 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 7 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 9 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 10 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |

| PAKAR | ITEM | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 22 | | | 23 | | | 24 | | |
| 11 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.2 | 0.4 | 0.6 |
| 12 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 13 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 14 | 0.2 | 0.4 | 0.6 | 0.2 | 0.4 | 0.6 | 0 | 0.2 | 0.4 |
| 15 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 16 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 17 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 18 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 19 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 20 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| PURATA | 0.470 | 0.670 | 0.870 | 0.480 | 0.680 | 0.880 | 0.430 | 0.630 | 0.830 |
| | m1 | m2 | m3 | m1 | m2 | m3 | m1 | m2 | m3 |

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 25 | | | 26 | | | 27 | | |
| 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 2 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 3 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 4 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 5 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 6 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0 | 0.2 | 0.4 |
| 7 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.2 | 0.4 | 0.6 |
| 8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 9 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 10 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |
| 11 | 0.2 | 0.4 | 0.6 | 0.2 | 0.4 | 0.6 | 0.2 | 0.4 | 0.6 |
| 12 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 13 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 14 | 0 | 0.2 | 0.4 | 0 | 0.2 | 0.4 | 0 | 0.2 | 0.4 |
| 15 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 16 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 |
| 17 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 |

| PAKAR | ITEM | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 25 | | | 26 | | | 27 | | |
| 18 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 19 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 20 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.2 | 0.4 | 0.4 |
| PURATA | 0.440 | 0.640 | 0.840 | 0.450 | 0.650 | 0.850 | 0.400 | 0.600 | 0.440 |
| | m1 | m2 | m3 | m1 | m2 | m3 | m1 | m2 | m1 |

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 28 | | | 29 | | | 30 | | |
| 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |
| 2 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |
| 3 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |
| 4 | 0.4 | 0.6 | 0.8 | 0.2 | 0.4 | 0.6 | 0.2 | 0.4 | 0.4 |
| 5 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.6 |
| 6 | 0.2 | 0.4 | 0.6 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.2 |
| 7 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.4 | 0.6 | 0.6 |
| 8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |
| 9 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |
| 10 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |

| PAKAR | ITEM | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 28 | | | 29 | | | 30 | | |
| 11 | 0.2 | 0.4 | 0.6 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.2 |
| 12 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.4 |
| 13 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 14 | 0 | 0.2 | 0.4 | 0 | 0.2 | 0.4 | 0 | 0.2 | 0 |
| 15 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 16 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 17 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 1 | 0.6 | 0.8 | 0.6 |
| 18 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 19 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.8 | 0.4 | 0.6 | 0.4 |
| 20 | 0.2 | 0.4 | 0.6 | 0.4 | 0.6 | 0.8 | 0.6 | 0.8 | 0.2 |
| PURATA | 0.440 | 0.640 | 0.840 | 0.460 | 0.660 | 0.860 | 0.460 | 0.660 | 0.440 |
| | m1 | m2 | m3 | m1 | m2 | m3 | m1 | m2 | m1 |

| PAKAR | ITEM | | |
|-------|------|-----|-----|
| | 31 | | |
| 1 | 0.6 | 0.8 | 1 |
| 2 | 0.6 | 0.8 | 1 |
| 3 | 0.6 | 0.8 | 1 |
| 4 | 0.2 | 0.4 | 0.6 |
| 5 | 0.4 | 0.6 | 0.8 |
| 6 | 0.4 | 0.6 | 0.8 |
| 7 | 0.4 | 0.6 | 0.8 |
| 8 | 0.6 | 0.8 | 1 |
| 9 | 0.6 | 0.8 | 1 |
| 10 | 0.6 | 0.8 | 1 |
| 11 | 0.4 | 0.6 | 0.8 |
| 12 | 0.6 | 0.8 | 1 |
| 13 | 0.4 | 0.6 | 0.8 |
| 14 | 0 | 0.2 | 0.4 |
| 15 | 0.4 | 0.6 | 0.8 |
| 16 | 0.4 | 0.6 | 0.8 |
| 17 | 0.6 | 0.8 | 1 |

| PAKAR | ITEM | | |
|--------|-------|-------|-------|
| | 31 | | |
| 18 | 0.4 | 0.6 | 0.8 |
| 19 | 0.4 | 0.6 | 0.8 |
| 20 | 0.6 | 0.8 | 1 |
| PURATA | 0.460 | 0.660 | 0.860 |
| | m1 | m2 | m3 |



LANGKAH 4:**MENENTUKAN NILAI 'd' (TRHESHOLD VALUE)**

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | 0.1 | 0.4 | 0.2 | 0.4 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 |
| 2 | 0.2 | 0.4 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.4 | 0.4 |
| 3 | 0.1 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.7 | 0.7 |
| 4 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 |
| 5 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 |
| 6 | 0.2 | 0.0 | 0.4 | 1.0 | 0.1 | 0.1 | 0.2 | 0.4 | 0.4 |
| 7 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 |
| 8 | 0.2 | 0.0 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 |
| 9 | 0.1 | 0.4 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 0.1 |
| 10 | 0.1 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 |
| 11 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 | 0.2 |
| 12 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 |
| 13 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 |
| 14 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 |
| 15 | 0.1 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 |
| 16 | 0.1 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 |
| 17 | 0.1 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 |

| PAKAR | ITEM | | | | | | | | |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 18 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 |
| 19 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.2 |
| 20 | 0.2 | 0.3 | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 | 0.0 | 0.1 |
| Nilai d setiap item | 3.055 | 3.116 | 3.177 | 4.005 | 2.933 | 3.024 | 2.933 | 3.636 | 3.910 |
| Nilai d total item | | | | | | | | | |
| Nilai d konstruk | | | | | | | | | |
| PAKAR | ITEM | | | | | | | | |
| | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| 2 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 |
| 3 | 0.2 | 0.2 | 0.7 | 0.1 | 0.1 | 0.7 | 0.1 | 0.2 | 0.0 |
| 4 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 |
| 5 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.3 |
| 6 | 0.2 | 0.4 | 0.1 | 0.4 | 0.2 | 0.1 | 0.1 | 0.1 | 0.7 |
| 7 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 |
| 8 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 |
| 9 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 |
| 10 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 |
| 11 | 0.2 | 0.4 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.4 | 0.4 |

| PAKAR | ITEM | | | | | | | | |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 12 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 |
| 13 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 |
| 14 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.4 | 0.4 |
| 15 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 |
| 16 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 |
| 17 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 |
| 18 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| 19 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 |
| 20 | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 |
| Nilai d setiap item | 3.361 | 3.422 | 3.574 | 3.299 | 3.024 | 3.574 | 3.024 | 3.422 | 3.636 |
| Nilai d total item | | | | | | | | | |
| Nilai d konstruk | | | | | | | | | |

| PAKAR | ITEM | | | | | | | | |
|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2 |
| 2 | 0.2 | 0.2 | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 |
| 3 | 0.1 | 0.1 | 0.7 | 0.3 | 0.2 | 0.7 | 0.3 | 0.1 | 0.7 |
| 4 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 |

