UPM
UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

IPSAS
INSTITUT PENGAJIAN SAINS SOSIAL

PROSIDING SEMINAR HASIL PENYELIDIKAN IPSAS 2011

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Cetakan 2012

Dicetak Oleh
Univision Press
Jln Serdang Raya, Tmn Serdang Raya,
43300 Seri Kembangan, Selangor
Tel: 603 8941 8500 Fax: 603 8941 9600
ISBN : 978-967-10933

PRAKATA

Tidak dapat dinafikan penyelidikan dalam bidang sains sosial merupakan elemen penting dalam membentuk masyarakat yang berketrampilan, holistik dan berdaya maju. Sejajar dengan ini banyak penyelidikan yang berkaitan dengan bidang sains sosial perlu dilaksanakan untuk mencungkil penyelesaian kepada pelbagai masalah yang dihadapi oleh masyarkat sejagat. Prosiding ini adalah himpunan kertas kerja daripada penyelidikan sains sosial yang telah dilaksanakan oleh para pengkaji di Institut Pengajian Sains Sosial, UPM dan outputnya telah dibentangkan di Seminar Hasil Penyelidikan IPSAS 2011.

Terdapat empat (4) sub tema yang dibincangkan dan ianya merangkumi isu, cabaran dan strategi dalam bidang (i) Pembangunan Belia; (ii) Pembangunan Komuniti; (iii) Konflik Sosial; dan (iv) Kesihatan dan Kualiti Hidup.

Adalah menjadi harapan dengan adanya pengumpulan kertas kerja hasil daripada penyelidikan yang telah dijalankan dapat memberi cetusan idea dan menjadi sumber rujukan kepada penggubal dasar, pelaksana serta pihak-pihak yang bertanggungjawab dalam membentuk polisi negara serta dapat membantu penyelidik-penyelidik muda dalam menjalankan penyelidikan yang seterusnya. Penglibatan aktif dan sokongan penyelidik dapat menghasilkan penyelidikan yang berkualiti dan mendatangkan manfaat kepada agama, bangsa dan negara.

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PENYELIDIK SEBAGAI KERJAYA
DAN MEMERTABATKAN JURNAL TEMPATAN

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Abstrak

Penyelidikan merupakan satu aktiviti utama dalam proses mendapatkan serta membongkar ilmu pengetahuan. Tamadun manusia berkembang kerana penemuan-penemuan ilmu yang dapat diaplikasikan dalam kehidupan seharian. Para penyelidik memainkan peranan penting dan proses penyelidikan dan mereka perlu mempunyai kemahiran tertentu bagi memastikan mereka dapat menyumbang dalam usaha penerokaan ilmu dengan lebih berkesan. Kertas kerja ini mengemukakan beberapa kemahiran teras yang perlu ada pada setiap penyelidik bagi membolehkan mereka menjadikan penyelidikan sebagai kerjaya. Bahagian kedua kertas kerja ini mengusulkan cadangan agar jurnal tempatan dinaikkan taraf dan diberikan pengiktirafan yang sewajarnya agar ilmu yang terkumpul dapat dimanfaatkan dengan lebih luas oleh komuniti akademik dan anggota masyarakat Malaysia. Adalah amat baik sekali sekiranya amalan sekarang yang memberi 'markah' lebih kepada penerbitan dalam jurnal antarabangsa juga memberi pengiktirafan yang sama dengan jurnal tempatan. Dengan usaha padu para akademik negara yang banyak menjadi sidang editor pada jurnal antarabangsa, boleh merealisasikan cadangan ini. Kertas kerja ini membincangkan mengapa usaha ini perlu dilakukan segera serta cadangan langkang-langkah ke arah mencapai matlamat ini.

Kata kunci*: Kerjaya penyelidik, Kemahiran penyelidikan dan Jurnal tempatan*

> *Maka tidakkah mereka memperhatikan unta, bagaimana diciptakan? Dan langit, bagaimana ditinggikan? Dan gunung-gunung bagaimana ditegakkan? Dan bumi bagaimana dihamparkan?*
>
> (Al-Qur'an 88, 17 – 20)

Tujuan utama kertas kerja ini adalah untuk berkongsi pengalaman penyelidikan serta memberi pandangan tentang senario penerbitan jurnal tempatan, khususnya jurnal ilmiah yang diterbitkan oleh institusi pengajian tinggi dan institusi penyelidikan. Adalah diharapkan kertas kerja ini akan dapat memberi rangsangan kepada penyelidik-penyelidik muda untuk terus bergiat dengan aktiviti penyelidikan. Di samping itu adalah diharapkan kertas kerja ini dapat mencetuskan tindakan susulan bagi memertabatkan jurnal ilmiah tempatan ke persada global. Oleh itu, kertas kerja ini

terbahagi kepada dua bahagian. Bahagian pertama membincangan pengalaman penulis sebagai penyelidik selama 30 tahun serta persediaan yang perlu bagi membolehkan seseorang itu menjadi penyelidik yang berjaya. Manakala bahagian kedua pula akan mengutarakan sebab-sebab mengapa usaha untuk menaiktaraf jurnal tempatan itu penting dilakukan segera serta langkah-langkah yang boleh diambil untuk mencapai hasrat berkenaan.

I – Penyelidik sebagai kerjaya

Penyelidikan dan kepentingannya

Allah berfirman dalam Surah Al Kahfi ayat 109 yang membawa maksud: Katakan (Muhammad), "Seandainya lautan menjadi tinta untuk (menulis) kalimat-kalimat Tuhanku, maka pasti habislah lautan itu sebelum selesai (penulisan) kalimat-kalimat Tuhanku, meskipun Kami datangkan tambahan sebanyak itu (pula)." Ayat ini membuktikan bahawa terdapat terlalu banyak ilmu untuk ditimba oleh setiap orang dalam dunia ini. Melakukan pemerhatian, melakukan penyelidikan serta menuntut ilmu adalah antara cara untuk manusia mempelajari anugerah Allah yang tidak terhingga ini. Adapun ilmu itu banyak tingkatnya dan tidak semua orang akan dapat mempelajari semua ilmu. Jadi kita semua kena berusaha keras untuk mendapatkan seberapa banyak, luas dan dalamnya sesuatu ilmu.

Memang menjadi fitrah, manusia yang dibekalkan dengan akal fikiran mempunyai keinginan untuk tahu dalam banyak hal. Ada perkara yang kita tahu melalui pengalaman, pembelajaran, dapat daripada media komunikasi atau diberitahu oleh pakar. Adakalanya kita hendak tahu apa yang kita tidak tahu, atau ingin tahu lebih dari apa yang kita tahu supaya menjadi lebih 'arif' tentang perkara berkenaan. Maka di sinilah bermulanya titik penyelidikan atau kajian. Secara mudahnya Wimmer dan Dominick (2011) menyatakan kajian adalah satu usaha untuk *discover* sesuatu. Sungguhpun demikian, terdapat beberapa langkah yang sistematik untuk menjalankan penyelidikan agar hasil penyelidikan itu dapat dipertahankan dan memenuhi tuntutan kaedah saintifik.

Terdapat beberapa jenis penyelidikan dan banyak sebab mengapa penyelidikan masih dilakukan sehingga ke hari ini oleh pelbagai pihak. Selain dari ilmu yang tidak mungkin habis dikaji, penyelidikan dilakukan bagi mendapatkan maklumat supaya dapat membantu dalam membuat keputusan yang lebih baik. Perlu dinyatakan bahawa penyelidikan tidak akan menyelesaikan masalah secara terus, akan tetapi membuka jalan untuk menangani masalah berkenaan atau memberi petunjuk tentang cara untuk menyelesaikannya.

Tujuan sesuatu penyelidikan itu dilakukan bergantung kepada siapa yang melakukannya serta jenis penyelidikan seperti yang diterangkan di bawah:

- Para pelajar institusi pengajian tinggi menjalankan penyelidikan untuk memenuhi keperluan untuk mendapatkan ijazah bachelor, sarjana atau Ph.D,
- Para saintis menjalankan penyelidikan untuk mendapatkan, antara lain, ubat-ubatan bagi menyembuhkan penyakit, mencari baka pertanian yang sesuai untuk keperluan makanan, memastikan alam sekitar dapat dipulihara dengan baik,
- Para jurutera menjalankan penyelidikan untuk menjadikan kehidupan manusia lebih selesa dengan perkakasan dan peralatan yang selamat dan mudah, dan mudah untuk bergerak di muka bumi,
- Ahli ekonomi menjalankan penyelidikan untuk memastikan pulangan yang lebih tinggi kepada pelaburan dan sistem ekonomi yang lebih mantap secara global,
- Para akademik menjalankan penyelidikan untuk meneroka sempadan ilmu dan menjadikan ilmu berkenaan lebih bermanfaat kepada seluruh manusia,
- Ahli penyelidik sains sosial menjalankan penyeldikan untuk menjadikan kehidupan lebih sejahtera, harmoni dan mencari jalan untuk mengatasi gejala sosial yang makin meruncing,
- Penyelidikan asas (fundamental) dijalankan untuk menembahkan ilmu pengetahuan secara langsung kerana penemuan hasil kajian selalunya tidak diaplikasikan dalam penyelesaian masalah.
- Penyelidikan gunaan (applied) dilaksnakan bagi mencari penyelesaian kepada sesuatu masalah yang telah dikenalpasti kerana hasil penyelidikan ini akan menjadi asas bagi mengatasi masalah berkenaan.
- Penyelidikan dijalankan di lapangan untuk mendapatkan situasi yang sebenar,
- Penyelidikan dilaksanakakan di makmal supaya kawalan dan manipulasi dapat dilakukan.

Tidak dinafikan juga bahawa ada golongan yang menjalankan penyeldikan kerana itu memang tugas hakiki mereka. Ada juga yang menjalankan penyeldikan kerana dibayar untuk melakukannya. Malah, orang ramai ada membuat penyelidikan mereka sendiri untuk mencari jawapan kerana sesuatu persoalan atau mencari maklumat untuk memuaskan hati terhadap ketidakpastian tentang sesuatu.

Negara-negara maju amat mementingkan penyelidikan untuk terus maju. Ini diterjemahan dengan peruntukan besar bagi aktiviti penyelidikan dan pembangunan (R & D) yang mencapai sehingga 3 peratus atau lebih dari jumlah Keluaran Negara Kasar negara berkenaan. Di samping itu syarikat-syarikat swasta amat aktif dalam penyelidikan dengan menyediakan pembiayaan serta terlibat secara langsung dengan penyelidikan di universiti. Negara kita, Malaysia juga telah mengambil langkah positif dengan menubuhkan institusi penyelidikan secara khusus serta menjadikan beberapa universiti tempatan sebagai universiti penyelidikan, walaupun penyelidikan menjadi salah satu aktiviti penting bagi semua universiti. Akan tetapi, tidak banyak pihak swasta di negara kita yang sudi melabur untuk penyelidikan. Kerajaan juga telah menyediakan dana-dana penyelidikan supaya para penyelidik dapat membuahkan hasil demi kemajuan dan kepentingan negara.

Untuk melaksanakan penyelidikan dengan baik, kita memerlukan para penyelidik yang cukup terlatih dari segi ilmiah dan amali seperti yang dinyatakan dalam bahagian berikut.

Menjadi penyelidik

Untuk menjadi seorang penyelidik, seseorang itu perlu mengikuti pendidikan formal diperingkat universiti. Pendidikan ini akan membekalkan seseorang itu dengan ilmu serta kemahiran yang perlu. Secara amnya pendidikan pra-perkhidmatan pada peringkat bacelor akan membekalkan mahasiswa dengan pendidikan menyeluruh dan kursus penyelidikan serta keperluan melaksanakan tesis bacelor akan memberi pendedahan awal kepada mahasiswa tentang kemahiran penyelidikan. Pada peringkat sarjana lazimnya pelajar akan lebih menjurus kepada bidang pengkhususan yang lebih fokus. Di tahap ini pelajar diharapkan dapat menjalankan penyelidikan dengan bimbingan pensyarah atau penyelia serta dapat menggunakan teori-teori berkaitan sebagai asas penyelidikan mereka.
Pendidikan yang lebih perlu untuk menjadi penyelidik adalah pada tahap pengajian doktor falsafah (Ph.D). Di peringkat ini pelajar diharapkan dapat menjalankan penyelidikan secara sendiri dengan pemantauan minima daripada penyelia atau ahli jawatankuasa penyeliaaan. Bagi melengkapkan diri dengan ilmu serta kemahiran penyelidikan, pelajar digalakkan untuk mengikuti kursus penyelidikan dan statistik sebanyak yang mungkin. Akan tetapi, pada masa kini kebanyakan university menawarkan program Ph.D secara kerja kursus dan pelajar cuma perlu mengambil satu atau dua kursus penyelidikan dan statistik sahaja. Pada pandangan saya cara ini tidak membekalkan pelajar dengan ilmu penyelidikan yang luas serta pelajar akan menumpukan kepada usaha untuk menyiapkan penyelidikan mereka seperti yang dimahukan oleh penyelia serta ahli jawatankuasa penyeliaan.

Sebagai contoh, penulis ingin berkongsi kursus-kursus penyelidikan dan statistik yang telah diambil semasa mengikuti pengajian di peringkat Ph.D pada tahun 1989 - 1993.

1.	Quantitative Methods in Communication Research	3 credit
2.	Computers in Communication Research	3 credit
3.	Statistical Methods for Communication Research	3 credit
4.	Measurement of Listeners and Viewers	3 credit
5.	Content Analysis	3 credit
6.	General Linear Model	4 credit
7.	Introduction to Program Evaluation	3 credit
8.	Analysis of Instructional Media	4 credit
9.	Non-parametric Analysis	2 credit
10.	Economic Evaluation in Education	3 credit
11.	Qualitative Methods	3 credit
12.	Participative Research Planning Evaluation	3 credit

Kesedaran untuk mengikuti banyak kursus berkenaan adalah kerana sebagai seorang tenaga akademik, ilmu pengetahuan penyelidikan serta pemprosesan data amat penting untuk menyelia pelajar pada peringkat siswazah. Secara tidak langsung dengan mengikuti kursus-kursus berkenaan penulis mendapat banyak pendedahan kaedah penyelidikan serta prosidur statistik yang perbagai mengikut jenis penyelidikan. Berbekalkan ilmu pengetahuan ini, penulis mempunyai keyakinan untuk melaksanakan penyelidikan dan menyelia pelajar.

Sejak bertugas sebagai pagawai akademik pada tahun 1981 penulis telah melaksanakan 34 peyelidikan yang mana 18 sebagai ketua, atau secara sendirian dan 16 sebagai ahli kumpulan. Jumlah dana bagi semua penyelidikan yang telah diperolehi adalah sebanyak RM1,923,345.00. Berikut adalah beberapa contoh penyelidikan yang telah dijalankan.

- Mobilizing e-community for inculcating first class mentality.
  Sci-Fund – RM113, 810.00, Ketua

- Utilization of ICT among farming entrepreneurs: An approach towards development of k-farmers. Sci-Fund – RM107, 085.00, Ahli

- Family communication and use of computers among Malaysian farm families.
  Sci-Fund – RM150, 150.00, Ahli

- Rural society and ICT projects: An effort for development of k-society.
  IRPA – RM145, 000.00, Ketua.

- The readiness of selected Malaysian society to accept information technology (IT).
  IRPA – RM105, 000.00, Ketua

- The roles of mass media in promoting caring society. IRPA – 55,000.00, Ahli

- The use of ICT among Committee Members of Community Development and Security (JKKK) Kampung Gerakan Daya Wawasan. RUGS – RM62, 000.00, Ahli

- Fisherman community and ICT: An effort towards the development of knowledgeable fisherman. MoHE – RM100, 000.00, Ketua

Bagi mereka yang berminat untuk menjadikan penyelidikan sebagai pekerjaan utama, mereka boleh bermula dengan menjadi pembantu penyelidik untuk menimba ilmu pengetahuan dan kemahiran penyelidikan. Semasa menjadi pembantu penyelidik mereka hendaklah sentiasa memerhatikan suasana penyelidikan dan sanggup menjalankan tugas yang diberi dengan baik.

