

PENGGUNAAN TEKNIK BIO MAKLUMBALAS  
BAGI MENGUKUR CIRI-CIRI DISIPLIN DAN  
TANGGUNGJAWAB DALAM KALANGAN  
MAHASISWA

SHAHIDAH BINTI HAMZAH

IJAZAH DOKTOR FALSAFAH  
(TEKNOLOGI KEMANUSIAAN)  
UNIVERSITI MALAYSIA PAHANG

UNIVERSITI MALAYSIA PAHANG

**PENGESAHAN STATUS TESIS DAN HAK CIPTA**

Nama : Shahidah Binti Hamzah  
Tarikh Lahir : 29 April 1985  
Tajuk : Penggunaan Teknik Bio Maklumbalas bagi Mengukur Ciri-Ciri  
Disiplin dan Tanggungjawab dalam Kalangan Mahasiswa  
Sesi : 2016/2017

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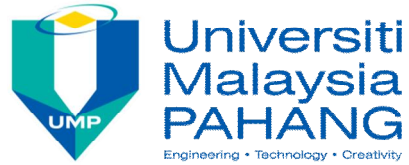
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Tarikh :

PM Dr. Muhammad Nubli Bin  
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Nama Pelajar : SHAHIDAH BINTI HAMZAH

No. Metrik : PBS13004

Tarikh : 26 SEPTEMBER 2016

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DISIPLIN DAN TANGGUNGJAWAB DALAM KALANGAN MAHASISWA

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## SENARAI SINGKATAN

ANS	Sistem Saraf Autonomik
BP	Tekanan Darah
bpm	Denyut Per Minit / <i>Beat Per Minute</i>
BPM	Bernafas Per Minit / <i>Breath Per Minute</i>
CNS	Sistem Saraf Pusat
CPI	Indeks Persepsi Rasuah
EEG	Gelombang Otak
EKG	Denyutan Jantung
EMG	Perubahan Otot
GSR	Perubahan Garvanic Kulit
HF	Spektrum Kuasa Tinggi / <i>High Frequency</i>
HR	Dengupan Jantung / <i>Heart Rate</i>
HRV	Kadar Kebolehubahan Jantung / <i>Heart Rate Variability</i>
IPT	Institut Pengajian Tinggi
LF	Spektrum Kuasa Rendah / <i>Low Frequency</i>
PIN	Pelan Integriti Nasional
PNGK	Purata Nilai Gred Terkumpul
PNS	Sistem Saraf Parasimpetik
PPG	Denyutan Nadi
RF	Frekuensi Pernafasan
RSA	Pernafasan Sinus Aritmia
SNS	Sistem Saraf Simpetetik
SPRM	Suruhanjaya Pencegah Rasuah Malaysia

SSP	Sistem Saraf Perifer
VLf	Spektrum Kuasa Sangat Rendah / <i>Very Low Frequency</i>

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## ABSTRAK

Kemerosotan nilai integriti dalam sesebuah negara boleh memberikan implikasi yang negatif kepada sosio ekonomi, budaya dan politik. Berdasarkan Pelan Integriti Nasional (2006), integriti adalah kualiti unggul yang wujud secara keseluruhan dan padu pada individu dan organisasi. Penyelidikan tentang integriti kebanyakannya menjurus kepada ujian psikometrik dan impak sosial namun begitu permasalahan integriti ini masih berlarutan sehingga kini (Mikulay dan Goffin, 1998). Kajian ini menggunakan teknik bio maklumbalas bagi mengukur elemen integriti dalam diri individu. Tujuan kajian ini ialah mengukur sub elemen integriti menggunakan teknik bio maklumbalas manakala objektif khusus kajian ini ialah meneroka profil integriti mahasiswa, membangunkan protokol bio maklumbalas, mengukur profil kadar kebolehubahan jantung (HRV) dan kitaran pernafasan dengan integriti serta menentukan hubungan antara HRV dan kitaran pernafasan dengan elemen integriti. Terdapat dua kaedah yang digunakan iaitu, kaedah kuantitatif dan kaedah klinikal. Subjek kajian bagi kaedah kuantitatif meliputi 148 orang responden yang dipilih melalui kaedah rawak sistematik manakala subjek kajian bagi kaedah klinikal meliputi 50 orang responden yang dibahagikan kepada dua kumpulan iaitu kumpulan A dan kumpulan B berdasarkan pencapaian akademik. Para peserta telah diuji menggunakan protokol bio maklumbalas yang dibangunkan dimana terdapat lapan sesi kajian yang perlu dilalui oleh setiap peserta. Dapatan kajian kuantitatif menunjukkan terdapat perhubungan yang signifikan antara pencapaian akademik dengan sub elemen integriti mahasiswa iaitu mahasiswa yang mempunyai pencapaian akademik cemerlang akan mempunyai sifat disiplin dan tanggungjawab yang tinggi dalam diri begitu juga sebaliknya. Dapatan kaedah klinikal pula mendapati responden yang memperoleh skor spektrum kuasa frekuensi rendah (LF) lebih tinggi skor spektrum kuasa frekuensi tinggi (HF) dan skor spektrum kuasa frekuensi sangat rendah (VLF) merupakan individu yang mempunyai pencapaian akademik cemerlang. Kesimpulannya, hasil dapatan kajian ini menunjukkan teknik bio maklumbalas merupakan salah satu kaedah pengukuran integriti yang berkesan dan boleh digunapakai serta boleh menjadi terapi dari aspek penambahbaikan diri sekiranya aktiviti-aktiviti yang meningkatkan nilai disiplin dan tanggungjawab mahasiswa bagi meningkatkan nilai integriti individu.

## ABSTRACT

The impairment of a country's integrity can implicate its socio-economic, cultural and political aspects negatively. Based on the National Integrity Plan (2006), integrity is the superior quality that exists as a whole and coherently on individuals and organisations. Research on the integrity is mostly focused on psychometric assessment and social impact. However, the problems of integrity still persist up to this day (Mikulay dan Goffin, 1998). This study used the biofeedback method to measure the integrity of an individual. Throughout this entire research, the biofeedback technology has been used to measure the element of integrity. The aim of this study was to assess the integrity measurement by using the biofeedback method and the specific objectives of this study were to explore the student integrity profiles, to develop biofeedback protocols, to measure the HRV profiles and respiratory cycle with the integrity profiles and to determine the relationship between HRV and respiratory cycle and the element of integrity. There are two methods used, namely, the quantitative methods and clinical methods. The subjects selected consisted of 50 respondents which were divided into two groups, group A and group B, based on their academic achievement. The respondents were assessed by using the biofeedback protocol provided where they had to go through the assessment in eight different sessions. The study carried out showed that there was a significant relationship between individual's achievement and their discipline and self-responsibility in which individuals with high achievement will have high discipline and self-responsibility, vice versa. Via clinical method, it was found that the respondents who received a low-frequency spectrum (LF) higher than high-frequency spectrum (HF) and those with a very low-frequency spectrum (VLF) are individuals who have outstanding achievement as this is directly related to the autonomic nervous system. In conclusion, this study showed that the biofeedback method is one of the effective ways that can be put into practise in the integrity measurement and it is also a method of therapy to improve self-discipline and responsibility with ongoing activities.

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