| PAKAR | ITEM | | | | | | | | |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 5 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 |
| 6 | 0.1 | 0.1 | 0.4 | 0.2 | 0.4 | 0.2 | 0.4 | 0.2 | 0.1 |
| 7 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 8 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 9 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 |
| 10 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 |
| 11 | 0.1 | 0.1 | 0.2 | 0.2 | 0.4 | 0.2 | 0.1 | 0.1 | 0.1 |
| 12 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 |
| 13 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 |
| 14 | 0.4 | 0.4 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 15 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 16 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 17 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| 18 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 19 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 20 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 |
| Nilai d setiap item | 3.177 | 3.299 | 4.024 | 3.616 | 3.634 | 3.797 | 3.557 | 3.257 | 3.673 |
| Nilai d total item | | | | | | | | | |
| Nilai d konstruk | | | | | | | | | |

| PAKAR | ITEM | | |
|-------|------|-----|-----|
| | 29 | 30 | 31 |
| 1 | 0.2 | 0.2 | 0.2 |
| 2 | 0.1 | 0.2 | 0.3 |
| 3 | 0.3 | 0.2 | 0.1 |
| 4 | 0.1 | 0.1 | 0.1 |
| 5 | 0.1 | 0.1 | 0.2 |
| 6 | 0.1 | 0.1 | 0.6 |
| 7 | 0.2 | 0.2 | 0.3 |
| 8 | 0.2 | 0.2 | 0.3 |
| 9 | 0.1 | 0.2 | 0.3 |
| 10 | 0.2 | 0.2 | 0.3 |
| 11 | 0.1 | 0.4 | 0.4 |
| 12 | 0.2 | 0.1 | 0.1 |
| 13 | 0.1 | 0.1 | 0.1 |
| 14 | 0.1 | 0.4 | 0.4 |
| 15 | 0.2 | 0.1 | 0.1 |
| 16 | 0.2 | 0.1 | 0.1 |
| 16 | 0.2 | 0.2 | 0.2 |

| PAKAR | ITEM | | |
|----------------------------|---------------|-------|-------|
| | 29 | 30 | 31 |
| 17 | 0.2 | 0.2 | 0.3 |
| 18 | 0.1 | 0.1 | 0.1 |
| 19 | 0.2 | 0.1 | 0.1 |
| 20 | 0.2 | 0.2 | 0.1 |
| Nilai d setiap item | 3.279 | 3.532 | 3.870 |
| Nilai d total item | 106.050 | | |
| Nilai d konstruk | 0.1710 | | |

* Syarat pertama

*Syarat sudah dipatuhi kerana nilai threshold (d) bagi konstruk adalah ≤ 0.2

LANGKAH 5:

MENENTUKAN PERATUSAN KESEPAKATAN SETIAP ITEM DAN KESELURUHAN ITEM

| | ITEM | | | | | | | | |
|---|-----------------------|-----|-----|-----|------|------|------|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Bilangan Item $d \leq 0.2$ | 20 | 11 | 19 | 19 | 20 | 20 | 20 | 11 | 17 |
| Peratus Setiap Item $d \leq 0.2$ | 100% | 55% | 95% | 95% | 100% | 100% | 100% | 55% | 85% |
| Total Item $d \leq 0.2$ | 620 | | | | | | | | |
| Peratus Keseluruhan Item $d \leq 0.2$ | 88.71% (Syarat kedua) | | | | | | | | |

| | ITEM | | | | | | | | |
|---|--------|-----|-----|-----|------|-----|------|-----|-----|
| | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Bilangan Item $d \leq 0.2$ | 19 | 18 | 19 | 19 | 20 | 19 | 20 | 18 | 10 |
| Peratus Setiap Item $d \leq 0.2$ | 95% | 90% | 95% | 95% | 100% | 95% | 100% | 90% | 50% |
| Total Item $d \leq 0.2$ | 620 | | | | | | | | |
| Peratus Keseluruhan Item $d \leq 0.2$ | 88.71% | | | | | | | | |

| | ITEM | | | | | | | | |
|---|--------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| Bilangan Item $d \leq 0.2$ | 18 | 19 | 19 | 17 | 18 | 16 | 19 | 18 | 19 |
| Peratus Setiap Item $d \leq 0.2$ | 90% | 95% | 95% | 85% | 90% | 80% | 95% | 90% | 95% |
| Total Item $d \leq 0.2$ | 620 | | | | | | | | |
| Peratus Keseluruhan Item $d \leq 0.2$ | 88.71% | | | | | | | | |

| | ITEM | | | |
|---|--------|------|-----|-----|
| | 28 | 29 | 30 | 31 |
| Bilangan Item $d \leq 0.2$ | 19 | 20 | 18 | 11 |
| Peratus Setiap Item $d \leq 0.2$ | 95% | 100% | 90% | 55% |
| Total Item $d \leq 0.2$ | 620 | | | |
| Peratus Keseluruhan Item $d \leq 0.2$ | 88.71% | | | |

* Syarat sudah dipatuhi kerana nilai peratusan bagi konstruk adalah $> 75\%$

LAMPIRAN B

Laporan Kajian Rintis

A) Demografi pelajar rintis

i. Jantina

(1-Lelaki dan 2- Perempuan)

| Jantina | | | | | |
|---------|-------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 14 | 46.7 | 46.7 | 46.7 |
| | 2 | 16 | 53.3 | 53.3 | 100.0 |
| | Total | 30 | 100.0 | 100.0 | |

ii. Gred Matematik (Semasa SPM)

(1 – A1 dan 2 – A2)

| Mate_Mode | | | | | |
|-----------|-------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 28 | 92.9 | 92.9 | 92.9 |
| | 2 | 2 | 7.1 | 7.1 | 100.0 |
| | Total | 30 | 100.0 | 100.0 | |

iii. Gred Matematik Tambahan

(1- A1, 2-A2, 3-B1, 4-B2 dan 5-C5)

| Mate_Tam | | | | | |
|----------|-------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 4 | 13.3 | 13.3 | 13.3 |
| | 2 | 6 | 20.0 | 20.0 | 33.3 |
| | 3 | 7 | 23.3 | 23.3 | 56.6 |
| | 4 | 5 | 16.7 | 16.7 | 73.3 |
| | 5 | 8 | 26.7 | 26.7 | 100.0 |
| | Total | 30 | 100.0 | 100.0 | |