Apabila telah menjawat jawatan sebagai penyelidik, mereka hendaklah mengikuti kursus dan latihan serta menyertai seminar secara berterusan kerana ilmu dan kemahiran penyelidikan itu amat luas. Pendedahan yang diperolehi semasa pra-perkhidmatan adalah bekalan asas, sedangkan proses penyelidikan itu sentiasa berkembang. Kursus-kursus dalam perkhidmatan akan membentuk penyelidik itu melakar kemahiran serta mengenalpasti bidang penyelidikan yang diminati. Di samping itu dengan menghadiri kursus dan seminar, para penyelidik dapat membangunankan jalinan dengan penyelidik-penyelidik lain yang penting untuk mewujudkan jaringan rakan sejawat. Dengan cara ini para penyelidik dapat belajar sesama mereka serta berkongsi pengalaman, kemahiran yang tidak akan diperolehi melalui pembacaan.

Kemahiran teras penyelidikan

Untuk menjadi seorang penyelidik seseorang itu harus melengkapkan diri masing-masing dengan ilmu pengetahuan dan kemahiran yang berkaitan. Walaupun pendidikan pra-perkhidmatan telah membekalkan ilmu pengetahuan, akan tetapi kemahiran perlu ditimba melalui kerja-kerja atau penglibatan dalam penyelidikan. Terdapat beberapa kemahiran teras yang perlu ada pada setiap penyelidik supaya dapat melaksanakan penyelidikan dengan baik. Senarai kemahiran yang disenaraikan dalam kertas kerja ini telah dikumpul melalui pengalaman menjalankan penyelidikan dan juga interaksi dengan ramai penyelidik lain. Adalah diharapkan senarai kemahiran teras ini dapat membantu para penyelidik dan mereka yang bercita-cita untuk menjadi penyelidik melengkap diri masing-masing serta memandu mereka dalam menimba pengalaman yang relevan.

1) *Teliti* – setiap penyelidik hendaklah teliti dalam setiap kerja yang dilakukannya.
2) *Mencerap* – penyelidik harus banyak membaca untuk membuat soroton literatur dan mengenalpasti isu atau masalah yang akan menjadi topik penyelidikan. Dengan ada kemahiran ini penyelidik akan dapat mengenalpasti isi-isi penting dalam pembacaan serta berupaya membincangkannya secara kritikal.
3) *Menulis* – satu kemahiran yang amat penting kerana setiap penyelidik perlu menulis cadangan penyelidikan untuk mendapatkan pembiayaan, menulis hasil kajian, menulis laporan, menulis kertas kerja seminar/konferens dan yang pentingnya menulis makalah untuk diterbitkan dalama jurnal. Dalam hal ini penyelidik kena mahir dengan format, gaya dan tuntutan penulisan jurnal berkaitan. Penyelidik juga kena mahir membangunkan instrumen kajian.
4) *Analisis data* – setiap penyelidik akan menganalisis data yang telah diperolehi dengan menggunakan prosidur statistik yang sesuai untuk penyelidikan kuantitatif, atau kaedah analisis kualitatif yang betul. Pengetahuan dan kemahiran menggunakan komputer bagi tujuan menganalisis data dengan perisian yang pelbagai merupakan satu kemahiran yang amat penting bagi setiap penyelidik.
5) *Interpretasi data dan membuat kesimpulan* – setelah data dianalisis, penyelidik hendaklah mahir menterjemah hasil kajian itu dalam bentuk yang dapat difahami

oleh pihak lain serta menjawab persoalan kajian. Kemahiran ini penting bagi memastikan bahawa hasil kajian itu menunjukkan bahawa objektif kajian telah dicapai.

6) *Membuat pembentangan* – setiap penyelidik perlu mempunyai kemahiran untuk berkongsi hasil penyelidikan masing-masing dengan khalayak secara lisan dan menggunakan media komunikasi yang sesuai.
7) *Komunikasi antaraperseorangan* – selalunya penyelidikan dilakukan secara kumpulan, maka setiap penyelidik perlu memiliki kemahiran komunikasi untuk berinteraksi dengan anggota kumpulan, dengan pemegang taruh, responden dan juga pihak pembiaya.
8) *Menganalisis persekitaran* – penyelidik hendaklah mempunyai keupayaan untuk sentiasa menganalisis persekitaran bagi menimbulkan persoalan-persoalan yang sesuai bagi mencetuskan idea penyelidikan, mesti mempunyai pemikiran yang kritis.
9) *Mengenalpasti masalah* – merupakan kemahiran asas yang perlu dimiliki oleh setiap penyelidik. Ini adalah penting kerana dalam bidang kemanusian dan sains sosial setiap penyelidikan dimulakan dengan mengenalpasti masalah. Kemampuan untuk mengenalpasti masalah dan menyatakannya dengan jelas mampu membezakan antara penyelidik yang berpengalaman dengan mereka yang baru berkecimpung dengan penyelidikan.

Para penyelidik tidak seharusnya menumpukan kemahiran kepada senarai ini sahaja kerana banyak lagi kemahiran lain yang perlu untuk melaksanakan penyelidikan dengan baik. Walau bagaimanapun senarai kemahiran teras ini merupakan kemahiran yang perlu diperolehi dan dikuasai oleh setiap penyelidik, sekiranya bercita-cita untuk menjadikan penyelidikan sebagai satu kerjaya. Oleh itu rancanglah strategi untuk mengumpul kemahiran berkenaan secara ansur-ansur, tetapi terus berusaha untuk melengkapkannya.

Adalah amat baik sekiranya dapat ditubuhkan satu persatuan atau kumpulan yang membawa penyelidikan sebagai satu bidang yang dibincangkan secara berkala. Pada masa sekarang selalunya seminar atau konferens membentang dan membincangan hasil kajian. Jadi, mengapa tidak diadakan satu sesi khusus untuk membincangkan hal-hal atau isu penyelidikan itu sendiri bagi tujuan berkongsi ilmu, pengetahuan serta mengembangkan lagi ilmu penyelidikan itu ketahapm yang lebih tinggi. Dengan cara ini para penyelidik akan mendapat tahu perkembangan terkini dari segi teknologi untuk pengumpulan data, perisian baru untuk menganalisis data, serta isu-isu penyelidikan yang menjadi topik perbincangan utama pada peringkat global.

Sebagai kesimpulan, lengkapkanlah diri anda dengan ilmu pengetahuan serta kemahiran yang berkaitan untuk menjadi penyelidik yang baik. Percayalah bahawa rezeki itu datangnya dari Allah dan kita kena berusaha untuk mendapatkannya.

II – Memertabatkan jurnal tempatan

Setiap penyelidikan yang telah disempurnakan memberi hasil yang boleh digunakan untuk menyelesaikan masalah, mencipta peralatan baharu, membentuk teori baharu, memperkenalkan kaedah yang yang lebih baik dan lain-lain lagi. Bagi memastikan hasil penyelidikan mendatangkan manfaat yang lebih berkesan, ia perlu disebarkan atau dikongsi bersama. Perkongsian ini boleh berlaku dalam banyak cara seperti pembentangan kepada pembiaya, rakan sejawat di institusi, menulis laporan, membentangkan dalam seminar atau konferens dan menerbitkannya dalam jurnal. Bagi para penyelidik dan tenaga akademik, menerbitkan makalah hasil penyelidikan dalam jurnal terpilih atau satu kemastian, sehingga timbulnya budaya '*publish or perish*.' Tuntutan ini secara tidak langsung telah membuatkan setiap individu terlibat berusaha gigih untuk menulis dan mendapat tempat di jurnal yang terindeks serta diiktiraf secara global. Tidak kurang juga ada begitu tertekan untuk mencapai KPI yang telah ditetapkan oleh institusi masing-masing.

Hashim dan M.A. Yahya (2011) menyatakan ada universiti tempatan yang mengenakan syarat bahawa untuk dinaikkan pangkat ke professor C perlu ada 2 buku, 30 naskah dalam jurnal dan sekurang-kurang 8 hendaklah dalam jurnal terindeks ISI. Bagi kenaikan pangkat ke professor B perlu ada 4 buah buku, 40 makalah jurnal dan sekurang-kuranganya 12 dalam jurnal ISI. Seterunya untuk mendapat professor A perlu menerbitkan 6 buah buku dan menghasilkan 50 jurnal yang mana sekurang-kurangnya 16 dalam jurnal ISI. Begitu juga dengan pensyarah yang ingin naik pangkat ke professor madya, ada keperluan untuk menerbitkan 15 makalah jurnal dan sekurang-kurangnya 4 dalam jurnal ISI.

Tidak dinafikan bahawa terdapat jurnal yang diterbitkan oleh institusi pengajian tinggi dan juga institusi penyelidikan. Pada tahun 2007, satu projek yang dinamakan Malaysian Abstracting and Indexing System (MyAIS) telah mengenalpasti 519 jurnal yang telah diterbitkan dalam Negara. Maklumat tentang usaha ini terdapat dalam laman web Fakulti Komputer dan Teknologi Maklumat, Universiti Malaya. Pada bulan Mac 2011, didapati bahawa 11 jurnal tempatan telah terindeks dalam ISI WoS, 44 jurnal dalam SCOPUS dan 7 jurnal mempunyai Impact Factor dari 0.113 hingga 0.763. Ini membuktikan bahawa telah terdapat pengiktirafan terhadap jurnal tempatan. Akan tetapi bilangan ini perlu ditingkatkan bagi menampung keperluan penerbitan ilmiah negara.

Kenapa jurnal tempatan perlu dinaiktaraf?

Dalam persaingan global sekarang setiap negara ingin menonjolkan bahawa mereka mempunyai kelebihan atau niche untuk menarik pelabur, peniaga serta pihak-pihak lain datang ke negara masing-masing. Sektor pendidikan tinggi tidak terlepas dalam hal ini, malah kerajaan telah mengishtiharkan bahawa Malaysia ingin menjadi hub pendidikan tinggi serantau. Oleh itu, salah satu sumbangan untuk mencapai hasrat ini adalah

dengan menaiktarafkan jurnal-jurnal ilmiah serta penyelidikan negara. Berikut adalah antara sebab mengapa usaha menaiktaraf jurnal tempatan perlu disegerakan.

1) Banyak institusi pengajian tinggi telah membuat peraturan yang memerlukan pelajar peringkat sarjana dan doktor falsafah perlu menerbitkan makalah dalam jurnal yang diiktiraf sebelum mereka boleh dianugerahkan ijazah.

2) Keperluan untuk tenaga pegawai akademik dan para penyelidik untuk menerbitkan hasil kajian dalam jurnal yang diiktiraf bagi tujuan kenaikan pangkat dan penilaian tahunan.

3) Menambah bilangan jurnal yang terindeks dan diiktiraf untuk para tenaga akademik dan penyelidik menerbitkan hasil penyelidikan mereka serta berkongsi ilmu pengetahuan. Dengan cara ini ia mampu menarik penyelidik luar memberi sumbangan dalam jurnal tempatan. Secara tidak langsung kita mendapat penemuan baru dengan tidak perlu berbelanja besar bagi melaksanakan penyelidikan

4) Telah ada tindakan menyenarai hitamkan beberapa jurnal antarabangsa yang dicurigai sistem wasit dan prosedur penerbitannya.

5) Negara banyak 'kehilangan' maklumat strategik dengan menerbitkan hasil kajian yang baik di luar negara. Seolah-olah mereka mendapat maklumat secara percuma, walhal penyelidik bertungkus lumus untuk mendapatkan hasil.

6) Wang awam yang digunakan untuk penyelidikan kurang memberi pulangan kepada masyarakat tempatan kerana hasil kajian dikongsi oleh golongan atau masyarakat akademik antarabangsa.

7) Negara kita mempunyai *niche* dalam banyak perkara seperti tanaman getah dan kelapa sawit serta pertanian tropikal, dan perbankan Islam. Jurnal-jurnal dalam bidang ini sepatutnya telah menjadi rujukan antarabangsa.

8) Akses kepada maklumat penyelidikan akan menjadi lebih mudah terutamanya bagi pelajar dan para penyelidik kerana jurnal tempatan mempunyai reputasi.

9) Skop penyelidikan yang dilaksanakan oleh para penyelidik tertumpu kepada isu semasa dan persoalan tempatan. Hasil kajian ini penting bagi negara tetapi tidak menjadi keutamaan jurnal antarabangsa.

10) Untuk menjadi hub pendidikan bertaraf dunia dan menarik ahli akademik serta penyelidik berwibawa, perlu ada kemudahan dan prasarana akademik yang kondusif. Mempunyai jurnal tempatan yang diiktiraf pada peringkat antarabangsa mampu membantu dalam hal ini.

Tidak semestinya alasan atau justifikasi yang tersenarai ini adalah lengkap. Apa yang penting adalah satu gerakan sepadu serta komited oleh semua pemegang taruh, baik di peringkat pembuat polisi atau pun pelaksana bertindak pantas sebelum terlambat. Adalah dikhuatiri tekanan dan bebanan untuk menerbitkan malakah di dalam jurnal ISI di peringkat antarabangsa akan mencetuskan fenomena 'academic collapse atau academic crash' di mana para profesor tidak dapat berfungsi dengan cara sepatutnya.

Walhal jurnal-jurnal tempatan yang boleh memainkan peranan untuk menjadi wadah perkongsian ilmu tidak diambil kira atau diabaikan begitu sahaja.

Langkah selanjutnya

Penulis akui bahawa untuk menaiktaraf sesebuah jurnal itu bukan perkara mudah dan ia memakan masa. Walau bagaimanapun usaha mesti dimulakan sekarang kerana kalau lambat diusahakan, maka makin jauhlah kita ketinggalan. Berikut adalah beberapa cadangan yang boleh difikirkan bersama bagi mencapai hasrat berkenaan.

1) Dapatkan status jurnal masa kini – Projek MyAIS telah menyenaraikan 519 jurnal yang diterbitkan oleh institusi tempatan. Amat baik sekiranya status jurnal berkenaan dikemaskini bagi menentukan keadaannya seperti kekerapan penerbitan dan isu terkini supaya perancangan seterusnya dapat dijalankan.

2) Kenalpasti jurnal yang ada potensi, niche – Telah ada jurnal yang mendapat indeks ISI dan SCOPUS serta mempunyai Impact Factor. Jadikan jurnal ini sebagai pembimbing kepada beberapa jurnal terpilih setelah dinilai potensi untuk menaiktaraf.

3) Peruntukan dana untuk menyokong usaha ini – Komitmen daripada pihak berwajib untuk menyediakan dana untuk menaiktaraf jurnal amat perlu. Peruntukan yang setimpal seperti dana hakcipta dan pengkomeserlan perlu diwujudkan.

4) Kenalpasti individu yang dapat membuatkan ini berlaku – Kini terdapat lebih daripada 1500 orang profesor serta banyak lagi tenaga akademik dan penyelidik yang mampu memberi sumbangan dalam perkara ini. Terdapat juga profesor atau penyelidik yang menjadi ahli sidang editor bagi jurnal antarabangsa. Jasa baik tenaga pakar ini boleh digembelingkan dalam usaha memertabatkan jurnal tempatan

5) Tubuhkan unit khusus untuk penerbitan jurnal diperingkat kebangsaan dengan staf yang terlatih dan jadual penerbitan yang rigid – Penerbitan jurnal adalah satu kegiatan serius yang perlu diberi tumpuan penuh oleh kumpulan yang terlatih. Antara ciri jurnal yang baik adalah penerbitannya yang mengikut jadual penerbitan. Oleh itu satu unit penerbitan jurnal diperingkat kebangsaan perlu untuk memantau aktiviti penerbitan jurnal. Di samping itu pihak kerajaan perlu ada usaha untuk mengiktiraf jurnal-jurnal kebangsaan seperti yang dilakukan oleh negara lain.

6) Memberi pengiktirafan dan ganjaran sewajar kepada penilai atau pengulas makalah yang melaksanakan tugas dalam tempoh yang diberikan – Sebagai insentif kepada mereka untuk menyumbangkan tenaga dan buah fikiran.

7) Kerjasama antara semua pihak – Kejayaan untuk menaiktaraf jurnal tempatan amat bergantung kepada komitmen pemegang taruh untuk membuatkan usaha ini berjaya. Pada pandangan penulis Majlis Profesor Negara boleh menjadikan isu ini

sebagai satu usaha serta memainkan peranan penting bagi memertabatkan jurnal tempatan.

Sebagai kesimpulan, perlulah ditegaskan sekali lagi bahawa aktiviti penyelidikan adalah penting dalam proses pembangunan negara baik dari segi ekonomi, sosial, politik dan juga akademik. Oleh itu barisan penyelidik perlu dilengkapkan dengan ilmu dan kemahiran yang secukupnya agar kajian-kajian yang dilakukan dapat memberikan hasil yang boleh dimanfaatkan sepenuhnya. Di samping itu penemuan penyelidikan perlu dikongsi bersama dan menerbitkan hasil penyelidikan dalam jurnal yang diiktiraf adalah satu tuntutan masa kini. Atas sebab ini, usaha untuk menaiktaraf jurnal tempatan perlu dibuat bagi menampung keperluan semasa dan akan datang.

Rujukan

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HUMAN DEVELOPMENT INDEX: THE CASE OF COMMUNITIES IN MUAR AND PAHANG RIVERS

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Abstract

Human development is an important aspect to be considered for the development of the rural community. Attempts to create Human Development Index mainly to assess the level of human development has never been stopped and among the current human development index is the one developed by the American Human Development Project of the Social Science Research Council. Using the index developed, this study would like to assess the level of human development of the rural community living along two major rivers in Peninsular Malaysia; Muar and Pahang Rivers. This is a quantitative study; an instrument was developed based on the questions asked on the index. The index which is available online consists of three parts and includes of 26 questions related to health, education and income. A total of 900 respondents were chosen from three main districts along Pahang and Muar Rivers namely Pekan, Bahau and Muar. Results gained have confirmed that rural community in Bahau does have the highest level of human development compared to the communities in the other two districts. Further analysis using ANOVA has confirmed that there is no significant difference in terms of human development between the communities in the three districts. A number of valuable of recommendations and discussion have been further highlighted in this paper.

Keywords: *Human development, Pahang River, Muar River and Rural community.*

Introduction

What is Human Development?

Human development covers a number of definitions. Scholars and researchers have their own understanding on what human development stands for. Among the established human development definitions are:

> *The basic purpose of development is to enlarge people's choices. In principle, these choices can be infinite and can change over time. People often value achievements that do not show up at all, or not immediately, in income or growth figures: greater access to knowledge, better nutrition and health services, more secure livelihoods, security against crime and physical violence, satisfying leisure hours, political and cultural freedoms and*

sense of participation in community activities. The objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives- Mahbub ul Haq (1934-1998) Founder of the Human Development Report- quotation from: http://hdr.undp.org/en/humandev/

"Human development, as an approach, is concerned with what I take to be the basic development idea: namely, advancing the richness of human life, rather than the richness of the economy in which human beings live, which is only a part of it." Prof. Amartya Sen Harvard University" quotation from http://hdr.undp.org/en/humandev/

The Human Development Index

The Human Development Index (HDI) is essentially needed to examine where actually a group stands in term of human development. Commonly this index consists of three main elements namely health; income and education. Development of HDI has been initiated since 11 years ago in 1990. Till now there are hundreds of human development indices created and among the most used HDI was developed by American Human Development Project Social Science Research Council. Similarly, this index measures the three basic elements of human development. Nonetheless, it was further developed to suit the American context and to maximize the use of available data (American Human Development Project Social Science Research Council, 2011).

Malaysia stands in the 57th position in terms of HDI based on the study done by United Nations Development Programme (UNDP). It is very interesting to examine the HDI of the rural community in Malaysia by using an index created and used in the developed country. Through this, information can be gained. on where actually rural communities in a developing country such as Malaysia stand if they are being compared to communities living in the developed countries such as the USA.

Efforts and plans to develop rural community in Malaysia

Rural community is an important group in Malaysia. Their roles especially in developing the agriculture industry cannot be denied. In Malaysia, continuity of rural development is guaranteed through 5 eras of development known as 1) era of early independence; 2) era of New Economic Policy; 3) era of National Development Policy; 4) era of development based on knowledge and 5) era of government transformation. In these 5 eras, a lot of problems and obstacles have been and still need to be solved. Among the identified problems are to change the way rural people think about development, the value of rural community, rural leadership, less attractive employment opportunities in the rural areas, limited entrepreneurship opportunities, difficulties to find available land, high dependency on immigrant human resources, low productivity, unorganized settlement, low level of skills and education and redundancy in agencies' roles and inefficiency management of sources.

To ensure the development will persistently be exposed to the rural community, there are seven cores set by the government. First is the intensification of human capital and community empowerment. Within this core, rural community will be empowered through a number of mediums such as education and diverse type of trainings and skills. Second is economic development which is competitive and sustainable and one of the ways to achieve this is by widening the networking and marketing of the rural industry, usage of new technology and creative and innovative management of the economic activities. Third is the integration of rural development program with physical planning. This is important in initiating a systematic rural development planning. Fourth is the overall development on infrastructure and public facilities. Fifth is to uplift the quality of life among the lower income group. Within the fifth core there are three main elements emphasized which are better and comfortable homes; consciousness on health and strengthening the social security networking. Sixth is systematic development management; to have a systematic development management cooperation between government, private and NGO agencies should be strengthened while the competencies of the implementer officers should be enhanced. The last core is the sustainable management of the environmental sources. Sustainable management of environmental sources can be achieved if there are continuous monitoring and control on the activities of forest exploration, rural industry and implementing good agriculture practice and being environmental friendly.

The Pahang River and Muar River

The Pahang River located in Pahang, the largest state in Peninsular Malaysia; it flows along 459 km long which makes it the longest river in Peninsular Malaysia. A total of 75% of the river drain area is located in Pahang while the remaining drain area is located in Negeri Sembilan. Pahang River is still associated with the local community daily life. The local community still depends on it for conducting their socio-economic activities. Fish and fresh lobster fishing, alternative method of movement, money making activities and social and cultural activities are still actively conducted along Pahang River (Sulaiman et al., 2010).

Similarly, the Muar River is still relevant to the needs and activities of the local community. It flows through two states in Malaysia, Johor and Negeri Sembilan. It starts at Jempol in Negeri Sembilan and it flows to Malacca Straits through Kuala Muar. The Muar River is a well-known place for fresh lobster fishing. Both local and international tourists love to catch the fresh lobster due to a higher market price (approximately, USD 12 per kilo). Moreover, the Muar River is related to a number of historical events and stories related to famous Malay warrior and princess namely Hang Tuah and Tun Teja, Bukit Kepong Police Station Kota Buruk and World War 2 bombed bridge called “Jambatan Patah” (Sulaiman et al., 2010).

Not many people nowadays know that these two rivers were nearly connected at a place called Penarikan in Bahau, Negeri Sembilan. Only 300 meters separated these two rivers and because of the pulling of boats overland, the local site is called “Penarikan”, which is the Malay word for pulling. Centuries before, it was an essential route for trading activities.

Trading boats from Muar River used this route to reach Kuala Pahang in Pekan, or Kuala Lipis to continue into Terengganu, Kelantan or Perak.

Figure 1: Flows of Pahang River and Muar River

Methodology

This study is quantitative in nature. The instrument developed is based on the questions asked within the HDI. A pre tested instrument was used to collect the data needed. A simple random sampling was employed. Through this sampling, 900 respondents have been chosen. The respondents were among the villagers that stayed along Pahang River and Muar River. The respondents were chosen from three main districts along these two rivers namely Pekan (end of Pahang River), Bahau (city where Pahang River and Muar River are nearly connected) and Muar (end of Muar River). Each district represents an equal number of respondents which is 300. Apart from this, the survey method was used to gain the data needed. The HDI calculation was based on the question asked in the online index which can be accessed at http://www.measureofamerica.org/well-o-meter/ . All the data gained was keyed to the online index. Three main elements have been focused within the index namely 1) Health (24 questions); 2) Income (1 question) and 3) Education (1 question). After calculating the value of index of each respondent, the value then will be keyed in the SPSS software. Furthermore, descriptive analyses were employed to describe the general data of the respondents.

Results

The first part of the index emphasizes on the health aspect. Within this part a total of 24 questions were asked. More than half of the respondents (55.3%) were male while more than two fifth of the respondents (46.1%) were included in the age group of 50-70 years. The mean score recorded for respondents age was 53.5%. Nearly three quarters of the respondents (72.8%) mentioned that neither their grandfather nor grandmother lived more than 85 years old. More than two thirds of the respondents (69.7%) claimed that all of their grandparents passed away before their age reaching 80 years. Moreover, a large majority of the respondents (86.2%) claimed that none their parents died of a stroke or heart attack before reaching the age of 50 years. Slightly more than three quarters of the respondents (76.2%) have none of their parents, brother or sister under the age of 50 years has (or had) cancer of a heart condition or has diabetes.

Apart from this, it can be identified that minority of the respondents (10.1%) are still working even though their ages are more than 65 years. Minority of the respondents (4.5%) have informed that they live alone. Consistently, 89.2% of the respondents informed that they never live alone since their age was 25 years old. Furthermore, it can be detected that 6.9% of the respondents are working at the office while 79.4% of them claimed that their work required heavy physical works. It is good to know that a total of 21.8% of the respondents exercised (at least half an hour) for 5 times a week while only 9.0% of the respondents sleep more than 10 hours each night. Findings revealed that a big number of respondents have no speeding ticket (88.1%), not drinking equivalent of two drinks or liquor a day (99.9%), not overweight (73.1%) and have annual medical checkup (83.9%).

Table 3: HDI Part 1(Health)

Level	Frequency	Percentage	Mean	SD
Gender				
Male	498	55.3		
Female	402	44.7		
Age (years)			**53.5**	**14.6**
under 30	64	7.1		
between 30-40	104	11.6		
between 40-50	200	22.2		
between 50-70	415	46.1		
over 70	117	13		
Live in Urban Areas with the population more than 2 million				
Yes	0	0		
No	900	100		

Has one of your grandparents live to age 85 or more		
Yes	245	28.2
No	655	72.8
Have all of your grandparents lived to age 80 or more		
Yes	273	30.3
No	627	69.7
Has either one of your parents died of a stroke of heart attack before 50		
Yes	124	13.8
No	776	86.2
Has any parents, brother or sister under the age of 50 has (or had) cancer, heart condition or has diabetes		
Yes	208	23.1
No	692	76.9
Are you over 65 and still working		
Yes	91	10.1
No	809	89.9
Do you live with a spouse or friend		
Yes	857	95.2
No	43	4.8
How many years have you lived alone since age 25 (years)		
0	803	89.2
1-5	59	6.6
6-10	16	1.8
>10	22	2.4
Do you work behind a desk		
Yes	62	6.9
No	838	93.1
Does your work require heavy physical work		
Yes	185	20.6
No	715	79.4

How long do you exercise strenously (tennis, running, etc) a week for at least ½ hour		
5 times	196	21.8
2-3 times	196	21.8
Less than two times	508	56.4
Do you sleep more than 10 hours each night		
Yes	81	9.0
No	819	81.0
Are you intense; aggressive or easily angered		
Yes	24	2.7
No	876	97.3
Are you easy-going and relaxed		
Yes	887	98.6
No	13	1.4
Are you happy		
Yes	891	99.0
No	9	1.0
Are you unhappy		
Yes	16	1.8
No	884	98.2
Have you had a speeding ticket last year		
Yes	107	11.9
No	793	88.1
Do you drink equivalent of two drinks or liquor a day		
Yes	1	.1
No	899	99.9
Are you overweight		
I'm not overweight	658	73.1
By 10 to 30 pounds	125	13.9
By 30 to 50 pounds	99	11.0
By 50 pounds or more	18	2.0
Do you have annual medical check up		
Yes	755	83.9
No	145	16.1

Part 2 of the index focuses on how much the respondents managed to earn in a year. The mean score recorded for income gained was RM1874.74; a good level of income. Nevertheless, a total of 19.6% of the respondents have been identified to earn less than RM6,000 per year (equivalent to RM500 per month) which is below the poverty level set by the government which is RM720. Majority of the respondents managed to earn RM6,001-RM12,000 per year (equivalent to RM600-RM1,000 per month).

Table 4: Part 2: HDI Part 2 (Income)

	Frequency	**Percentage**	**Mean**	**SD**
Income per month			**1874.74**	**5375.53**
≤RM6000	176	19.6		
RM6001-RM12,000	251	27.9		
RM12,001-RM18,000	155	17.2		
RM18,001-RM30,000	174	19.3		
>RM30,001	144	16.0		

Part 3 of the index focuses on the level of education that the respondents hold. In this part the respondents were given five options of answer ranging from did not complete high school/no diploma to Master/Doctorate of Professional Degree. Majority of them have never gone to school and just finished their primary school or did not passed their Lower Certificate Education (equivalent to PMR), so it is not surprising why majority of the respondents (61.4%) were included in the category of did not complete high school/ no diploma. It also can be identified a total of 31.7% of the respondents have high school graduate or equivalent. Respondents who were included in this category are those who possess Malaysia Certificate Education (MCE) (equivalent to SPM/SPMV in this day) and STPM. Nevertheless, only 18 respondents were identified to have bachelor degree from four year college or university.

Table 5: HDI Part 3 (Education)

Level of education	**Frequency**	**Percentage**
Did not complete high school/ no diploma	553	61.4
High school graduate or equivalent	285	31.7
Some college credit or associate credit, but did not receive a bachelor degree	43	4.8
Bachelor degree from four year college or university	18	2.0
Master/Doctorate of Professional Degree	1	0.1

Based on the answers provided in the questionnaire, the answers were keyed in into HDI which can be accessed through http://www.measureofamerica.org/well-o-meter/. By doing this, HDI for each respondent can be gained. The index has generated a maximum value of 10.0. Using SPSS, a cumulative value for the index was generated to produce the overall level of HDI for the respondents. After generating the cumulative value; the HDI was

grouped into three categories; low (1.00-4.01), moderate (4.01-7.00) and high (7.01-10.0). Results yielded have revealed that the HDI for rural community living along Pahang River and Muar River is still low based on the overall mean score recorded (M = 3.98). Specifically, it can be identified that 5.6% of the respondents do have a high level of HDI and more than two third of the respondents (36.6%) have a moderate level of HDI. More than half of the respondents (57.8%) were in the low category (Table 7).

Table 6: Overall Level of Pahang River and Muar River Community Development Index Using the American Human Development Index (Well O Meter).

HDI Index Category	Frequency	Percentage	Mean	SD
			3.99	**1.48**
Low (1.00 - 4.00)	520	57.8		
Moderate (4.01 – 7.00)	329	36.6		
High (7.01 – 10.0)	51	5.6		

Unlike Table 7 which illustrates the overall level of HDI for the respondents, Table 8 will specifically inform on the HDI for respondents of each of the districts. Results presented in Table 7 have confirmed that respondents in Bahau managed to record the highest HDI with M = 4.10 while respondents in Pekan recorded the lowest HDI with M = 3.85. Nonetheless, this study concludes that there was no significant difference in the HDI between the respondents in these three districts based on F value (3, 900) = 1.748, p>.005 (Table 8).

Table 7: Level of Human Development Index in the Three Cities along Pahang River and Muar River.

	HDI Index Category	**Frequency**	**Percentage**	**Mean**	**SD**
Pekan	Low (1.00 - 4.00)	184	61.3	**3.85**	**1.57**
	Moderate (4.01 – 7.00)	104	34.7		
	High (7.01 – 10.0)	12	4.0		
Bahau	Low (1.00 - 4.00)	170	56.7	**4.10**	**1.61**
	Moderate (4.01 – 7.00)	108	36.0		
	High (7.01 – 10.0)	22	7.3		
Muar	Low (1.00 - 4.00)	166	55.3	**4.02**	**1.68**
	Moderate (4.01 – 7.00)	117	39.0		
	High (7.01 – 10.0)	17	5.7		

Table 8: Comparison between the three cities studied in term of HDI Index

Variables	n	Mean	SD	F	p
HDI Index				**1.748**	**.175**
Pekan	300	3.85	1.57		
Bahau	300	4.10	1.61		
Muar	300	4.02	1.68		

Conclusion

Human development is an important component for the rural community in Malaysia. What have been completed in this study would be useful in exploring information on where actually the rural community stands (in this case Pahang and Muar Rivers community) in terms of health, education and income. Based on the findings it can be concluded that:

1) Respondents in Muar and Bahau do exceed the moderate level of HDI
2) Majority of the respondents did not complete high school/ no diploma
3) Majority of respondents do exceed the recent poverty level established by the government
4) Majority of the respondents are not working after age 65
5) Majority of the respondents never live alone since their age of 25 years
6) The work of majority of the respondents do not require them to do a heavy physical work
7) Majority of the respondents do not have overweight problem
8) Majority of the respondents do perform their annual medical checkup

Discussion

This study is a first grounded attempt in Malaysia to use the HDI as a basis to assess the human condition in the rural areas. On the other hand, the Economic Planning Unit does submit national data to the United Nations Development Programme for inclusion into the global human development index monitoring coordinated by the UNDP. It is true that unpublished data for Malaysian HDI maybe available for the various states and federal territories. Comparatively, this study had gone beyond that and examined the HDI at a lower level.