Analisis Konstruk Menggunakan Alpha Cronbach

i. Konstruk Kesesuaian Kurikulum

| Case Processing Summary | | | |
|--------------------------------|-----------------------|----|-------|
| | | N | % |
| Cases | Valid | 30 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 30 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .951 | .954 | 17 |

ii. Konstruk Kemudahan Asas

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .823 | .837 | 9 |

iii. Sokongan Pembelajaran

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .839 | .848 | 15 |

iv. Konstruk Sumber Pendidikan

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .920 | .922 | 8 |

v. Konstruk Kualiti Pengajaran Pensyarah

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .921 | .920 | 18 |

vi. Konstruk Sistem Pentaksiran

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .885 | .885 | 7 |

vii. Konstruk Pengetahuan Pelajar

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .864 | .870 | 10 |

viii. Konstruk Kemahiran Pelajar

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .884 | .881 | 8 |

viii. Konstruk Kepuasan Pelajar

| Reliability Statistics | | |
|-------------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .884 | .891 | 12 |

x. Rumusan Keseluruhan Konstruk Kajian Rintis

| Konstruk | Pelajar | Kesesuaian Kurikulum | Kemudahan Asas | Sokongan Pembelajaran | Sumber Pendidikan | Kualiti Pengajaran | Sistem Pentaksiran | Pengetahuan Pelajar | Kemahiran Pelajar | Kepuasan Pelajar |
|-------------|---------------------|----------------------|----------------|-----------------------|--------------------|--------------------|--------------------|---------------------|-------------------|------------------|
| Nilai Alpha | Pismp Jan 2010 N=30 | 0.95 Sangat Tinggi | 0.82 Tinggi | 0.84 Tinggi | 0.92 Sangat Tinggi | 0.92 Sangat Tinggi | 0.89 Tinggi | 0.86 Tinggi | 0.88 Tinggi | 0.88 Tinggi |

LAMPIRAN C

Analisis min, dan sisihan piawai

i) Min dan Sisihan Piawai item Kurikulum

| | | PK1_Pengetahuan bidang | PK2_Aplikasi_s ekolah | PK3_Aplikasi_k omuniti | PK4_Aplikasi_p ersekitaran |
|----------------|---------|---------------------------------|---------------------------------------|----------------------------------|--------------------------------------|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.56 | 4.45 | 4.50 | 4.49 |
| Std. Deviation | | .578 | .641 | .590 | .634 |
| | | | | | |
| | | PK5_Tanggungjawab social | PK6_Sedar tanggungjawab sosial | PK7_Kem. komunikasi | PK8_Daya kepimpinan |
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.50 | 4.55 | 4.51 | 4.58 |
| Std. Deviation | | .691 | .615 | .691 | .517 |
| | | | | | |
| | | PK9_Sedar etika | PK10_Kerja satu kumpulan | PK11_Kem. selesai masalah | PK12_Kem. belajar spjng hayat |
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.56 | 4.50 | 4.44 | 4.41 |
| Std. Deviation | | .549 | .599 | .631 | 6.28 |
| | | | | | |
| | | PK13_Kem fikir kreatif | PK14_Martabat B Melayu | PK15_Kom B Inggeris | PK16_Ciri Profesionalisme |
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.26 | 381 | 4.49 | 4.45 |
| Std. Deviation | | .830 | .968 | .625 | .720 |

Min dan Sisihan Piawai item Kurikulum (sambungan)

| | | PK17_Amanah ilmu |
|----------------|---------|-------------------------|
| N | Valid | 187 |
| | Missing | 0 |
| Mean | | 4.65 |
| Std. Deviation | | .521 |

ii) Min dan Sisihan Piawai item Kemudahan Asas

| | | Pik1_Bilik Kuliah | Pik2_Peralatan Matematik_sesuai | Pik3_Peralatan Matematik_cukup | Pik4_Peralatan Matematik Terkini |
|----------------|---------|--------------------------------|--|---------------------------------------|---|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 3.57 | 3.44 | 3.26 | 3.28 |
| Std. Deviation | | 1.182 | 1.136 | 1.145 | 1.173 |
| | | | | | |
| | | Pik5_Makmal Komputer | Pik6_Bil komputer cukup | Pik7_Internet baik | Pik8_Dewan kuliah ada |
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 3.033 | 2.97 | 2.80 | 3.48 |
| Std. Deviation | | 1.244 | 1.168 | 1.279 | 1.197 |
| | | | | | |
| | | Pik9_Dewan kuliah cukup | | | |
| N | Valid | 187 | | | |
| | Missing | 0 | | | |
| Mean | | 3.52 | | | |
| Std. Deviation | | 1.233 | | | |

iii) Min dan Sisihan Piawai item Sokongan Pembelajaran

| | | Pis 1_Kolej kediaman_cukup | Pis 2_tempat ulangkaji mencukupi | Pis 3_Selenggara kolej kediaman | Pis 4 _HEP mesra pelanggan |
|----------------|---------|--|---|--|-----------------------------------|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 3.84 | 3.45 | 3.13 | 3.19 |
| Std. Deviation | | .998 | 1.063 | 1.116 | 1.179 |
| | | | | | |
| | | Pis 5_HEP bantu selesai masalah | Pis 6_Khidmat kaunseling | Pis 7_Khidmat kaunseling membantu | Pis 8_Kafeteria mencukupi |
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 3.24 | 3.64 | 3.50 | 3.25 |
| Std. Deviation | | 1.112 | .920 | .952 | 1.302 |
| | | | | | |

| | | Pis 9_Harga di kafeteria berpatutan | Pis 10_Pengangkutan bas | Pis11_Surau mencukupi | Pis 12_Tandas mencukupi |
|----------------|---------|--|--|--|------------------------------------|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 3.23 | 3.44 | 4.05 | 3.30 |
| Std. Deviation | | 1.148 | 1.117 | .920 | 1.168 |
| | | Pis 13_Kemudahan rekreasi mencukupi | Pis 14_Tempat letak kereta mencukupi Kolej kediaman | Pis 15_Tempat letak kereta mencukupi kampus | |
| N | Valid | 187 | 187 | 187 | |
| | Missing | 0 | 0 | 0 | |
| Mean | | 2.96 | 2.93 | 3.76 | |
| Std. Deviation | | 1.346 | 1.246 | 1.168 | |

iv) Min dan Sisihan Piawai item Sumber Pendidikan

| | | Pip 1_Bahan rujukan mencukupi | Pip 2_Bahan online mudah akses | Pip 3_Kemudahan fotokopi | Pip 4_Sistem OPAC |
|----------------|---------|--|---|---|---|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 3.10 | 2.97 | 3.64 | 3.64 |
| Std. Deviation | | 1.117 | 1.180 | 1.114 | 1.009 |
| | | Pip 5_Bahan membantu | Pip 6_Ruang perbincangan | Pip 7_Bahan senang dicari | Pip 8_Buku baharu dipamerkan |
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 3.55 | 3.98 | 3.75 | 3.42 |
| Std. Deviation | | 1.043 | .922 | 1.066 | 1.135 |

v) Min dan Sisihan Piawai item Pengajaran Pensyarah

| | | Pp 1_Pelbagai kaedah | Pp 2_Kaitkan isi dgn pelajaran lepas | Pp 3_Guna ABM yg sesuai | Pp4_Ketepatan isi pengajaran |
|----------------|---------|---------------------------------|---|------------------------------------|---|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.36 | 4.47 | 4.27 | 4.54 |
| Std. Deviation | | .722 | .674 | .819 | .674 |