Results gained did raise some concerns about the human development if one takes into consideration the expected level of development in the three moderately developed states in Peninsular Malaysia, they being Johor, Negri Sembilan and Pahang. The overall moderate level of HDI for Bahau and Muar and the low HDI for Pekan can be attributed to the low scores in the level of education achieved and to a certain extent, the moderate to low average income received, what more, as the poverty level income had recently been adjusted to RM$720.00.

Surprisingly, it was revealed that the HDI for Bahau had exceeded those of Muar and Pekan, it opposed the common expectation that the hinterland would be economically less vibrant than the cities at the two river mouths. Future study on this result should be conducted by interested and concern parties.

The health data provided have concluded the growing number of the elderly in the Malaysian population, which as a whole, is quite healthy, although they lack adequate exercise. It is good to know that they do not have an over-weight problem and they do go for annual

medical check-ups. Workwise, the study population had also been low-risk takers as most of them worked in jobs that did not require great physical efforts.

It is contended that this study could raise a lot of further commentary and discussion in the human development field and it is hoped to lead others to further examine the HDI concept as applied to human development progress in Malaysia and the region.

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THE QUALITY OF LIFE AMONG RIVER COMMUNITIES ALONG PAHANG AND MUAR RIVERS

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Abstract

In Malaysia as elsewhere the populace including river communities has the rights to get the benefits from development.Impacts of development should not merely measured on the economic achievement; it should cover aspects that can drive towards a better quality of life. The purpose of this study is to examine the quality of life of river communities. Albeit the economic achievement achieved by the country and proven to profit groups such as rural and urban communities, agriculture community and entrepreneurs; does it brings any impact on the river community in Malaysia?This quantitative study was conducted to determine the quality of life among river communities. A total 900 respondents along Pahang river and Muar river were selected based on the simple random sampling. It was found that the quality of life among river community in Pahang river and Muar river is at moderate level. It is proposed that to further develop the river community quality of life; strategic and systematic developments strategies should be planned in line with their needs and requirements. This development should be focused on basic needs that are affordable and create more job opportunities that offer a better income.

Keywords: *Economic development, river community, quality of life, Pahang river and Muar river.*

Introduction

Our country has become more concerned or more caring about the quality of life for the people of Malaysia. The quality of life and well-being are two different things but can be connected in so many ways; the connections of these two aspects will eventually create satisfaction in our life. There is a number of ways and programs which have been conducted and still on going to further advance the Malaysian quality of life.

The Malaysian government has introduced 6 National Key Result Areas (NKRAs) to benchmark and improve the level of quality of life in Malaysia. These 6 NKRAs are reduction of crime rates, combating corruption, widening access to affordable and quality education areas, uplift the living standard of the poor, improving the infrastructure in rural areas, and improving public transport in the medium term. There is a clear objective of the NKRAs; people either in rural or urban will equally benefits from it. Albeit the difficulties in reaching some of the groups due to the geographical factors especially in Sabah and Sarawak, it should not be a major problem for the government in exposing the NKRAs benefits to such groups.

The history of Pahang River and Muar River

The Muar River formed part of the Penarikan, an ancient overland trade route, which was a short-cut from the west to the east coast of the Malay Peninsula. The river is bridged by two bridges in Muar town. Back in 1967, the first bridge was constructed to replace the ferry service. Thirty eight years after that the second bridge was built. Among the main attractions of Muar River is Taman Tanjung Emas, Muar town's park; situated at the estuary of Muar River. Apart form this, there are two Sultan Ibrahim mosques along the Muar River. The older mosque, which was built in 1927, is a sign of pride for the locals. The Sultan Ibrahim Jamek Mosque is situated in Muar town, on the southern bank of the Muar River. The construction of the mosque has integrated British influences, mainly because it was built during the British colonial period. The newer Sultan Ibrahim mosque 2, which is placed at the northern bank of the Muar River in Tanjung Agas, is the latest icon of Muar town with a design similar to the earlier mosque.

Pahang River originated in the state of Pahang. It is the longest river on the Malay Peninsula. The river begins at the confluence of Jelai and Tembeling rivers on the Titiwangsa Mountains and drains into the South China Sea. The Pahang River and Muar River were nearly connected at a place called Jempol, Negeri Sembilan. In the past, trading boats from Muar River could continue their journey up to the east coast. Every time the traders reaching Jalan Penarikan, assist from local and other traders is needed to pull the boats overland. The distance is about 300 meters and due to the pulling the boats overland, the route is named Penarikan, which is the Malay word for pulling.

A number of attractive historical sites can be found at Pahang River. Historical places such as Makam Lubuk Pahang situated near to Kampung Jeranggang should be visited by tourists. This burial consists of the tombs of Sultan Abdul Jamil, Datuk Budiman and Puteri Buluh Betong. There, a building for the British resident was erected. It was later converted into a palace for the Sultan. Now it is the Sultan Abu Bakar Muzium. Jerantut is 15 km from the confluence of Jelai and Tembeling rivers. Temerloh is located on the confluence between Semantan and Pahang rivers. The town of Pekan, which is Pahang's royal town, is situated on the southern bank of the river, near the river mouth.

Activities along the River

There are many activities that can be conducted along the river. Albeit the facts that currently rivers are mainly used as the sources of recreational activities, doubtlessly it still able to offer economic and culture related activities for the locals. Muar and Pahang Rivers is a well known places for local anglers and part-time fishermen. Muar River for example is well known with its fresh lobster; the market price for the fresh lobster is quite lucrative reaching RM38 per kilo while Pahang River is famous with its Patin Fish. Apart from this, social and

cultural activities are still conducted at these two rivers, events such as Angling Competition, Pesta Berakit and Annual Kayaking are actively conducted at both rivers.

Quality of Life

Referring to Farquhar M. (1995), quality of life is not simply talking about the good things in their life, but the bad things too; descriptions centre of the nature of people's lives, and the ability to maintain or even improve the quality of their lives. Nonetheless, Abrams (1973), has emphasized the expression quality of life as the level of satisfaction or dissatisfaction sensed by people based on some aspects of their lives. It can be connected to the degeree to which pleasure and satisfaction characterize human existence (Andrews, 1974). For the purposes of this research, quality of life refers to the people's life condition based on several indicators that influence their life quality.

Indicator for Quality of Life

The Malaysian economic data of 2010 by Economic Planning Unit Department of Prime Minister's office listed eleven indicators that influence the quality of life. The indicators are income and distribution, working life, transport and communication, health, education, housing, environment, family life, social participation, public safety, and culture and leisure. All these indicators play important roles in increasing the Malaysian quality of life.

Aspects of Quality of Life

Table 1: Aspects of quality of life to be measured

Name of the researcher/organization	Aspects of QOL emphasized
T. Rahman et al (2011)	Relationship with family and friends, health, work and productivity, material well-being, feeling part of one's local community, personal safety and the quality of environment.
Shiovitz-Ezra et al (2009)	Happiness, self-esteem, depression, loneliness, anxiety, stress and self-reported emotional health.
Idler et al (2008)	Religion
Malaysian quality of life index (MQLI) 2004	Income and distribution, working life, transport and communication, education, housing, environment, family life, social participation, public safety and culture and leisure.
Tom Koch (2000)	Health planning, health economics and medical decision-making.
Malaysian quality of life index (MQLI) 1999	Income and distribution, working life, transport and communication, health, education, housing, environment, family life,

	social participation and public safety.
Morag Farquhar (1995)	Family relationship, social contacts, general health and functional status.

Findings

Demographic Data of the Respondent

The descriptive statistics analysis is used to describe the frequency and percentage of respondent's demographic data which are based on gender, age, level of education, income per month, period of staying at the village, distance to the nearest city, distance to the nearest river and the number of family members.The result shown in Table 2.

Gender and Age

The total number of respondent involved in this study was about 900 people. 498 people (55.3%) of whom are male and the balance of the total respondent were women of the total of 402 people (44.7%). The mean score of the age recorded was 53.5 years. From the total respondents, 49.75 are among 41-60 years. Followed by those aged more than 60 years (22.0%) and finally it is amongst people aged less than 40 years (18.3%).

Level of Education

In term of education, majority of them (32.7%) possess in primary school, followed by who is possess SPM/SPMV/MCE (30.0%) and (20.8%) possess in PMR/SRP/LCE. Less than 10% of them possess in higher education, which are (1.7%) possess in skills certificates, (4.8%) possess in STPM/Diploma and (2.1%) of them are degree/master/PhD holder. However, there were (8.0%) of them who never been to school.

Income per Month

Based on the results presented in Table 2 the mean score for income per month was RM 1,874.74 and majority of the respondents (27.9%) earn between RM 501 to RM 1,000 a month. Then, followed by those who earn ≤RM 500 (19.6%), (19.3%) between RM 1,501 to RM 2,500, (17.2%) earn between RM 1,001 to RM 1,500 and (16.0%) earn more than RM 2,501.

Period of Staying at the Village and Number of Family Members

Table 2 shown that most of the respondents stay at the village more than 51 years (35.0%), followed by who is stay between 26 to 50 years (35.8%) and stay less than 25 years (27.8%).Majority of the respondents (400 people) havebetween 3 to 5numbers of family members. 200 respondents (22.2%) have 1 to 2 family members, followed by respondent who have 6 to 7 family members (20.8%) and (12.3%) have more than 8 number of family members.

Distance to the Nearest City and River

According to the Table 2, 326 respondents stay less 5 km from the nearest city. Then, 315 respondents more than 11 km to the nearest city, followed by the distance from 6 to 10 km which is 259 respondents. Majority respondents (26.3%) stay between 251 to 500 meter from the river and (22.2%) of the respondents stay between 1 km to 2 km from the river.

Table 2: Demographic Data of The Respondent

Level	**Frequency**	**Percentage**	**Mean**	**SD**
Gender				
Male	498	55.3		
Female	402	44.7		
Age (years)			**53.5**	**14.6**
<40	165	18.3		
41-60	447	49.7		
>61	288	22.0		
Level of education				
Never been to school	72	8.0		
Primary School	294	32.7		
PMR/SRP/LCE	187	20.8		
SPM/SPMV/MCE	270	30.0		
Skills certificates	15	1.7		
STPM/Diploma	43	4.8		
Degree/Master/PhD	19	2.1		
Income per month			**1874.74**	**5375.53**
≤RM500	176	19.6		
RM501-RM1000	251	27.9		
RM1001-RM1500	155	17.2		
RM1501-RM2500	174	19.3		
>RM2,501	144	16.0		
Period of staying at the village (years)			**40.9**	**21.6**
<25	250	27.8		
26-50	322	35.8		
>51	328	36.4		
Distance to the nearest city (km)			**10.98**	**10.39**
≤5 km	326	36.2		

6-10 km	259	28.8		
>11km	315	35.0		
Distance to nearest river			**0.86**	**0.65**
<250 meter	230	25.6		
251-500 meter	237	26.3		
501-1000 meter	233	25.9		
1km-2km	200	22.2		
Number of family members			**4.67**	**2.50**
1-2	200	22.2		
3-5	400	44.4		
6-7	187	20.8		
>8	111	12.3		

Quality of Life

Table 3 informs on the overall mean score of the quality of life of the river community in Pahang river and Muar river. The overall mean score was gained based on a cumulative value calculated from seven aspects of quality of life studied. Based on the overall mean score recorded (M = 2.48), it can be seen that river community in Pahang river and Muar river have a moderate level of quality of life. Further analysis have revealed that only 0.2% of the respondents have a low level of quality of life, a total of 50.7% have a moderate level of quality of life while a total of 49.1% of the respondents were detected to have a high level of quality of life.

Table 3: Overall level of QOL

Level	Frequency	Percentage	Mean	SD
			3.63	**0.413**
Low (1.00-2.33)	2	0.2		
Moderate (2.34-3.67)	456	50.7		
High (3.68-5.00)	442	49.1		

Table 4 depicts specific information on each district of the quality of life studied. Muar have a highest quality of life (M=3.66). Then, followed by Pekan (M=3.65) and Bahau (M=3.59). Based on the quality of life for each district, there are not much different in their level of quality of life.

Table 4: QOL for each district

District	Frequency	Mean	SD
Muar	300	3.66	0.449
Pekan	300	3.65	0.334

Bahau	300	3.59	0.443

Table 5 represents specific information on each of the quality of life studied. Out of seven aspects studied, three of the aspects were identified to record a high level namely social involvement and relationship (M = 3.94), home condition (M = 3.90) and safety at the areas (3.78). The remaining four aspects namely education (M = 3.78), physical environment (M = 3.50), financial and job security (M = 3.46) and infrastructure facilities (M = 3.12) were managed to record a moderate level. Aspect of social involvement and relationship has come out with the highest mean score (M = 3.94) while the aspect of infrastructure facilities has recorded the lowest mean score (M = 3.12).

Table 5: QOL aspects

Level	Frequency	Percentage	Mean	SD
Social involvement and relationship			**3.94**	**0.560**
Low (1.00-2.33)	6	0.7		
Moderate (2.34-3.67)	303	33.7		
High (3.68-5.00)	591	65.7		
Home condition			**3.90**	**0.544**
Low (1.00-2.33)	4	0.4		
Moderate (2.34-3.67)	274	30.4		
High (3.68-5.00)	622	69.1		
Safety at the areas			**3.78**	**0.652**
Low (1.00-2.33)	15	1.7		
Moderate (2.34-3.67)	332	36.9		
High (3.68-5.00)	553	61.4		
Education			**3.73**	**0.583**
Low (1.00-2.33)	3	0.3		
Moderate (2.34-3.67)	431	47.9		
High (3.68-5.00)	466	51.8		
Physical environment			**3.50**	**0.497**
Low (1.00-2.33)	6	0.7		
Moderate (2.34-3.67)	599	66.6		
High (3.68-5.00)	295	32.8		
Financial and job security			**3.46**	**0.907**
Low (1.00-2.33)	98	10.9		
Moderate (2.34-3.67)	377	41.9		
High (3.68-5.00)	425	47.2		

Infrastructure facilities			**3.12**	**0.718**
Low (1.00-2.33)	127	14.1		
Moderate (2.34-3.67)	579	64.3		
High (3.68-5.00)	194	21.6		

Conclusion

Based on the analysis done, it can be concluded that the quality of life among river community in Pahang river and Muar river are good even it still at a moderate level. River, an important component of the nature, still plays an important role in uplifting the quality of life of the river community. To ensure the good quality of life for the river community, It is proposed that to further develop the river community quality of life; strategic and systematic developments strategies should be planned in line with their needs and requirements. This development should be focused on basic needs that are affordable and create more job opportunities that offer a better income.

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FACTORS AFFECTING ICT USAGE AMONG VILLAGE LEADERS IN PENINSULAR MALAYSIA

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Abstract

Rural community is one of the important groups which has been placed under the radar of development by the government. A lot of mechanism has been put forward for developing the rural community and one of it is the usage of ICT. Government has invested substantially for developing the rural community through ICT and rural community should capitalize this opportunity to develop themselves. This study intends to examine the level of ICT usage among the rural community leaders who are the Village Development and Security Committee member and to identify factors that affect it. This study employed quantitative methodology in which a total of 240 respondents were selected based on the multi-stage random sampling procedure. A set of pre tested questionnaire was used as an instrument for the data collection. Data were analyzed using statistical package, SPSS; employing both, relevant descriptive and inferential analyses. Findings revealed that the Village Development and Security Committee members in Malaysia posted a moderate level of ICT usage. Furthermore, all of the factors studied namely self-efficacy towards ICT usage, attitude towards ICT usage, perceived usefulness towards ICT usage, perceived ease of ICT use, job relevance in ICT usage, subjective norm of ICT usage and compatibility towards ICT usage have significant relationship with ICT usage. Self-efficacy was found as the major contributor for ICT usage among the Village Development and Security Committee members.