| | | Pp 5_Pantau prestasi GP | Pp 6_Sampai isi sistematik | Pp 7_Dapat tarik minat GP | Pp 8_Beri pelbagai Kerja kursus |
|----------------|---------|--------------------------------|-----------------------------------|----------------------------------|--|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.57 | 4.56 | 4.42 | 4.52 |
| Std. Deviation | | .595 | .656 | .678 | .625 |

v) Min dan Sisihan Piawai item Pengajaran Pensyarah (sambungan)

| | | Pp 9_Ajar ikut profoma | Pp 10_KBAT | Pp 11_Beri mencukupi Kerja kursus | Pp 12_Guna sepenuh masa mengajar |
|----------------|---------|---------------------------------------|--|--|---|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.57 | 4.54 | 4.56 | 4.52 |
| Std. Deviation | | .612 | .666 | .656 | .675 |
| | | Pp 13_Masuk kelas tepat | Pp 14_Tamat kelas tepat | Pp 15_Ajar ikut aras kebolehan | Pp 16_Pastikan GP faham konsep |
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.58 | 4.55 | 4.51 | 4.51 |
| Std. Deviation | | .662 | .623 | .642 | .651 |
| | | Pp 17_Kumpul GP ikut kebolehan | Pp 18_Letak harapan tinggi kpd GP | | |
| N | Valid | 187 | 187 | | |
| | Missing | 0 | 0 | | |
| Mean | | 4.36 | 4.47 | | |
| Std. Deviation | | .759 | .650 | | |

vi) Min dan Sisihan Piawai item Sistem Pentaksiran

| | | PPP 1_Menilai keupayaan saya melalui peperiksaan | PPP 2_Menilai keupayaan melalui kerja kursus | PPP3_Menilai keupayaan saya melalui amali | PPP 4_Menilai keupayaan melalui UAK |
|----------------|---------|---|---|--|--|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.45 | 4.51 | 4.53 | 4.59 |
| Std. Deviation | | .649 | .617 | .625 | .653 |
| | | | | | |
| | | PPP 5_Guna borang PR 1 | PPP 6_Guna portfolio | PPP 7_Penulisan Refleksi | |
| N | Valid | 187 | 187 | 187 | |
| | Missing | 0 | 0 | 0 | |
| Mean | | 4.48 | 4.54 | 4.52 | |
| Std. Deviation | | .706 | .641 | .634 | |

vii) Min dan Sisihan Piawai item Pengetahuan

| | | Pr1_kuasai ilmu | Pr2_hurai teori pemb | Pr3_Fahami lmu mate | Pr4_Pelajari pelbagai kaedah strategi |
|----------------|---------|---|--|---|--|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.23 | 4.08 | 4.30 | 4.37 |
| Std. Deviation | | .660 | .679 | .661 | .630 |
| | | | | | |
| | | Pr5_tahu pelbagai ilmu pentaksiran | Pr6_kenal pasti sumber pengajaran | Pr7_interpretasi bahan kurikulum | Pr8_mampu jelas prosedur mate |
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.28 | 4.30 | 4.23 | 4.28 |
| Std. Deviation | | .605 | .636 | .676 | 6.56 |

vii) Min dan Sisihan Piawai item Pengetahuan (sambungan)

| | | Pr9_tahu teori yg sesuai dgn pengajaran | P10_tahu strategi yang sesuai |
|----------------|---------|--|--------------------------------------|
| N | Valid | 187 | 187 |
| | Missing | 0 | 0 |
| Mean | | 4.29 | 4.29 |
| Std. Deviation | | .606 | .606 |

viii) Min dan Sisihan Piawai item Kemahiran

| | | Pm1_aplikasi teori | Pm2_guna prosedur mate | Pm3_tulis hasil pemb | Pm4_guna teknik penyoalan |
|----------------|---------|---------------------------|-------------------------------|------------------------------|---|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.26 | 4.36 | 4.34 | 4.40 |
| Std. Deviation | | .646 | .619 | .630 | .651 |
| | | | | | |
| | | Pm5_akt pengayaan | Pm6_aktiviti pemulhan | Pm7_Nilai-nilai murni | PM8_penilaian di akhir penagajaran |
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.39 | 4.32 | 4.44 | 4.51 |
| Std. Deviation | | .641 | .712 | .705 | 5.81 |
| | | | | | |
| | | Pm9_refleksi | | | |
| N | Valid | 187 | | | |
| | Missing | 0 | | | |
| Mean | | 4.63 | | | |
| Std. Deviation | | 5.76 | | | |

viii) Min dan Sisihan Piawai item Kepuasan

| | | Pa1_pendidikan di IPGM | Pa2_kemudahan bilik kelas | Pa3_kemudahan makmal mate | Pa4_seronok program PISMP |
|----------------|---------|-------------------------------|----------------------------------|----------------------------------|--------------------------------------|
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.40 | 3.82 | 3.51 | 4.40 |
| Std. Deviation | | .706 | 1.121 | 1.147 | .634 |
| | | | | | |
| | | Pa5_HEP | Pa6_kaunseling | Pa7_sumber pembelajaran | Pa8_pengajaran pensyarah |
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 3.38 | 3.83 | 3.95 | 4.48 |
| Std. Deviation | | 1.169 | .911 | .896 | .633 |
| | | | | | |
| | | Pa9_sistem pentaksiran | Pa10_sistem penyampaian | Pa11_tetap pilih PISMP | Pa12_puas hati belajar di IPG |
| N | Valid | 187 | 187 | 187 | 187 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 4.17 | 4.30 | 4.44 | 4.52 |
| Std. Deviation | | .848 | .822 | .648 | .642 |

LAMPIRAN D

Analisis frekuensi dan peratus institut, jantina, subjek major, elektif 1, elektif 2, gred Matematik dan gred Matematik Tambahan

i. Nama Institut

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|--------|-----------|---------|---------------|--------------------|
| Valid | ipda | 43 | 23.0 | 23.0 | 23.0 |
| | ipgpp | 42 | 22.5 | 22.5 | 45.5 |
| | ipgtb | 40 | 21.4 | 21.4 | 66.8 |
| | ipsah | 24 | 12.8 | 12.8 | 79.7 |
| | perlis | 38 | 20.3 | 20.3 | 100.0 |
| | Total | 187 | 100.0 | 100.0 | |

ii. Jantina

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | L | 92 | 49.2 | 49.2 | 49.2 |
| | P | 95 | 50.8 | 50.8 | 100.0 |
| | Total | 187 | 100.0 | 100.0 | |

iii. Subjek Major

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------|-----------|---------|---------------|--------------------|
| Valid | Mate | 187 | 100.0 | 100.0 | 100.0 |

iv. Subjek Elektif Pertama

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|----|-----------|---------|---------------|--------------------|
| Valid | PJ | 187 | 100.0 | 100.0 | 100.0 |

v. Subjek Elektif Kedua

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | BC | 10 | 5.3 | 5.3 | 5.3 |
| | BI | 87 | 46.5 | 46.5 | 51.8 |
| | BM | 85 | 45.5 | 45.5 | 97.3 |
| | BT | 5 | 2.7 | 2.7 | 100.0 |
| | Total | 187 | 100.0 | 100.0 | |

vi. Gred Matematik

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | A | 47 | 25.1 | 25.1 | 25.1 |
| | A+ | 140 | 74.9 | 74.9 | 100.0 |
| | Total | 187 | 100.0 | 100.0 | |

vii. Gred Matematik Tambahan

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | A | 30 | 16.0 | 16.0 | 16.0 |
| | A- | 29 | 15.5 | 15.5 | 31.6 |
| | A+ | 63 | 33.7 | 33.7 | 65.2 |
| | B | 19 | 10.2 | 10.2 | 75.4 |
| | B- | 5 | 2.7 | 2.7 | 78.1 |
| | B+ | 38 | 20.3 | 20.3 | 98.4 |
| | C | 2 | 1.1 | 1.1 | 99.5 |
| | C+ | 1 | .5 | .5 | 100.0 |
| | Total | 187 | 100.0 | 100.0 | |