Keywords: *ICT, Village leaders, Rural development, Rural community development.*

INTRODUCTION

ICT and rural administrators

In the present globalized world, functions of ICT in developing the rural communities are indisputable. ICT expedites in rapid sharing and exchange of information and knowledge which are cogent to the success of any activities. Realizing the role of ICT in developing the rural community, Malaysian government has instituted a number of high impact ICT projects

in order to encourage and persuade the community especially those in the rural areas to accept and use ICT. Among the established ICT projects are Rural Internet Center (PID), Rural Info Center (MID), National Broadband Initiatives (NBI) and Universal Services Provider (USP). Those ICT projects are operated under the Ministry of Regional and Rural Development (MRRD), Department of Community Development (DCD) and Ministry of Communication, Information and Culture (MCIC). According to Musa (2008), it is reported that more than 1500 telecenters have been established by both; the government and private agencies.

Establishment of such telecenter does not reflect the true success. Rural community should be educated and motivated to use ICT in their daily lives. Rural communities must, in themselves realize the importance of ICT and take the initiatives to utilize ICT to further enhance their livelihood. Through the functions of various government agencies, continuous efforts have been instituted to promote higher ICT utilization among the target groups. Among the initiatives include various ICT projects, awareness campaigns and researches. A strategy to ensure sustainable utilization of ICT among the rural communities, the Village Development and Security Committee (VDSC) members, being the rural leaders must show a good example to the rural communities in that they must utilize the ICT themselves in their administration and daily activities.

Studies done by Musa (2008) and MCMC (2008) revealed that the level of ICT usage among the rural communities was still not to the expectation of the government. Certainly, this gap will lead to digital divide problem between rural and urban communities. Nevertheless, this gap can be reduced if rural communities were given adequate related ICT trainings (Musa et al., 2009).

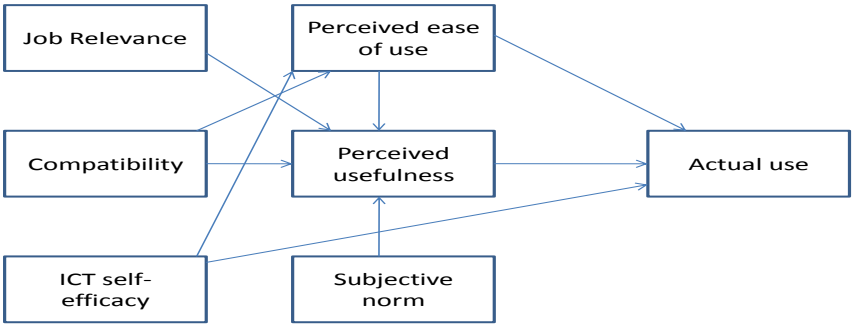
Village Development and Security Committee (VDSC) and Village Vision Movement (VVM)

The main objective of the establishment of VDSC is to act as the government channel in the rural areas. Through VDSC, it is hoped that the relationship between the government and the rural communities can be further intensified. All of the needs and demands of the rural community will be noted by VDSC who then will present these needs and demands to the government. Apart from this, the Village Vision Movement (VVM) was established to uplift the ability of the rural communities which will aid in their development process. It is also hoped that through VVM, consciousness, awareness and attitude of rural communities towards success of second Plan on Rural Transformation will be materialized.

The model used

This study was guided by the Extended Technology Acceptance Model (ETAM) which was established by Hu et al. (2003). Unlike TAM, ETAM model excluded attitude, due to its limited mediation effects. ETAM emphasizes that decision to accept or reject a technology is related with the technology usefulness, ease of use, technology self-efficacy, job relevance

and subjective norms as in Figure 1. Nonetheless, a lot of studies have proven the significance of attitude as a determinant for ICT usage and thus this study would like to incorporate attitude as one the factors in its research conceptual framework.



(Source: Hu Et al. 2003)

Figure 1: Extended Technology Acceptance Model

Factors affecting VDSC members' usage of ICT

Based on the literature reviews, various studies have been done to uncover factors that affecting the ICT usage and reasons that inhibit ICT usage. Among the factors are attitude, perceived ease of use, perceived usefulness, self-efficacy and compatibility. Significantly, subjective norm and job relevance also are among the major determinants of ICT usage.

Attitude

A number of past studies have been conducted to identify the influence of attitude on ICT usage especially among the rural community. A positive attitude is claimed to be the key for someone to adapt ICT in their daily life and tasks (Zhang and Aikman, 2007; Shih, 2004; Luarn and Lin, 2004 and Kaba et al., 2009). According to Shiro (2008), community especially in rural areas have very positive attitude towards ICT and they want ICT projects to be built in their areas. Nevertheless, besides having this positive attitude, according to Shiro (2008), their lack of ICT knowledge prohibits them from using ICT frequently.

Perceived usefulness and perceived ease of use

Meso et al. (2005), have claimed that perceived usefulness and perceived ease of use, believe in the technology and higher accessibility towards ICT facilities are among the contributor for higher level of ICT usage. Moreover, the existing literatures on ICT usage have identified the influence of perceived usefulness on intention to use ICT (Venkatesh and Davis, 1996 and Hu et al. 2003). Apart from this, a number of past studies have proven whether or not

perceived ease of use has effects on intention to use ICT (Venkatesh and Davis, 1996 and Meso et al, 2005).

Compatibility

Gulbahar and Guven (2008) have identified that ICT compatibility are intensified when the users have experience in using ICT and their language skills especially in English are higher. Apart from this, Al-Gaith et al. (2010), have identified that ICT trainings can strengthen ICT compatibility. Moreover, a number of past studies on ICT usage have revealed that compatibility has something to do with intention to use ICT (Kumar and Best, 2006 and Hu et al., 2003).

Self-efficacy

An individual's belief in his or her ability to successfully perform a specific behavior can be called as self-efficacy. Past studies comprehend general computer self efficacy as an individual's judgment of efficacy across multiple computer domains while application-specific self-efficacy is an individual's perception of efficacy in performing specific computer related tasks within the domain of general computing (Compeau and Higgins, 1995).

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Subjective norm

Subjective norm can be understood as an individual's perception on the situation to which essential social surroundings can influence the performance of a behavior (Fishbein and Ajzen, 1975). Subjective norm have been admitted as an important determinant for ICT usage in a number of studies (Gilligan, 2004). Gilligan (2004) have concluded that rural people that live in areas where less people use ICT due to their limited access to ICT related information good and services will have a low level of ICT usage.

Job relevance

Rural community will use ICT if it encompasses immediate needs and usually the rural community need to depend on ICT to search for information concerning agriculture products market prices, fertilizer price, weather information and employment in the city (Comfort et al, 2005 and Joseph and Andrew, 2007). Joseph and Andrew (2007), stressed that government efforts to intensify ICT usage among the rural community must be accentuated on the relevance of ICT to the rural community daily tasks and activities.

Materials and Methods

Respondents needed for this study were selected using a multi stage random procedure. For this study, in the first stage, a state with the highest VDSC members was selected from the four zones of Peninsular Malaysia. The states included Kedah (northern zone), Terengganu (East coast zone), Perak (Central zone) and Johor (Southern zone). In the second stage, a district with the highest number of VDSC members was selected from each selected states.

The districts comprised Kota Star (Kedah), Kuala Terengganu (Terengganu), Kinta (Perak) and Batu Pahat (Johor). Each of these four districts was represented by six randomly selected VVM villages and 10 VDSC members were randomly selected from each of the villages resulting in a total of 240 respondents. Results of the pre test unveiled that the study instrument was reliable (cronbach alpha value more than .70) as posited by Nunnally (1978). Relevant descriptive and inferential statistics were employed for this study.

Results

Respondents' background

Table 1 displays on the demographic profiles of the respondents. A large majority of the respondents were male (82.1%). The mean for respondents' age was 50.0 and substantial pool of them was in the 41-50 years age group (34.2%). A total of 52.5% of the respondents possessed SPM/SPMV certificate compared to 20.4% who possessed pre-university and university level of education. Slightly more than one third of the respondents were self-employed (35.5%). The respondents recorded mean monthly income of 1,507.90 with 37.1% of the respondents managed to earn more than RM1,500 a month. A total of 38.8% of the respondents were among top management. Majority of the respondents can be considered as "senior" villagers based on the mean score recorded for period of staying in the village (M = 38.34). A total of 60.0% of the respondents had at least a computer in their home while 37.9% of them had computer access to the internet. Not all of the VDSC offices are equipped with computer; only 45.8% of the VDSC offices were identified to have equipped with computer. Unfortunately, only 12.5% of the computers in the VDSC offices were connected to the internet. It is a worth noting that only 30% of the respondents have attended ICT trainings.

Table 1: Demographic profiles of the respondents

Variables	Frequency	Percentage	Mean	SD
Gender				
Male	197	82.1		
Female	43	17.9		
Age (years)				
≤40	51	21.2	50.0	11.0
41-50	82	34.2		

51-60	60	25.0		
≥61	47	19.6		
Level of Education				
PMR and primary school	65	27.1		
SPM/SPMV	126	52.5		
University and Pre University	69	20.4		
Type of Job				
Self-employed	85	35.5		
Retiree/housewives	62	25.8		
Government sector	56	23.3		
Private sector	37	15.4		
Income per month (RM)			1507.90	990.56
<750	70	29.1		
751-1500	81	33.8		
>1501	89	37.1		
Position				
Top management	93	38.8		
Committee	147	61.2		
Period of staying in VVM village			38.34	16.82

(years)		
≤30	90	37.5
31-45	64	26.7
≥46	86	35.8
Possession of computer		
Yes	144	60.0
No	96	40.0
Computer connected to internet		
Yes	91	37.9
No	149	62.1
VDSC office has computer		
Yes	110	45.8
No	130	54.2
VDSC office has internet line		
Yes	30	12.5
No	210	87.5
Have attended any ICT course		

Yes	72	30.0
No	168	70.0

Overall level of ICT usage

The overall ICT usage score was computed from the 22 items instrument resulting in possible mean score ranging from 1 to 10. The 22 items incorporate statements related to ICT usage for administration works and ICT usage for daily activities/needs. The computed mean summated score were than grouped into three levels of ICT usage namely low (1.00-4.00), moderate (4.01 – 7.00) and high (7.01 – 10.0). The overall mean score (M = 4.04) demonstrates that the respondents studied had a low to moderate level of ICT usage.

Table 2: Overall level of ICT usage among VDSC members

Level	Frequency	Percentage	Mean	SD
Low (1.00-4.00)	122	50.8	4.04	2.23
Moderate (4.01-7.00)	91	37.9		
High (7.01-10.0)	27	11.3		

Level of ICT usage for administration work

ICT usage for administration works was measured using a 10 item instrument. The items represents relevant tasks to the VDSC members. Findings revealed relatively low ICT usage for administration works as depicted by mean of individual items ranging from 3.43 to 4.98. The findings also unveiled a low ICT usage in completing their tasks through ICT especially in sending information required to related agency through e-government services. Nevertheless, it seems that the respondents had moderate ICT usage in preparing letters, memo, minutes of meeting, reminder etc using ICT (Table 3).

Table 3: ICT usage for the purpose of administration among VDSC members

Statement	**Scale**										**Mean**
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
Preparing letters, memo, minutes	18.8	12.5	10.0	7.9	6.7	5.8	9.6	9.2	11.7	7.9	4.98

meeting and reminder, etc											
Preparing village profile	18.8	8.3	16.2	7.1	7.1	5.0	8.8	12.5	10.0	6.2	4.92
Preparing monthly report regarding administration and village development	17.9	15.0	11.2	6.2	4.6	6.7	10.4	15.0	7.5	5.4	4.84
Preparing timeline for activities scheduled	20.0	13.3	9.6	7.5	7.9	8.3	10.8	12.9	5.8	3.8	4.64
Preparing schedule for VDSC tasks	21.2	13.3	10.0	6.2	10.0	7.5	8.3	11.7	7.9	3.8	4.58
Preparing sources for billboard at VDSC room, village hall or mosque	19.2	12.9	13.8	7.5	6.2	7.9	14.2	11.7	3.8	2.9	4.50
Preparing data and statistic of the village	18.3	16.2	13.8	4.2	11.2	6.7	9.6	12.1	3.3	4.6	4.45
Communicating with VDSC members and village community	28.3	10.8	9.2	7.1	7.5	3.3	7.9	13.3	7.9	4.6	4.43
Preparing presentation using Microsoft Power Point	32.9	14.2	9.2	5.4	7.5	5.4	7.1	8.8	6.2	3.3	3.90
Sending information required to related agency through e-government services	37.1	12.1	11.7	7.5	7.9	7.9	5.4	5.0	2.5	2.9	3.43

Level of ICT usage for respondents daily activities/needs

A total of 12 items were used to measure ICT usage in daily activities/needs. Analysis performed revealed that respondents had moderate use of ICT for three activities namely " typing personal letters" (M = 5.30); reading newspaper (M = 4.40) and website surfing (M = 4.12). Nonetheless, one statement has been identified to record a mean score lower than 3.00 and the statement was related the usage of ICT for chat/skype (M = 2.80); thus it reflects the importance of the respondents to be taught in using these internet applications (Table 4).

Table 4: ICT usage for daily activities/needs

Statement	Scale										Mean
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
Typing personal letters	20.4	5.0	10.8	3.3	8.3	9.2	10.0	16.7	8.3	7.9	5.30
Reading newspaper	28.8	7.5	11.7	6.7	7.5	7.5	7.9	11.2	5.8	5.4	4.40
Website surfing	30.8	9.2	10.4	8.3	9.6	4.6	7.9	9.6	5.0	4.6	4.12
Sending or reading e-mail	35.8	7.5	10.4	6.7	10.0	6.2	6.7	7.5	6.2	2.9	3.88
Downloading other related articles (ex: recipe, journal, etc)	36.7	9.2	11.7	7.5	9.2	8.3	5.8	5.4	3.3	2.9	3.59
Watching video/television	32.1	10.8	12.5	9.2	12.5	5.8	7.5	7.5	1.2	0.8	3.58
Reading novel/book/article/magazine	36.7	10.8	11.7	8.8	7.1	5.8	6.2	7.5	3.3	2.1	3.53
Hearing to music/radio	36.7	10.4	12.5	8.3	9.6	6.2	8.3	5.4	1.2	1.2	3.39
E-government services	42.1	11.2	9.2	5.0	7.9	5.8	7.1	7.5	3.3	0.8	3.35
Downloading video, music and picture	40.0	11.7	12.9	8.8	5.0	6.2	7.1	3.3	2.5	2.5	3.23
E-banking services	41.7	13.3	13.3	3.3	7.9	4.6	8.8	3.8	2.5	0.8	3.11
Chat/Skype	46.2	11.2	12.9	6.2	10.0	3.3	4.6	3.3	1.7	0.4	2.80

Seven factors of the study

Mean summated score were computed for each of the factors resulting in the mean scores ranging from 1 to 10. Based on the mean computed scores, the factors were group into three levels namely low (mean score from 1.00 to 4.00), moderate (mean score from 4.01 to 7.00) and high (mean score from 7.01 to 10.0). Results recorded a moderate level of all of the seven factors, perceived usefulness towards ICT usage (M = 6.88), perceived ease of ICT usage (M = 6.50), attitude towards ICT usage (M = 5.91), ICT job relevance in ICT usage (M = 5.83), self-efficacy towards ICT usage (M = 5.38), subjective norm of ICT usage (M = 5.32) and compatibility towards ICT usage (M = 4.82) (Table 5).