UUM
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LAMPIRAN E

Analisis Data Regresi

i) Pengaruh Kemudahan Asas, Sokongan Pembelajaran, Sumber Pendidikan Terhadap Pengetahuan

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .379 ^a | .144 | .130 | .574 |

a. Predictors: (Constant), Kemudahan_Asas, Kesesuaian_Sokongan_Pembelajaran, Sumber_Pendidikan

| ANOVA ^a | | | | | | |
|---|------------|----------------|-----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 10.107 | 3 | 3.369 | 10.224 | .000 ^b |
| | Residual | 60.299 | 183 | .330 | | |
| | Total | 70.406 | 186 | | | |
| a. Dependent Variable: Pengetahuan | | | | | | |
| b. Predictors: (Constant), sumber_pendidikan, Kemudahan_asas, sokongan_pembelajaran | | | | | | |

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-----------------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.311 | .200 | | 16.559 | .000 |
| | Kemudahan_asas | .043 | .047 | .078 | .921 | .358 |
| | sokongan_pembelajaran | .060 | .074 | .077 | .815 | .416 |
| | sumber_pendidikan | .193 | .062 | .277 | 3.102 | .002 |

a. Dependent Variable: Pengetahuan

ii) Pengaruh Kemudahan Asas, Sokongan Pembelajaran, Sumber Pendidikan, Terhadap Kemahiran

| Model Summary | | | | |
|---|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .342 ^a | .117 | .103 | .53930 |
| a. Predictors: (Constant), sumber_pendidikan, Kemudahan_asas, sokongan_pembelajaran | | | | |

| ANOVA ^a | | | | | | |
|---|------------|----------------|-----|-------------|-------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 7.053 | 3 | 2.351 | 8.083 | .000 ^b |
| | Residual | 53.225 | 183 | .291 | | |
| | Total | 60.278 | 186 | | | |
| a. Dependent Variable: Kemahiran | | | | | | |
| b. Predictors: (Constant), sumber_pendidikan, Kemudahan_asas, sokongan_pembelajaran | | | | | | |

| Coefficients ^a | | | | | | |
|----------------------------------|-----------------------|-----------------------------|------------|---------------------------|--------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.517 | .188 | | 18.723 | .000 |
| | Kemudahan_asas | .054 | .044 | .105 | 1.226 | .222 |
| | sokongan_pembelajaran | .057 | .069 | .079 | .822 | .412 |
| | sumber_pendidikan | .139 | .058 | .216 | 2.381 | .018 |
| a. Dependent Variable: Kemahiran | | | | | | |

iii) Pengaruh Kemudahan Asas, Sokongan Pembelajaran, Sumber Pendidikan, Terhadap Kepuasan

| Model Summary | | | | |
|---|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .567 ^a | .321 | .310 | .53749 |
| a. Predictors: (Constant), sumber_pendidikan, Kemudahan_asas, sokongan_pembelajaran | | | | |

| ANOVA ^a | | | | | | |
|---|------------|----------------|-----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 24.993 | 3 | 8.331 | 28.838 | .000 ^b |
| | Residual | 52.868 | 183 | .289 | | |
| | Total | 77.861 | 186 | | | |
| a. Dependent Variable: Kepuasan | | | | | | |
| b. Predictors: (Constant), sumber_pendidikan, Kemudahan_asas, sokongan_pembelajaran | | | | | | |

| Coefficients ^a | | | | | | |
|---------------------------------|-----------------------|-----------------------------|------------|---------------------------|--------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2.706 | .187 | | 14.452 | .000 |
| | Kemudahan_asas | .228 | .044 | .389 | 5.157 | .000 |
| | sokongan_pembelajaran | .066 | .069 | .081 | .960 | .339 |
| | sumber_pendidikan | .140 | .058 | .191 | 2.393 | .018 |
| a. Dependent Variable: Kepuasan | | | | | | |

iv) Pengaruh pentaksiran, kualiti pengajaran Terhadap Pengetahuan

| Model Summary | | | | |
|---------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .576 ^a | .332 | .325 | .50554 |

a. Predictors: (Constant), pentaksiran, Kualiti_pengajaran

| ANOVA ^a | | | | | | |
|--------------------|------------|----------------|-----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 23.381 | 2 | 11.690 | 45.742 | .000 ^b |
| | Residual | 47.026 | 184 | .256 | | |
| | Total | 70.406 | 186 | | | |

a. Dependent Variable: Pengetahuan
b. Predictors: (Constant), pentaksiran, Kualiti_pengajaran

| Coefficients ^a | | | | | | |
|---------------------------|--------------------|-----------------------------|------------|---------------------------|-------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.340 | .317 | | 4.224 | .000 |
| | Kualiti_pengajaran | .365 | .086 | .348 | 4.256 | .000 |
| | pentaksiran | .297 | .087 | .280 | 3.422 | .001 |

a. Dependent Variable: Pengetahuan

v) Pengaruh pentaksiran, kualiti pengajaran Terhadap Kemahiran

| Model Summary | | | | |
|--|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .600 ^a | .360 | .353 | .45780 |
| a. Predictors: (Constant), pentaksiran, Kualiti_pengajaran | | | | |

| ANOVA ^a | | | | | | |
|--|------------|----------------|-----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 21.716 | 2 | 10.858 | 51.808 | .000 ^b |
| | Residual | 38.562 | 184 | .210 | | |
| | Total | 60.278 | 186 | | | |
| a. Dependent Variable: Kemahiran | | | | | | |
| b. Predictors: (Constant), pentaksiran, Kualiti_pengajaran | | | | | | |

| Coefficients ^a | | | | | | |
|----------------------------------|--------------------|-----------------------------|------------|---------------------------|-------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.484 | .287 | | 5.166 | .000 |
| | Kualiti_pengajaran | .278 | .078 | .287 | 3.577 | .000 |
| | pentaksiran | .361 | .079 | .368 | 4.591 | .000 |
| a. Dependent Variable: Kemahiran | | | | | | |

vi) Pengaruh pentaksiran, kualiti pengajaran Terhadap Kepuasan

| Model Summary | | | | |
|--|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .539 ^a | .290 | .283 | .54794 |
| a. Predictors: (Constant), pentaksiran, Kualiti_pengajaran | | | | |

| ANOVA ^a | | | | | | |
|--|------------|----------------|-----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 22.617 | 2 | 11.309 | 37.665 | .000 ^b |
| | Residual | 55.244 | 184 | .300 | | |
| | Total | 77.861 | 186 | | | |
| a. Dependent Variable: Kepuasan | | | | | | |
| b. Predictors: (Constant), pentaksiran, Kualiti_pengajaran | | | | | | |

| Coefficients ^a | | | | | | |
|---------------------------------|--------------------|-----------------------------|------------|---------------------------|-------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.203 | .344 | | 3.498 | .001 |
| | Kualiti_pengajaran | .325 | .093 | .295 | 3.494 | .001 |
| | pentaksiran | .328 | .094 | .294 | 3.481 | .001 |
| a. Dependent Variable: Kepuasan | | | | | | |