Table 5: Factors studied

Level	Frequency	Percentage	Mean	SD
Perceived usefulness towards ICT usage			**6.88**	**2.43**
Low (1.00-4.00)	31	12.9		
Moderate (4.01-7.00)	69	28.8		
High (7.01-10.0)	140	58.3		
Perceived ease of ICT usage			**6.50**	**2.45**
Low (1.00-4.00)	40	16.7		
Moderate (4.01-7.00)	82	34.2		
High (7.01-10.0)	118	49.2		
Attitude towards ICT usage			**5.91**	**2.48**
Low (1.00-4.00)	57	23.8		
Moderate (4.01-7.00)	90	37.5		
High (7.01-10.0)	93	38.7		
Job Relevance in ICT usage			**5.83**	**2.74**
Low (1.00-4.00)	67	27.9		
Moderate (4.01-7.00)	68	28.3		
High (7.01-10.0)	105	43.8		
Self-efficacy towards ICT			**5.38**	**2.78**

usage				
Low (1.00-4.00)	76	31.7		
Moderate (4.01-7.00)	91	37.9		
High (7.01-10.0)	73	30.4		
Subjective Norm of ICT usage			**5.32**	**2.12**
Low (1.00-4.00)	61	25.4		
Moderate (4.01-7.00)	125	52.1		
High (7.01-10.0)	54	22.5		
Compatibility towards ICT usage			**4.82**	**2.76**
Low (1.00-4.00)	96	40.0		
Moderate (4.01-7.00)	84	35.0		
High (7.01-10.0)	60	25.0		

Relationship between seven constructs of ETAM and the ICT usage

In order to determine relationship between the constructs of ETAM and ICT usage, Pearson product-moment correlation was employed. Based on the analysis, it can be concluded that all of the constructs studied has significant relationships with ICT usage. Specifically, three constructs showed strong and positive relationship with ICT usage and the constructs were self-efficacy towards ICT usage, attitude towards ICT usage and compatibility towards ICT usage. The remaining constructs namely job relevance in ICT usage, subjective norm of ICT usage, perceived ease of ICT usage and perceived usefulness towards ICT usage showed a moderate and positive relationships with ICT usage. Results gained here have proven that the additional construct of the model namely attitude towards ICT usage can be strongly related to ICT usage and consistent with findings from past studies (Borekci, 2005; Zhang and Aikman, 2007 and Shiro, 2008). Zhang and Aikman (2007) for example has postulated a simple conclusion from their study by saying that positive attitude will generate a higher level of ICT usage while negative attitude will generate a lower ICT usage (Table 6).

Table 6: Relationship between ICT usage and selected independent variables

Variables	r	*p*
Self-efficacy towards ICT usage	.765	.0001
Attitude towards ICT usage	.753	.0001
Compatibility towards ICT usage	.750	.0001
Job relevance in ICT usage	.663	.0001
Subjective norm of ICT usage	.642	.0001
Perceived ease of ICT usage	.609	.0001
Perceived usefulness towards ICT usage	.522	.0001

Factors contributing toward ICT usage

In order to determine factors that significantly contribute towards ICT usage a multiple linear regression using stepwise method was applied. Results revealed self-efficacy towards ICT usage was the main contributor towards ICT usage. It contributes 76.5 % of variance in ICT usage (R^2 = .765). This finding is in line with Lam and Lee (2005) who claimed that self-efficacy is the key for a better ICT usage due to the self-efficacy judgment significantly influence outcome expectation (which is to use or not to use the ICT), someone with a higher self-efficacy in ICT usage tend to use the ICT at a higher level.

Attitude towards ICT usage is second highest contributor and it explains additional 6.3% variance in ICT usage (ΔR^2 = .063). Apart from this, subjective norm of ICT usage contributes an additional 2.9% variance in ICT usage (ΔR^2 = .029). Furthermore, perceived usefulness towards ICT usage explains additional 2.5% variance in ICT usage. Moreover, it was revealed that there was a reversed correlation between ICT usage and perceived usefulness towards ICT usage which means higher perceived usefulness towards ICT, the lower tendency for ICT usage produced. This is not surprising and is consistent with studies done by Teo (2008) and Lim and Khine (2006). Teo (2008) stressed that usefulness provided by ICT do not mean that all of the usefulness can be profited by the public. Within the context of this study, there is likelihood that the VDSC members only perceived ICT useful when they are producing their letter and the financial budget for their VDSC organization; nevertheless the usefulness of ICT is not perceived by the respondents in term of downloading documents, video, music, chat/skype and using the e-government services.

Compatibility towards ICT usage is the least significant contributor towards ICT usage. It contributes additional 1.1% variance in ICT usage. The analysis also reveals that these five factors collectively explain 71.4% variance in ICT usage.

Table 7: Factors that contribute to ICT usage among VDSC members using Multiple Linear Regression (Stepwise method)

Independent variables	B	beta	R	R^2	ΔR^2
Constant	.012				
Self-efficacy towards ICT usage	.263	.323	.765	.586	-
Attitude towards ICT usage	.346	.382	.805	.649	.063
Subjective norm of ICT usage	.255	.229	.823	.678	.029
Perceived usefulness towards ICT usage	-.216	-.235	.839	.703	.025
Compatibility towards ICT usage	.169	.208	.845	.714	.011

Discussion

This study has demonstrated that self-efficacy towards ICT usage recorded a positive and high relationship with ICT usage and it is consistent with what have been found by a number of past studies (Johnson and Marakas, 2000 and Norazah and Ramayah, 2010). The researchers mentioned have revealed that people with higher self efficacy will use ICT more compared to those who have lower self efficacy.

Borekci (2005) stressed that people in rural area are frequently associated with negative attitude towards ICT, nevertheless this study has opposed Borekci (2005) when attitude was identified to yield a positive and high relationship with ICT usage (r = .748). Additionally, Shiro (2008) has concluded that positive attitude will yield in a higher ICT usage while Zhang and Aikman (2007) revealed that negative attitude will yield in a lower usage of ICT.

Obviously, the results gained have demonstrated that compatibility has something to do with ICT usage. Compatibility influence on ICT usage has been investigated in a number of past studies; Norazah and Ramayah (2010) and Kumar and Best (2006), have emphasized that the more compatible people with ICT, the more they will use ICT. To fortify rural community compatibility on ICT usage, Gulbahar and Guven (2008) and Al-Gaith et al (2010) stressed that focus should be more on how to strengthen their language skills especially English. This is vital due to a lot of ICT tools are created in English interfaces to serve western users. This obstructs VDSC members to use ICT as majority of the VDSC members speak Malay; so

doubtlessly, intensification of English language among VDSC members are essential to increase their ICT compatibility.

Analysis performed has concluded that job relevance in ICT usage has resulted in a moderate and significant relationship with ICT usage and this is consistent with studies done by Comfort et al. (2005) and Joseph and Andrew (2007). Comfort et al. (2005) stated that rural community will use ICT if they find it is relevance to their daily tasks and contains instant needs. Moreover, results gained revealed that ICT is most related to VDSC members' tasks in term of producing letters, memo, minutes meeting, reminder and village profiles. Apart from this, Joseph and Andrew (2007), have identified the indispensible of job relevance on ICT usage where they noted that ICT programs brought by the government such as Pusat Internet Desa (PID) and Medan Info Desa (MID) should be linked to the rural community daily tasks and activities.

Results gained have identified that subjective norm of ICT usage has influence on ICT usage and this is in line with what have been completed by Gilligan (2004); Park (2009) and Al-Amoush and Al-Shaqrah (2010). Gilligan (2004) has detected the influence of social environment on ICT usage and concluded that rural people that live in areas where less people use ICT and limited access to ICT will have a low level ICT usage compared to their counterpart in the urban areas. This study has come out with findings that VDSC members ICT usage can be swayed by their family members, VDSC colleague, development agencies and establishment of ICT centers in their village.

Rogers (2003), Laudon and Laudon (2000) and Venkatesh and Davis (1996) emphasized that perceived ease of use have something to do with ICT usage. Result yielded is in line with these studies when the construct of perceive ease of ICT usage recorded a moderate and significant relationship with ICT usage ($r = .609$). Apart from this, in order for ICT to be perceived useful it must be low cost, has the ability to reach wider market and able to gather large information within a short time and lower cost (Laudon and Laudon, 2000).

Hu et al. (2003) have revealed the influence of perceived usefulness towards ICT usage and results of this study are in line with it. Results gained have demonstrated that perceived usefulness towards ICT usage ($r = .522$) was discovered to have a moderate and significance relationship with ICT usage. Meso et al. (2005) and Rogers (2003) stressed that the persistent ICT benefits will produce a better perceived usefulness towards ICT usage. Moreover, Laudon and Laudon (2000), emphasized that in order for ICT to be perceived useful it must be low cost, able to reach a wider market and able to gain maximum information within a short time and a minimal cost (Laudon and Laudon, 2000).

CONCLUSION

This study has demonstrated that village leaders in Malaysia do have a moderate level of ICT usage. Specifically, through the analyses done, it can be seen that the village leaders have a moderate level of ICT usage in administration works. Nonetheless, it can be noted that the village leaders have a low level of ICT usage in term of daily activities/needs. This study has confirmed that the ETAM model can be applied within the context of the village leaders in

Malaysia. Interestingly, the additional construct in the model namely attitude was identified to have a positive and significant relationship with ICT usage. Moreover, this construct was also identified as one of the contributor for ICT usage among the village leaders in Malaysia.

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COMPETENCY OF AGRICULTURE EXTENSION OFFICERS: THE CASE OF PADDY DEVELOPMENT AREAS IN SELANGOR, MALAYSIA

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Abstract

Paddy industry has become the main focus of the nation food security. A number of high impact projects have been conducted to ensure that the paddy industry will continuously play its role as the main food producer in the country. Furthermore, it is the agriculture extension officers that hold the main key to ensure the development of paddy industry in Malaysia. Due to this, a high level of competency must be instilled in every agriculture extension officer in Malaysia. The main objective of this study is to discover the level of competency of agricultural extension officers in the paddy area in Selangor, Malaysia. This is a quantitative study where a total of 72 officers have been selected as the respondents. To gain the data needed, a developed questionnaire was used. There were two main parts of the questions; one of the parts focusing on the competency of the agriculture extension officers which consists of 24 questions and another part of the questionnaire was focusing on the roles of the agriculture extension officers which consists of 14 questions. Through SPSS, analyses such as frequency, percentage, mean and standard deviation were employed. Results have shown that the agriculture extension officers studied do have a high level of competency and it also can be seen whereby they were able to carry their roles as the agriculture extension officers effectively.It is recommended that the agriculture extension officers should be exposed to more trainings, courses and seminars in order to further enhance their level of competency and perhaps through all of these it will be able to assist them in implementing the knowledge to their job effectively.

Keywords*: Agriculture extension officers, Rice paddy industry, Competency and Farmers*

Introduction

What is competency?

Competency can be comprehended as skills or knowledge that are able to produce a maximum performance. Competency can be created through an individual/organization knowledges, skills and abilities. Interestingly, those with higher competency are able to differentiate between poor performance and exceptional performance. There are also numbers of competency definition according to scholars all around the world, among the famous one are:

> *The traits or characteristics, including an individual's knowledge, skill, thought pattern, aspects of self-esteem and social roles, that they use to achieve successful*

or exemplary performance of any type. (adapted from Boyatzis,1982) (Dubois, 1993)

As cluster of related knowledge, skill and attitude that correlates with effective job performance, can be measured and evaluated, and can be improved through training and development. (Mc Lagan 1996)

Competency and Agriculture Extension Officer

Doubtlessly, Agriculture Extension Officer (AEO) play essential roles in developing both; the agriculture industry and the agriculture community. Their role as the middle man between the agencies and farmers is deem important. The appointed AEO should be knowledgeable and skilful so that they can be responsive to any query raised by the farmers. Furthermore, they would be able to give advisory and consultancy services to the farmers. AEO hold the main key in linking people, breaking down communication barriers and thus increasing profitability and efficiency of agribusiness. The success of any extension process depends largely on the AEO. Failure to respond to a given situation and function by the AEO will results in failure in the extension process even though the extension approach is impressive and designed systematically. In Malaysia, there are a lot of extension programs to be carried out and therefore extension workers need to play their significant role.

The Malaysia government target to be self-sufficiency not yet to be reached, thus, competent and well-trained AEO are needed to produce a successful extension programs. Competency of AEO is needed to educate the farmers and accelerating agricultural development in each country. Past studies have revealed that various skills needed by the AEO to enhance their competency and the skills are 1) understanding human behaviour; 2) program planning, understanding the teaching/learning process; 3) teaching strategies and teaching tools/aids, and 4) program evaluation. As stressed by Sulaiman et al. (1984), the AEO should have all these skills which are the important keys for AEO to perform their role as change agents.

Rice Paddy Industry in Malaysia

The developing world depends on rice as their food crop and rice also become the staple food of more than 3 billion people. The main producer of rice; Asia, has more than 200 million rice farms and rice-based farming is the main money making activities for rural poor in this region. One of the countries that depend on paddy as their main food producer is Malaysia. Rice is ranked first in term of important crop for the food sub-sector in Malaysia. Food security has become one of the government main agendas and it is essential for the overall development. Furthermore, the government has emphasized that food security is synonymous with rice security. As a result of this, the government has come out with the Malaysia's self-sufficiency program which persistently focused on rice, being the staple food of the large majority of the population (Dano and Samonte, 2005). To further develop the paddy industry in Malaysia, a large area for paddy development has been allotted by the government. Among

the famous places of paddy development area in Malaysia are Kuala Muda (Kedah), Tanjung Selangor (Selangor) and Seberang Perak (Perak). Sustaining the paddy industry in Malaysia is importance as it is highly needed for the nation food security. A large majority of Malaysian depend on rice as their main source of nutrient. Based on the recent statistic provided by the International Rice Research Institute (2009), Malaysian have utilized a total of 2,445,000 tons of rice in 2009 (Figure 1).

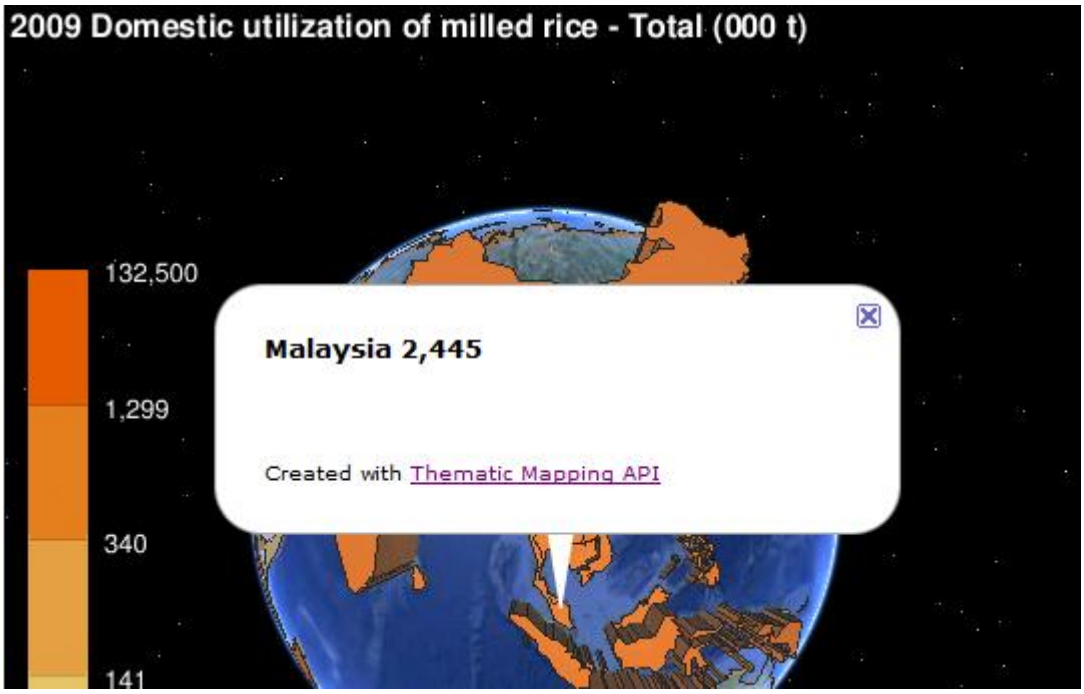

Figure 1: Malaysian utilization of milled rice – total (000 t) (sources: IRRI, 2009).

Statistic provided by FAO has illustrated the information on rice produced in Malaysia. There was roller coaster trend of rice productivity in Malaysia from 1980 to 2001. The highest productivity was recorded in 2001 where a total of 2,277,000 Mt of rice. A number of factors can be related to this encouraging statistic and one of it is the competency of the AEO. Certainly it is a concern for us when the statistic reflects that the harvested area of paddy recorded a significant decrease from 1980 (716,800 ha) to 2001 (672,000 ha). Furthermore, statistic has shown that there was a significance increase of imported paddy from 1980 to 2000 before a decrease of imported paddy in 2001, nevertheless the total of imported paddy in 2001 was still considered high (595,581 tons). Impacts of government's policy on decreasing rice self-sufficiency can be clearly seen when the imported rice recorded an increase of 259,963 tons from 1980 to 1995. There are possibilities that the local productivity were not able to meet the local demand thus imported paddy was needed (Figure 2). Even though by that time Malaysia need imported rice to meet local demands, Malaysia managed to export a total of 2, 430 tons rice in 1995. A large portion of this was exported to the neighbouring country; Myanmar, as part of a bilateral barter arrangement (Dano and Samonte, 2005).

RICE	1980	1985	1990	1995	1997	1998	1999	2000	2001
Production (Mt)	2,044,604	1,849,003	1,960,000	2,126,000	1,970,000	1,944,240	2,036,641	2,195,000	2,277,000
Harvested area	716,800	665,000	678,000	681,000	660,000	674,404	692,389	670,000	672,000
Yield (kg/ha)	2852.4	2780.5	2890.9	3121.9	3128.8	2882.9	2941.5	3276.1	3388.4
Import (tons)	167,593	428,017	330,336	427,556	630,000	657,870	612,467	595,581	-
Export (tons)	200	2,002	111	2,430	-	2,088	117	10	-
Consumption (kg/per/yr)	163.6	-	131.9	132.6					
OTHERS									
Population (1000)	13,763	15,677	17,891	20,140	20,907	21,352	21,791	22,218	22,633
Arable land (1000 ha)	1,000	1,280	1,700	1,820	1,820	1,820	1,820	1,820	-
Irrigated land (1000 ha)	320	334	335	340	365	365	365	365	-
Agricultural Tractors (No.)	7,430	12,000	26,000	43,295	43,300	43,300	43,000	43,000	-

Figure 2: Paddy Production in Malaysia
Source:
http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/AGPC/doc/riceinfo/ASIA/MALBODY.HTM and FAOSTAT

Table 1 and Figure 3 have shown where the paddy industry stands in Malaysia compared to other commodity industries. Obviously paddy industry have placed itself in the top five of commodity industry in Malaysia thus reflects the importance of this industry to the country. Certainly, palm oil is the main commodity in Malaysia where in 2009 more than $5 billion has been generated from this industry. Paddy industry was ranked fifth in the Table 1 where in 2009 a total of $575,213 million has been generated from this industry.

Table 1: Ranking of Commodity industry in Malaysia (2009).

Rank	Commodity	Production (Int $1000)	Production (MT)
1	Palm Oil	5,369,279	17,734,400
2	Indigenous Chicken Meat	1,162,769	1,017,890
3	Palm Kernels	585,446	4,577,000
4	Natural Rubber	575,213	1,072,400
5	Paddy Rice	482,018	2,353,000

Sources: FAO (2010)

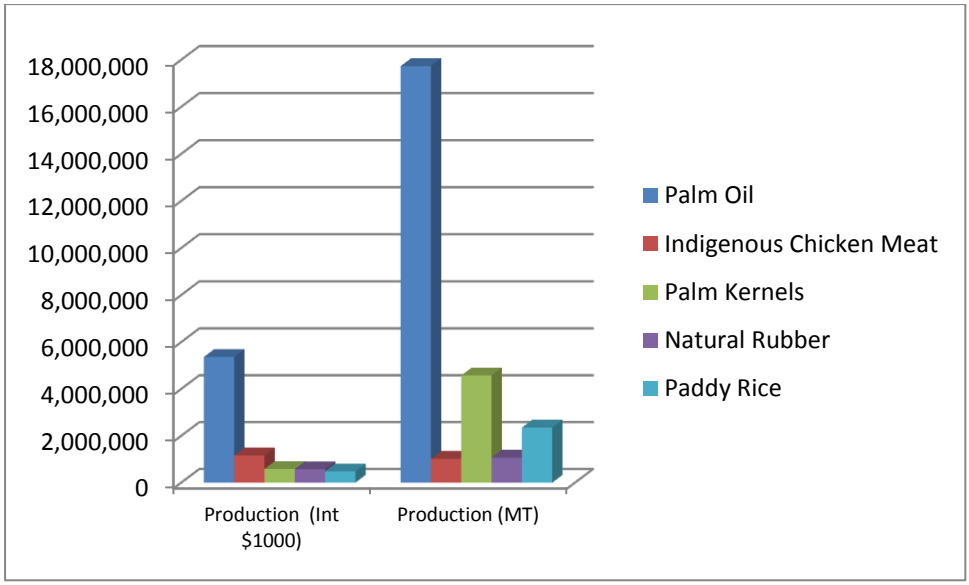

Figure 3: Production of main commodity in Malaysia

Source: FAO (2010)

Methodology

This is a quantitative study. A survey form was used to gain the data needed. The instrument was first pre tested to test its reliability and validity. Two things have been the main focus of this study; the AEO competency and the AEO roles. A total of 23 questions were included in the competency part where these questions have been divided into five aspects namely leadership, culture, P&P, planning and problem solving. For each of the questions, the respondents were given five likert-like scale answer ranging from strongly disagree (1) to strongly agree (5). For another part of the study (roles of AEO), a total of 14 questions have been asked to the AEO. These questions were divided into four aspects namely resource link, catalyst, solution giver and process helper. A total of 72 AEO were selected as the respondents. The selected AEO come from the districts in Selangor. For analysis, descriptive analyses such as frequency, percentage, mean and standard deviation were employed to describe the general data of the study.

Results

Table 2 illustrates the socio-demographic data of the AEO studied. It can be seen that majority of the AEO studied were male (55.6%). A large majority of the AEO studied (88.9%) are Malay, while only 5.6% of the AEO studied are Chinese. The mean score for age of the AEO studied was 39.00 while more than half of the AEO studied (58.3%) were in the age group of 31-50 years. In term of level of education, a total of 71.2% of the AEO studied informed that they possessed agriculture certificates and Diploma. Interestingly, a total of 18.1% of the AEO studied were degree holder. More than two fifth of the AEO studied (44.4%) were agriculture assistants.

Table 2: Socio-demographic data of the AEO

Factors	Frequency	Percentage	Mean	S.D
Gender				
Male	40	55.6		
Female	32	44.4		
Ethnic				
Malay	64	88.9		
Chinese	4	5.6		
Indian	3	4.2		
Others	1	1.4		
Age (years)			39.00	12.65
≤30	18	25.0		
31-50	42	58.3		
>51	12	16.7		
Level of Education				
LCE/SRP/PMR	2	2.8		
MCE/SPM/STPM	11	15.3		
Agriculture Certificates	22	30.6		
Diploma	22	30.6		
Degree	13	18.1		
Others	2	2.8		
Job Category				
Management and Administration Officer	10	13.9		
Management and Administration Assistant Officer	26	36.1		
Agriculture Assistant	32	44.4		
Others	4	5.6		

Table 3 demonstrates the overall mean score of AEO competency. To gain the overall mean score, a cumulative value from 24 statements used to measure competency was gained. Then the cumulative value was categorized into three groups namely low (1.00-2.66), moderate (2.67 – 3.33) and high (3.34 – 5.00). Based on the overall mean score gained (M = 4.23), it can be concluded that the AEO studied have a high level of competency. Interestingly, a total of 94.4% of the AEO was identified to have a high level of competency while only 5.6% of the AEO have a low level of competency.

Table 3: Overall mean score for agriculture extension officers competency

Level	Frequency	Percentage	Mean	S.D
			4.23	.650
Low (1.00-2.66)	4	5.6		
Moderate (2.67-3.33)	-	-		
High (3.34-5.00)	68	94.4		

In the competency element, there are five aspects studied namely leadership, culture, P&P, planning and problem solving. For the aspect of leadership, it can be seen that the overall mean score recorded for this aspect was 4.14 which can be considered as high. All of the four statements used to measure this aspect recorded a high level; nevertheless the statement of "encourage farmers to use agriculture technology" recorded the highest mean score (Table 4).

Table 4: Leadership

I can		**Strongly disagree**	**Disagree**	**Slightly disagree**	**Agree**	**Strongly agree**	**Mean**
	Overall mean score						**4.14**
1	Encourage farmers to use agriculture technology	2.8	2.8	1.4	62.5	30.6	4.15
2	Listen carefully to farmers queries and suggestions	1.4	4.2	4.2	59.7	30.6	4.14
3	Recommend new ideas and bring changes	4.2	1.4	5.6	54.2	34.7	4.14
4	Ensure local agriculture development	2.8	2.8	1.4	63.9	29.2	4.14

Be conscious of the farmers culture is important as it can assist the AEO in understanding the farmers and most importantly to adapt to the farmers culture and by doing this the AEO can be easily "accepted" into the farmers community. Thus, admitting the importance of this aspect, culture was included as one of the aspects studied. In this aspect a total of four statements have been measured. The overall mean score recorded was 4.22 and this indicates that the respondents studied have a high level of mean score in term of this aspect. All of the statements used were identified to record a mean score more than 4.00 (Table 5).

Table 5: Culture (n = 71)

	I can	**Strongly disagree**	**Disagree**	**Slightly disagree**	**Agree**	**Strongly agree**	**Mean**
	Overall mean score						**4.22**
5	Creating good relationship with farmers	4.2	-	2.8	43.1	50.0	4.35
6	Get involve with farmers festive events	-	4.2	6.9	52.8	36.1	4.21
7	Follow policies and procedures	1.4	2.8	5.6	58.3	31.9	4.17

	determined						
8	Understand and respects farmers culture, religion and belief.	2.8	2.8	1.4	60.6	32.4	4.17

To master P&P is important as it can be an effective channel in disseminating important agriculture information to the farmers. P&P enable farmers need of necessary information be identified. Furthermore, the right message can be delivered to the farmers at the right time; hence, farmers will always be updated with recent agriculture information. Based on the results illustrated in Table 6, obviously it reflects that all the AEO studied have a high level of PPP. This can be proven based on high overall mean score recorded (M = 4.25). The five statements studied recorded a mean score ranging from 4.19 to 4.28.

Table 6: P&P

	I can	**Strongly disagree**	**Disagree**	**Slightly disagree**	**Agree**	**Strongly agree**	**Mean**
	Overall mean score						**4.25**
9	Distributing pamphlets/messages related to agriculture development	-	2.8	5.6	55.6	37.5	4.28
10	Explain appropriate usage of technology that are relevant to the farmers' needs.	1.4	4.2	1.4	51.4	41.7	4.28
11	Demonstrate agriculture method effectively	1.4	5.6	1.4	55.6	37.5	4.25
12	Identify farmers' needs	1.4	2.8	2.8	55.6	37.5	4.25
13	Using appropriate teaching methods that are relevant to the farmers' needs	1.4	4.2	4.2	54.2	36.1	4.19

Planning is an essential component in agriculture development and indeed it will guide the farmers to do things systematically and effectively. Without a proper planning, the clear objective on the actions done by the farmers will not be gained. Nevertheless, findings from this study have proven that the AEO studied do not have any problems in term of creating a proper planning for the farmers and the paddy plantation. This can be concluded based on the mean score recorded (M = 4.24). The highest mean score was recorded by the statement of "using appropriate and effective teaching methods" (M = 4.28) and the lowest mean score was recorded by the statement of "implement training programs to enhance farmers' understanding' (M = 4.19) (Table 7).

Table 7: Planning

	I can	**Strongly disagree**	**Disagree**	**Slightly disagree**	**Agree**	**Strongly agree**	**Mean**

	Overall mean score						**4.24**
14	Using appropriate and effective teaching methods.	2.8	2.8	2.8	47.2	44.4	4.28
15	Evaluate the development of paddy plantation	1.4	4.2	-	56.9	37.5	4.28
16	Monitor paddy planting activities	-	1.4	8.3	54.2	36.1	4.25
17	Analyzing and identifying main problems of paddy plantation.	1.4	2.8	4.2	56.9	34.7	4.21
18	Implement training programs to enhance farmers' understanding	1.4	2.8	4.2	58.3	33.3	4.19

To be a problem solver for the problems faced by the farmers is a compulsory skill need to be mastered by the AEO. Without doubt farmers do need the AEO as the main sources for the problems they encountered. Interestingly, this study has managed to reveal that the AEO studied were skilled in term of solving the farmers problems. Mostly, they revealed that they were able to educate farmers on how to effectively make decision (M = 4.29), listen to agriculture problems (M = 4.28) and discuss with the farmers on the problems emerged (M = 4.28) (Table 8).

Table 8: Problem Solving

	I can	**Strongly disagree**	**Disagree**	**Slightly disagree**	**Agree**	**Strongly agree**	**Mean**
	Overall mean score						**4.26**
19	Educate farmers on how to effectively make decision	1.4	4.2	-	52.8	41.7	4.29
20	Listen to agriculture problems	1.4	2.8	1.4	55.6	38.9	4.28
21	Discuss with the farmers on the problems emerged	-	4.2	1.4	56.9	37.5	4.28
22	Identify farmers problems	1.4	4.2	1.4	55.6	37.5	4.24
23	Assist in solving the agriculture problem	1.4	4.2	1.4	56.9	36.1	4.22

Table 9 illustrates the overall level of AEO roles. To study the AEO roles, 4 aspects have been measured namely resource link, catalyst, solution giver and process helper. To gain the overall level of the AEO roles, a cumulative value for AEO roles was gained from 14 statements. Then the overall mean score was categorized into three categories namely low (0 – 1.33); moderate (1.34 – 2.67) and high (2.68 – 4.00). The mean score recorded was 3.37 (from the maximum mean score of 4.00) depicting that the AEO can implement their roles effectively. Interestingly, none of the AEO were detected to record a low level while a large majority of the respondents (94.4%) recorded a high level of mean score.

Table 9: Overall level of agriculture extension officers roles

Level	Frequency	Percentage	Mean	S.D
			3.37	.468
Low (0-1.33)	-	-		
Moderate (1.34-2.67)	4	5.6		
High (2.68-4.00)	68	94.4		

To be the resource link for the farmers is important for AEO. To implement this role is important as it will ensure that the farmers will not short of the sources to continuously conduct their agriculture activities. For this aspect, based on the overall mean score recorded (M = 3.35), it can be concluded that the AEO studied can implement the roles of resources link effectively. The highest mean score was recorded by the statement of "Ease the farmers to gain knowledge and technology for paddy plantation such as plough machinery" (M = 3.46) (Table 10).

Table 10: Resource Link

I need to		**Strongly not important**	**Not important**	**Important**	**Strongly Important**	**Mean**
	Overall mean score					**3.35**
1	Create relationship between farmers and concern parties such as MARDI, Agro Bank, IADA (Integrated Agriculture Development Authority), Agriculture Department and private agencies.	1.4	1.4	50.0	47.0	3.46
2	Have information on agriculture markets such as FAMA, BERNAS and others.	6.9	51.4	40.3	1.4	3.36
3	Create access for farmers to get sources such as banking services, agriculture loan, input, fertilizer etc.	2.8	1.4	56.9	38.9	3.32
4	Ease the farmers to gain knowledge and technology for paddy plantation such as plough machinery	1.4	4.2	59.7	34.7	3.28

The second role of the AEO studied was as the catalyst. In this aspect, questions constructed were focusing on the roles of the AEO in encouraging and motivating farmers, advising, creating awareness and guiding. The overall mean score recorded was 3.40 and it can be seen that the AEO studied was most effective in encouraging and motivating farmers to implement their paddy plantation activities based on the highest mean score recorded by this statement (M = 3.42) (Table 11).

Table 11: Catalyst

I need to		Strongly not important	Not important	Important	Strongly Important	Mean
	Overall mean score					**3.40**
5	To encourage and motivate farmers to implement their paddy plantation activities	-	4.2	50.0	45.8	3.42
6	To provide continuous advices and motivations	-	2.8	54.2	43.1	3.40
7	To create awareness among the farmers on the importance of increasing their productivity, the best way of using the fertilizer and others.	1.4	5.6	44.4	48.6	3.40
8	Go to the field and guide the farmers	1.4	1.4	55.6	41.7	3.38

The third role studied was solution giver. Effectively implementing this role will enhance farmers trust on the AEO. Furthermore, it will provide more alternatives for the problems faced by the farmers. A total of three statements were measured and the highest mean score was recorded by the statement of "Give effective suggestions in overcoming the farmers problems" (M = 3.43) followed by the statement of "Response instantly to the farmers problems" (M = 3.38) and statement of "provide solutions to farmers in all aspects; not only covering the paddy plantation" (M = 3.32).