LAMPIRAN F

Ouput Korelasi

| | | KESESUAIAN KURIKULUM | KEMUDAHAN ASAS | SOKONGAN PEMBELAJARAN | SUMBER PENDIDIKAN | PENGAJARAN PENSYARAH | PENTAKSIRAN | PENGETAHUAN | KEMAHIRAN | KEPUASAN |
|------------------------------|---------------------|----------------------|----------------|-----------------------|-------------------|----------------------|-------------|-------------|-------------|-------------|
| KESESUAIAN KURIKULUM | Pearson Correlation | 1 | .251 | .232 | .315 | .542 | .429 | .462 | .494 | .445 |
| | Sig. (2-tailed) | | .001 | .001 | .000 | .000 | .000 | .000 | .000 | .000 |
| | N | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |
| KEMUDAHAN ASAS | Pearson Correlation | .251 | 1 | .440 | .441 | .214 | .238 | .230 | .273 | .544 |
| | Sig. (2-tailed) | .001 | | .000 | .000 | .003 | .001 | .002 | .000 | .000 |
| | N | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |
| SOKONGAN PEMBELAJARAN | Pearson Correlation | .232 | .440 | 1 | .623 | .310 | .292 | .294 | .273 | .419 |
| | Sig. (2-tailed) | .001 | .000 | | .000 | .000 | .000 | .000 | .000 | .000 |
| | N | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |

| | | KESESUAIAN KURIKULUM | KEMUDAHAN ASAS | SOKONGAN PEMBELAJARAN | SUMBER PENDIDIKAN | PENGAJARAN PENSYARAH | PENTAKSIRAN | PENGETAHUAN | KEMAHIRAN | KEPUASAN |
|----------------------|---------------------|----------------------|----------------|-----------------------|-------------------|----------------------|-------------|-------------|-------------|-------------|
| SUMBER PENDIDIKAN | Pearson Correlation | .315 | .441 | .623 | 1 | .429 | .380 | .363 | .317 | .430 |
| | Sig. (2-tailed) | .000 | .000 | .000 | | .000 | .000 | .000 | .000 | .000 |
| | N | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |
| PENGAJARAN PENSYARAH | Pearson Correlation | .542 | .214 | .310 | .429 | 1 | .677 | .538 | .536 | .494 |
| | Sig. (2-tailed) | .000 | .003 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| | N | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |
| PENTAKSIRAN | Pearson Correlation | .429 | .238 | .292 | .380 | .677 | 1 | .516 | .562 | .493 |
| | Sig. (2-tailed) | .000 | .001 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| | N | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |

| | | KESESUAIAN KURIKULUM | KEMUDAHAN ASAS | SOKONGAN PEMBELAJARAN | SUMBER PENDIDIKAN | PENGAJARAN PENSYARAH | PENTAKSIRAN | PENGETAHUAN | KEMAHIRAN | KEPUASAN |
|-------------|---------------------|----------------------|----------------|-----------------------|-------------------|----------------------|-------------|-------------|-------------|-------------|
| PENGETAHUAN | Pearson Correlation | .462 | .230 | .294 | .363 | .538 | .516 | 1 | .660 | .422 |
| | Sig. (2-tailed) | .000 | .002 | .000 | .000 | .000 | .000 | | .000 | .000 |
| | N | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |
| KEMAHIRAN | Pearson Correlation | .494 | .273 | .273 | .317 | .536 | .562 | .660 | 1 | .483 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | .000 | .000 | | .000 |
| | N | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |
| KEPUASAN | Pearson Correlation | .445 | .544 | .419 | .430 | .494 | .493 | .422 | .483 | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | |
| | N | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |

LAMPIRAN G

Ouput T-test : Kemahiran Antara Jantina

| Group Statistics | | | | | |
|------------------|----------------------|----|------|----------------|-----------------|
| | 1,lelaki 2,perempuan | N | Mean | Std. Deviation | Std. Error Mean |
| Kemahiran | 1 | 92 | 4.43 | .449 | .047 |
| | 2 | 95 | 4.38 | .528 | .054 |

| Independent Samples Test | | | | | | | | | | |
|--------------------------|-----------------------------|---|-------------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| Kemahiran | Equal variances assumed | .392 | .532 | .611 | 185 | .542 | .044 | .072 | -.098 | .185 |
| | Equal variances not assumed | | | .613 | 182.054 | .541 | .044 | .072 | -.097 | .185 |

Ouput T-test : Kepuasan Antara Jantina

| Group Statistics | | | | | |
|------------------|----------------------|----|------|----------------|-----------------|
| | 1,lelaki 2,perempuan | N | Mean | Std. Deviation | Std. Error Mean |
| Kepuasan | 1 | 92 | 4.13 | .563 | .059 |
| | 2 | 95 | 4.07 | .566 | .058 |

| Independent Samples Test | | | | | | | | | | |
|--------------------------|-----------------------------|---|-------------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| Kepuasan | Equal variances assumed | .035 | .852 | .804 | 185 | .422 | .066 | .083 | -.097 | .229 |
| | Equal variances not assumed | | | .804 | 184.873 | .422 | .066 | .083 | -.097 | .229 |

Ouput T-test : Pengetahuan Antara Jantina

| Group Statistics | | | | | |
|------------------|----------------------|----|------|----------------|-----------------|
| | 1,lelaki 2,perempuan | N | Mean | Std. Deviation | Std. Error Mean |
| Pengetahuan | 1 | 92 | 4.32 | .482 | .050 |
| | 2 | 95 | 4.26 | .636 | .065 |

| Independent Samples Test | | | | | | | | | | |
|--------------------------|-----------------------------|---|-------------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| Pengetahuan | Equal variances assumed | 1.355 | .246 | .664 | 185 | .507 | .055 | .083 | -.108 | .218 |
| | Equal variances not assumed | | | .667 | 174.879 | .505 | .055 | .082 | -.108 | .217 |

LAMPIRAN H

Output MANOVA Di Antara IPGK Dengan Kepuasan Guru Pelatih.

| Between-Subjects Factors | | |
|--------------------------|---|----|
| | | N |
| KAMPUS | 1 | 42 |
| | 2 | 42 |
| | 3 | 41 |
| | 4 | 24 |
| | 5 | 38 |

| Box's Test of Equality of Covariance Matrices ^a | |
|--|-----------|
| Box's M | 99.623 |
| F | 3.993 |
| df1 | 24 |
| df2 | 61520.006 |
| Sig. | .000 |

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + IPG

Output MANOVA Di Antara IPGK Dengan Kepuasan Guru Pelatih.

Multivariate Tests^a

| | Effect | Value | F | Hypothesis df | Error df | Sig. |
|-----------|-----------------------|-------------|-----------------------|---------------|----------------|-------------|
| Intercept | Pillai's Trace | .989 | 5479.546 ^b | 3.000 | 180.000 | .000 |
| | Wilks' Lambda | .011 | 5479.546 ^b | 3.000 | 180.000 | .000 |
| | Hotelling's Trace | 91.326 | 5479.546 ^b | 3.000 | 180.000 | .000 |
| | Roy's Largest Root | 91.326 | 5479.546 ^b | 3.000 | 180.000 | .000 |
| IPG | Pillai's Trace | .194 | 3.139 | 12.000 | 546.000 | .000 |
| | Wilks' Lambda | .811 | 3.270 | 12.000 | 476.527 | .000 |
| | Hotelling's Trace | .227 | 3.382 | 12.000 | 536.000 | .000 |
| | Roy's Largest Root | .198 | 9.030 ^c | 4.000 | 182.000 | .000 |

a. Design: Intercept + IPG

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Output MANOVA Di Antara IPGK Dengan Kepuasan Guru Pelatih.

| Tests of Between-Subjects Effects | | | | | | |
|-----------------------------------|--------------------|---|---|-------------|---|------|
| Source | Dependent Variable | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Corrected Model | Kepuasan | 9.138 ^a | 4 | 2.285 | 8.302 | .000 |
| | Kemahiran | 1.701 ^b | 4 | .425 | 1.802 | .130 |
| | Pengetahuan | 1.965 ^c | 4 | .491 | 1.560 | .187 |
| Intercept | Kepuasan | 2981.488 | 1 | 2981.488 | 10834.710 | .000 |
| | Kemahiran | 3459.615 | 1 | 3459.615 | 14666.128 | .000 |
| | Pengetahuan | 3297.350 | 1 | 3297.350 | 10468.053 | .000 |
| IPG | Kepuasan | 9.138 | 4 | 2.285 | 8.302 | .000 |
| | Kemahiran | 1.701 | 4 | .425 | 1.802 | .130 |
| | Pengetahuan | 1.965 | 4 | .491 | 1.560 | .187 |
| Error | Kepuasan | 50.083 | 182 | .275 | | |
| | Kemahiran | 42.932 | 182 | .236 | | |
| | Pengetahuan | 57.328 | 182 | .315 | | |
| Total | Kepuasan | 3200.368 | 187 | | | |
| | Kemahiran | 3671.605 | 187 | | | |
| | Pengetahuan | 3498.107 | 187 | | | |
| Corrected Total | Kepuasan | 59.221 | 186 | | | |
| | Kemahiran | 44.633 | 186 | | | |
| | Pengetahuan | 59.294 | 186 | | | |
| | | a. R Squared = .154 (Adjusted R Squared = .136) | b. R Squared = .038 (Adjusted R Squared = .017) | | c. R Squared = .033 (Adjusted R Squared = .012) | |

Output MANOVA Di Antara IPGK Dengan Kepuasan Guru Pelatih.

| Levene's Test of Equality of Error Variances^a | | | | |
|---|-------|-----|-----|------|
| | F | df1 | df2 | Sig. |
| Kepuasan | 4.078 | 4 | 182 | .003 |
| Kemahiran | 2.354 | 4 | 182 | .056 |
| Pengetahuan | 2.723 | 4 | 182 | .031 |

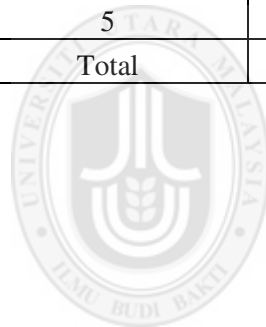
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + IPG

| Descriptive Statistics | | | | |
|-------------------------------|---------------|-------------|-----------------------|----------|
| | KAMPUS | Mean | Std. Deviation | N |
| Kepuasan | 1 | 4.28 | .471 | 42 |
| | 2 | 4.39 | .429 | 42 |
| | 3 | 3.87 | .522 | 41 |
| | 4 | 4.01 | .388 | 24 |
| | 5 | 3.88 | .718 | 38 |
| | Total | 4.10 | .564 | 187 |
| Kemahiran | 1 | 4.43 | .410 | 42 |
| | 2 | 4.56 | .399 | 42 |
| | 3 | 4.33 | .459 | 41 |
| | 4 | 4.40 | .479 | 24 |
| | 5 | 4.29 | .653 | 38 |
| | Total | 4.40 | .490 | 187 |

Output MANOVA Di Antara IPGK Dengan Kepuasan Guru Pelatih.

| Descriptive Statistics | | | | |
|------------------------|--------|------|----------------|-----|
| | KAMPUS | Mean | Std. Deviation | N |
| Pengetahuan | 1 | 4.26 | .451 | 42 |
| | 2 | 4.42 | .421 | 42 |
| | 3 | 4.22 | .487 | 41 |
| | 4 | 4.42 | .755 | 24 |
| | 5 | 4.17 | .718 | 38 |
| | Total | 4.29 | .565 | 187 |




UUM
Universiti Utara Malaysia

LAMPIRAN I

Kebenaran Melaksanakan Kajian Penyelidikan

- i) Kebenaran Daripada Bahagian Perancangan Dan Penyelidikan Dasar Pendidikan Kementerian Pendidikan Malaysia

 BAHAGIAN PERANCANGAN DAN PENYELIDIKAN DASAR PENDIDIKAN
KEMENTERIAN PENDIDIKAN MALAYSIA
ARAS 1 - 4, BLOK E - 8,
KOMPLEKS KERAJAAN PARCEL E
PUSAT PENTADBIRAN KERAJAAN PERSEKUTUAN
62604 PUTRAJAYA
Telefon: 03-88846591. Faks: 03-88846579

Rujuk. kami : KP(BPPDP)603/5/JLD.10 ()
Tarikh : 02/01/2014

Syed Khalid bin Syed Idrus @ Sd
Iskandar
752 Jalan Tengku Maheran 24
Taman Tengku Maheran Fasa 1
Bandar Darulman
Jitra Kedah 06000

Tuan/Puan,

Kelulusan Untuk Menjalankan Kajian Di Sekolah, Institut Perguruan, Jabatan Pendidikan Negeri dan Bahagian-Bahagian di Bawah Kementerian Pendidikan Malaysia

Adalah saya dengan hormatnya diarah memaklumkan bahawa permohonan tuan/puan untuk menjalankan kajian bertajuk :

Penilaian Terhadap program Ijazah Sarjana Muda Perguruan_PISMP_Matematik di Institut Pendidikan Guru Malaysia diluluskan.

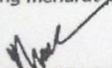
2. Kelulusan ini adalah berdasarkan kepada cadangan penyelidikan dan instrumen kajian yang tuan/puan kemukakan ke Bahagian ini. **Kebenaran bagi menggunakan sampel kajian perlu diperolehi dari Ketua Bahagian / Pengarah Pelajaran Negeri yang berkenaan.**

3. Sila tuan/puan kemukakan ke Bahagian ini senaskah laporan akhir kajian /laporan dalam bentuk elektronik berformat Pdf di dalam CD bersama naskah *hardcopy* setelah selesai kelak. Tuan/Puan juga diingatkan supaya **mendapat kebenaran terlebih dahulu** daripada Bahagian ini sekiranya sebahagian atau sepenuhnya dapatan kajian tersebut hendak dibentangkan di mana-mana forum atau seminar atau diumumkan kepada media massa.



Sekian untuk makluman dan tindakan tuan/puan selanjutnya. Terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah,


(Dr ZABAH BIN DARUS)
Ketua Sektor
Sektor Penyelidikan dan Penilaian
b.p. Pengarah
Bahagian Perancangan dan Penyelidikan Dasar Pendidikan
Kementerian Pendidikan Malaysia

- ii) Kebenaran Daripada Institut Pendidikan Guru Kampus Kementerian Pendidikan Malaysia

 
INSTITUT PENDIDIKAN GURU
KAMPUS PERLIS
BEHOR PULAI
01000 KANGAR
PERLIS
TELEFON : 04-9781522 – 592 (PELIJABAT)
04-9781531 (PENGARAH)
No. FAKS : 04-9781593

"1 MALAYSIA : RAKYAT DIDAHULUKAN, PENCAPAIAN DIUTAMAKAN"

Ruj. Kami : IPGKPs/11/010/jld. 13 (29)
Tarikh : 12 Ogos 2015

Tuan Syed Khalid Bin Syed Idrus @ Sd Iskandar
752 Jalan Tengku Maheran 24
Taman Tengku Maheran Fasa 1
Bandar Darulaman
06000 Jitra
KEDAH

Tuan,

KELULUSAN MENJALANKAN KAJIAN DI SEKOLAH, INSTITUT PERGURUAN, JABATAN PENDIDIKAN NEGERI DAN BAHAGIAN-BAHAGIAN DI BAWAH KEMENTERIAN PENDIDIKAN MALAYSIA

Dengan segala hormatnya saya di arah merujuk perkara di atas dan surat tuan bertarikh 31 Julai 2015.

2. Sukacita dimaklumkan bahawa permohonan tuan untuk menjalankan kajian bertajuk Penilaian Terhadap Program Ijazah Sarjana Muda Perguruan PISMP Matematik di Institut Pendidikan Guru Malaysia diluluskan.

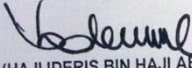
3. Tuan diminta berjumpa dengan Ketua Unit Khidmat Pengurusan / Pegawai Eksekutif Kanan / Pegawai Eksekutif atau Ketua Jabatan Hal Ehwal Pelajar untuk mengatur sesi pertemuan dengan responden / pelajar / guru pelatih.

4. Tuan diminta mematuhi Pekeliling Bahagian Perancangan dan Penyelidikan Dasar Pendidikan Kementerian Pelajaran Malaysia Bil. 1/2006 mengenai Syarat dan Peraturan Menjalankan Penyelidikan Pendidikan Di Institut-Institut Di Bawah Kementerian Pelajaran Malaysia. Jika sekiranya tuan gagal mematuhi arahan pekelling ini kebenaran kepada pihak tuan akan dibatalkan.

Sekian dimaklumkan, terima kasih.



"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah,


(HAJI IDERIS BIN HAJI ABU BAKAR)
b.p. Pengarah
IPG Kampus Perlis

s.k. Ketua Jabatan Penyelidikan dan Inovasi Profesionalisme Keguruan

ii) Kebenaran Daripada Jabatan Pendidikan Negeri


جَابَاتُ پَنْدِيدِيَانِ نِغْرِي كِدَاهِ دَارُ الْاَمَانِ
JABATAN PENDIDIKAN NEGERI KEDAH DARUL AMAN
KOMPLEKS PENDIDIKAN, JALAN STADIUM
05604 ALOR SETAR
KEDAH DARUL AMAN

No. TELEFON : 04-740 4000
No. FAKS : 04-740 4342
LAMAM WEB : www.jpn.moe.gov.my/jpnkedah

" KEDAH AMAN MAKMUR. BERSAMA MEMACU TRANSFORMASI "

Ruj Kami : JPK03-07/3212Jld16 (104)
Tarikh : 19 Oktober 2015

Syed Khalid bin Syed Idrus @ Sd Iskandar
752 Jalan Tengku Maheran 24
Taman Tunku Maheran Fasa 1
Bandar Darulaman
06000 Jitra
Kedah

Tuan/Puan,

**Kebenaran Untuk Menjalankan Kajian/ Soal Selidik di Jabatan Pendidikan Negeri /
Pejabat Pendidikan Daerah dan Sekolah – Sekolah di Negeri Kedah Darulaman**

Saya dengan hormatnya diarah merujuk kepada perkara tersebut di atas.

2. Dimaklumkan bahawa permohonan tuan/puan untuk menjalankan kajian yang bertajuk
" **Penilaian Terhadap Program Ijazah Sarjana Muda Perguruan_PISMP_Matematik di Institut
Pendidikan Guru Malaysia** " telah **diluluskan**.

3. Ketulusan ini adalah berdasarkan kepada apa yang terkandung di dalam cadangan penyelidikan
yang tuan/puan kemukakan ke Kementerian Pendidikan Malaysia. Tuan/Puan dikehendaki
mengemukakan senaskah laporan akhir kajian setelah selesai kelak dan diingatkan supaya mendapat
kebenaran terlebih dahulu daripada Jabatan ini sekiranya sebahagian atau sepenuhnya dapatan kajian
tersebut hendak dibentangkan di mana-mana forum, seminar atau diumumkan kepada media.

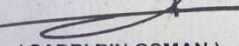
4. Kebenaran ini adalah tertakluk kepada persetujuan Pengetua sekolah berkenaan dan adalah **sah
sehingga 30 November 2015** sahaja.

Sekian, terima kasih.

Universiti Utara Malaysia

**"SEHATI SEJIWA"
" BERKHIDMAT UNTUK NEGARA "
" PENDIDIKAN CEMERLANG KEDAH TERBILANG "**

Saya yang menaruh perintah,


(SABRI BIN OSMAN)
Penolong Pengarah Kanan (Ketua Unit)
Unit Perhubungan dan Pendaftaran
Sektor Pengurusan Sekolah

b.p. Pengarah Pendidikan Negeri Kedah Darul Aman