Table 12: Solution giver

I need to		Strongly not important	Not important	Important	Strongly Important	Mean
	Overall mean score					**3.38**
9	Give effective suggestions in overcoming the farmers problems	-	2.8	51.4	45.8	3.43
10	Response instantly to the farmers problems	1.4	1.4	55.6	41.7	3.38
11	Provide solutions to farmers in all aspects; not only covering the paddy plantation.	1.4	6.9	50.0	41.7	3.32

The last aspect studied was the process helper. To have this role is important as it can smooth the farmers' agriculture process. To assist the farmers is important as it will speed up processes such as problem solving process, learning process and plantation activities. The overall mean score recorded was 3.35 which can be considered as high. The highest mean score was recorded by the statement of "give guidelines in overcoming problems such as Golden Apple Snail and weedy

rice." (M = 3.35) while the lowest mean score was recorded by the statement of "assist farmers in implementing their paddy plantation activities" (M = 3.29) (Table 13).

Table 13: Process helper

I need to		Strongly not important	Not important	Important	Strongly Important	Mean
	Overall mean score					**3.35**
12	Give guidelines in overcoming problems such as Golden Apple Snail and weedy rice.	-	5.6	44.4	50.0	3.44
13	To assist farmers in learning technology that are related to paddy plantation	-	6.9	54.2	38.9	3.32
14	Assist farmers in implementing their paddy plantation activities	1.4	5.6	55.6	37.5	3.29

Conclusion

Rice paddy industry is important for the country. It plays the most significant part in ensuring the food security in the country. To ensure the productivity of the rice paddy industry in Malaysia will be continuing, a high level of AEO competency is needed and thus to investigate the level of AEO competency in paddy area in Selangor, Malaysia has become the main objective of this paper. Based on the results depicted, it can be clearly seen that the AEO studied do have a high level of competency and the aspect of P&P was ranked first, followed by the aspect of planning, aspect of culture and aspect of leadership. Even though P&P was ranked first, there was no big gap between P&P (M = 4.25) and leadership (M =4.14). In term of roles of AEO, it can be concluded that the AEO studied can deliver their roles effectively based on the high level of mean score recorded. The AEO studies were identified to score a high level of mean score in the aspect of catalyst.

Discussion

Results of the study have revealed that the AEO studied have a high level of competency and they can implement their roles effectively. However, all of the competency aspects and roles need to be further intensified. This is importance as it will ensure the continuity of the effectiveness of AEO as the agents of agriculture and farmers' development. Training, courses and seminars are indeed important to enhance competency. According to Khodran (1992), trainings are important for AEO development; through trainings, it can create a better understanding on the relationship between extension and other organization that is related to agriculture, ability to encourage farmers, identify the strength of mass communication on society, skills in managing short and long range programs in extension, ability to evaluate extension programs and understanding the basic principles of communication. Khodran (1992) also revealed that research and evaluation, teaching and learning process and communication need to be strengthened in order to boost the AEO competencies. Randavay

and Vaughn (1991) have agreed with this as they stated that attending training related to teaching, communication, planning, implementing and evaluating in order to enhance AEO competency is important. The importance of trainings to enhance the competency of the AEO was admitted by a study done by Azimi (2007) (Table 14), where he has ranked the importance of the trainings needed by the AEO. The top 5 trainings needed by the AEO in Azimi (2007) study are indeed consistent with results of this study. Trainings related to 1) communication skills, 2) working with farm leaders, 3) participative programming and 4) organizing training is indeed important to create a better relationship between AEO and the farmers. All of these trainings can assist the AEO in creating a better leadership, understand more on farmers culture, creating a better P&P, to plan systematically and to solve farmers problems. Certainly a study done by Norsida (2007) has also shown consistent results with this study and this can be proven when aspects such as leadership, farm visit, technical, extension and method demonstration are included as the ten most needed trainings by the AEO (Table 15).

Table 14: Training Needs by AEO based on Azimi (2007) Study

Competency	S.D	Mean Rank	C.V.	Rank
Communication and developing strategic multimedia campaign	0.793	3.87	20.4909	1
Working with farm leaders	0.845	3.86	21.8912	2
Participative programming	0.891	3.74	23.8235	3
Organize training for farmers at village level	0.925	3.73	24.7989	4
Responding to farmers' inquiries	0.894	3.60	24.8333	5
Identifying relevant committee members for programming	0.904	3.54	25.5367	6
Developing extension program based on felt and unfelt needs	0.905	3.49	25.9312	7
Playing the role of resources linker	0.940	3.59	26.1838	8
Applying extension philosophy	0.929	3.48	26.6954	9
Applying the understanding of extension process/ procedure	0.901	3.33	27.0571	10
Ability to use statistical tool in evaluating programs	0.975	3.51	27.7778	11
Applying the theory of adult learning	0.962	3.35	28.7164	12

Developing criteria's for evaluating extension program	0.993	3.39	29.2920	13

Table 15: Training Needs by AEO based on Norsida (2007) Study

No	Trainings	Frequency	Percentage
1	Technical: Paddy	158	79.0
2	Extension	154	77.0
3	Farm practical	152	76.0
4	Method demonstration	135	67.5
5	Motivation	131	65.5
6	ICT	129	64.5
7	Farm visit	119	59.5
8	Country constitution	106	53.0
9	Leadership	91	45.5
10	Technical: non paddy	90	45.0
11	Organization management	84	42.0
12	Communication	80	40.0
13	Farm management	80	40.0
14	Water and Irrigation Management	76	38.0
15	Entrepreneurship	66	33.0
16	Machinery	65	32.5
17	Agribusiness	59	29.5
18	Agriculture marketing	56	28.0
19	Business	37	18.5
20	Policy	34	17.0
21	Literacy	32	16.0
22	Industrial	15	7.5

Sources: Norsida (2007)

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PERSEPSI DAN PENERIMAAN BELIA TERHADAP PERTANIAN *CONTRACT FARMING* DI MALAYSIA

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Abstrak

Tidak dapat dinafikan contract farming merupakan salah satu daripada cabang pertanian yang mempunyai potensi yang tinggi dan merupakan dimensi baharu yang dapat membolehkan bidnag pertanian mencapai kemampanannya. Tetapi adakah para belia yang merupakan tunjang negara menerima pertanian cara baharu ini? Oleh yang demikina, kajian ini akan meninjau faktor-faktor yang mempengaruhi penerimaan para belia terhadap contract farming di Malaysia. Rekabentuk kajian ini ialah dalam bentuk survei di mana data telah diperoleh dari 400 pelajar siswa-i yang kini sedang menuntut di pelbagai institusi pengajian tinggi awam di Malaysia dan data tersebut telah dianalisa dengan menggunakan perisian SPSS. Dapatan kajian menunjukkan para responden mempunyai penerimaan yang tinggi dan positif terhadap contract farming. Kajian juga mendapati bahawa faktor-faktor yang mempengaruhi penerimaaa terhadap contract farming ialah sikap, pengetahuan dan kepercayaan. Kajian ini mencadangkan agar lebih banyak kursus yang spesifik berkaitan dengan contract farming perlu dihebahkan di peringkat pengajian tinggi agar para siswa-i akan lebih sedar dan bersedia untuk menerima contract farming. Selanjutnya, ini akan membolehkan lebih ramai siswa/i untuk menceburi dalam bidang pertanian dan seterusnya ianya akan membolehkan sektor pertanian untuk terus berkembang maju.

Kata Kunci: *Contract farming, Belia dan Penerimaan*

Pengenalan

Tidak dapat dinafikan sektor pertanian merupakan satu-satunya bidang penting yang membawa sumbangan besar kepada ekonomi dan pembangunan negara. Keprihatinan negara terhadap kepentingan bidang ini dapat dirasai dengan merujuk kepada Rancangan Malaysia ke-9 di mana sektor ini diberi peranan sebagai paksi ketiga pertumbuhan ekonomi dan dalam bajet 2010, Perdana Menteri Malaysia telah mengumumkan bahawa hampir USD1.6 billion telah diperuntukkan untuk membangunkan sektor ini. Di samping itu, dengan penubuhan beberapa agensi kerajaan misalnya DOA, MARDI, FAMA, FOA dan agensi-agensi lain telah membuktikan usaha bersungguh-sungguh kerajaan untuk memperkembangkan sektor pertanian.

Satu daripada cabang pertanian yang berupaya untuk menarik perhatian para pembuat dasar, perancang pembangunan, agen pengembangan dan para penyelidik ialah penglibatan dalam *contract farming*. Terdapat pelbagai bentuk aktiviti *contract farming* antaranya ialah pemeliharaan lintah, kambing dan lembu, sarang burung, herba dan lain-lain lagi yang menawarkan potensi yang besar kepada mereka yang mengusahakannya dengan jayanya. Mengikut Da Silva (2005), walaupun *contract farming* bukanlah merupakan isu mutakhir,

tetap perkembangan topik terhadap *contract farming* telah mencapai ke suatu tahap yang signifikan disebabkan oleh perubahan dan trend yang mempengaruhi sistem pertanian di seluruh dunia. Sejak kebelakangan ini kelakuan penggunaan para penduduk Malaysia telah dipengaruhi oleh perkembangan yang berlaku ke atas permintaan yang tinggi ke atas makanan segera, kemunculan gedung-gedung perniagaan yang besar dan peluang-peluang yang lebih luas untuk perdagangan antarabangsa untuk produk tempatan. Kesemua ini telah mendorong untuk perkembangan *contract farming* di Malaysia.

Agak malang satu daripada fenomena yang merencatkan perkembangan pertanian adalah kewujudan bilangan tenaga kerja veteran yang amat tinggi dalam bidang pertanian dan ini memerlukan suatu tindakan segera daripada generasi muda khasnya para belia. Mengikut kajian yang dibuat oleh Md. Salleh dan Hayrol (2009) dan Ezhar et al. (2008) mendapati bahawa secara puratanya umur para petani Malaysia adalah melebihi 46 tahun sementara menurut Zaleha (2007) pula majoriti para petani dalam kajian beliau berumur lebih daripada 55 tahun dan hanya kurang daripada 26% para petani yang berumur di antara 15 hingga 40 tahun. Dapatan in menunjukkan beberapa langkah perlu diambil untuk memastikan golongan belia akan berminat dalam sektor pertanian. Sesungguhnya, pertanian boleh menjadi pemangkin untuk mengurangkan kadar pengangguran di negara kita. Menurut Norsida (2007), para belia di Malaysia mempunyai persepsi yang negatif untuk menerima bidang pertanian sebagai kerjaya yang ingin diceburi. Walau bagaimanapun satu kajian lain oleh Norsida (2008) menunjukkan bahawa walaupun para belia Malaysia mempunyai penerimaan negatif terhadap pertanian, tetapi mereka masih mempercayai bahawa bidang pertanian akan mendatangkan pulangan yang lumayan sekiranya mereka yang terlibat bekerja dengan tekun dan bersungguh-sungguh. Sehubungan dengan ini, usaha-usaha baharu perlu diwujudkan untuk menarik minat para belia dan untuk melipatgandakan penyertaan mereka dalam bidang pertanian. *Contract farming* merupakan industri yang baharu di Malaysia dan berkeupayaan untuk menarik lebih ramai belia untuk melibatkan diri berdasarkan kepada hujah bahawa ianya merupakan kaedah pertanian yang mudah dan menguntungkan. Malahan, *contract farming* telah diberi peranan untuk menyediakan pasaran alternatif kepada pasaran kecil-kecilan dan memastikan penawaran yang konsisten di pasaran. Sesungguhnya peluang-peluang yang wujud melalui *contract farming* adalah amat luas untuk diterokai khasnya dalam bidang perubatan, kesihatan dan bekalan daging mentah.

Faktor-faktor yang Mempengaruhi Penerimaan Belia Terhadap *Contract Farming*

Ledakan literatur membuktikan bahawa terdapat banyak faktor yang boleh dikaitkan dengan penerimaan belia terhadap *contract farming*. Satu daripada faktor yang telah dikenal pasti adalah sikap. Pada kebiasaannya sikap yang positif akan menyebabkan seseorang itu menerima sesuatu dengan hati yang terbuka sementara sikap yang negatif pula akan mendorong seseorang itu untuk membuat bantahan terhadap sesuatu pembaharuan. Ini telah dibuktikan oleh satu kajian yang dibuat oleh Giradakou (1999) yang mendapati kebanyakan belia mempunyai sikap yang negatif dan ini telah menyebabkan mereka begitu sukar untuk menerima *contract farming*. Sementara itu satu kajian yang dibuat oleh Kumar (2007)

didapati telah menyangkal dapatan kajian Giradakou (1999) di mana beliau telah menyatakan bahawa apa yang mampu disumbangkan oleh *contract farming* kepada komuniti berupaya untuk menarik lebih banyak para belia untuk menerima *contract farming*. Melalui penyelidikan beliau, adalah didapati sejak kebelakangan ini lebih ramai petani di India memilih untuk berkecimpung dalam *contract farming* ekoran daripada sikap yang positif kesan daripada perlindungan harga untuk barang komoditi. Dapatan kajian Kumar (2007) ini mengukuhkan lagi kajian yang dibuat oleh Mann dan Kogl (2003) yang turut menyatakan bahawa pendapatan yang lebih besar yang diperoleh daripada penglibatan dalam *contract farming* akan menjadi pemangkin ke arah mewujudkan sikap positif di kalangan masyarakat terhadap *contract farming* dan seterusnya ini akan mendorong mereka untuk menerima *contract farming*.

Ilmu pengetahuan boleh menjadi penentu yang penting untuk penerimaan *contract farming* dalam kalangan belia. Satu kajian yang dibuat oleh Shaban et al. (2006) menekankan bahawa faktor penerimaan untuk sesuatu perkara adalah ditentukan oleh tahap pengetahuan yang dimiliki oleh seseorang berhubung dengan perkara tersebut. Sementara itu, mengikut James (2004), masyarakat akan menolak untuk melibatkan diri dalam pertanian kesan daripada pengetahuan yang cetek terhadap potensi bidang pertanian. Frick et al. (1995) menyatakan bahawa penerimaan terhadap bidang pertanian akan meningkat seandainya tahap pendidikan pertanian dalam kalangan masyarakat dapat dipertingkatkan. Tidak dapat dinafikan pengetahuan merupakan kunci utama untuk mempengaruhi persepsi, dan trend ini sudah pasti akan memberi impak yang besar terhadap penerimaan individu terhadap potensi bidang pertanian. Dalam abad ke21 ini, pengumpulan ilmu dan aplikasi pengetahuan akan mendorong persepsi masyarakat untuk menerima sesuatu yang baharu. Pengetahuan, yang dapat ditakrifkan sebagai maklumat atau data yang tersusun, merupakan asas kepada seseorang untuk memahami sesuatu perkara. Elemen paling penting untuk kebaikan industri baru ini ialah untuk mempraktikkan apa yang telah disebarkan dan perkembangan pengetahuan ini dapat dicapai dengan mendedahkan apa yang diketahui kepada apa yang tidak diketahui. Apabila ini terjadi, ia akan meningkatkan kemungkinan untuk mempunyai lebih banyak persepsi positif terhadap *contract farming*

Sokongan terhadap *contract farming* adalah penting untuk memastikan kejayaannya. Kajian yang dibuat oleh Guo et al. (2005) mendapati bahawa sokongan kerajaan, ciri-ciri kontraktor dan jenis produk atau usaha adalah penentu penting bagi memastikan masyarakat menerima *contract farming*. Sokongan kerajaan adalah penting bagi memotivasikan para belia untuk menerima *contract farming*. Berdasarkan kepada kajian yang dibuat oleh Wheeler (2008) yang mendapati bahawa mereka yang berminat untuk melibatkan diri dalam *contract farming* memerlukan lebih banyak bantuan untuk melibatkan diri khasnya dalam memperoleh maklumat, sokongan daripada pakar pengembangan, demonstrasi ladang dan sokongan polisi kerajaan.

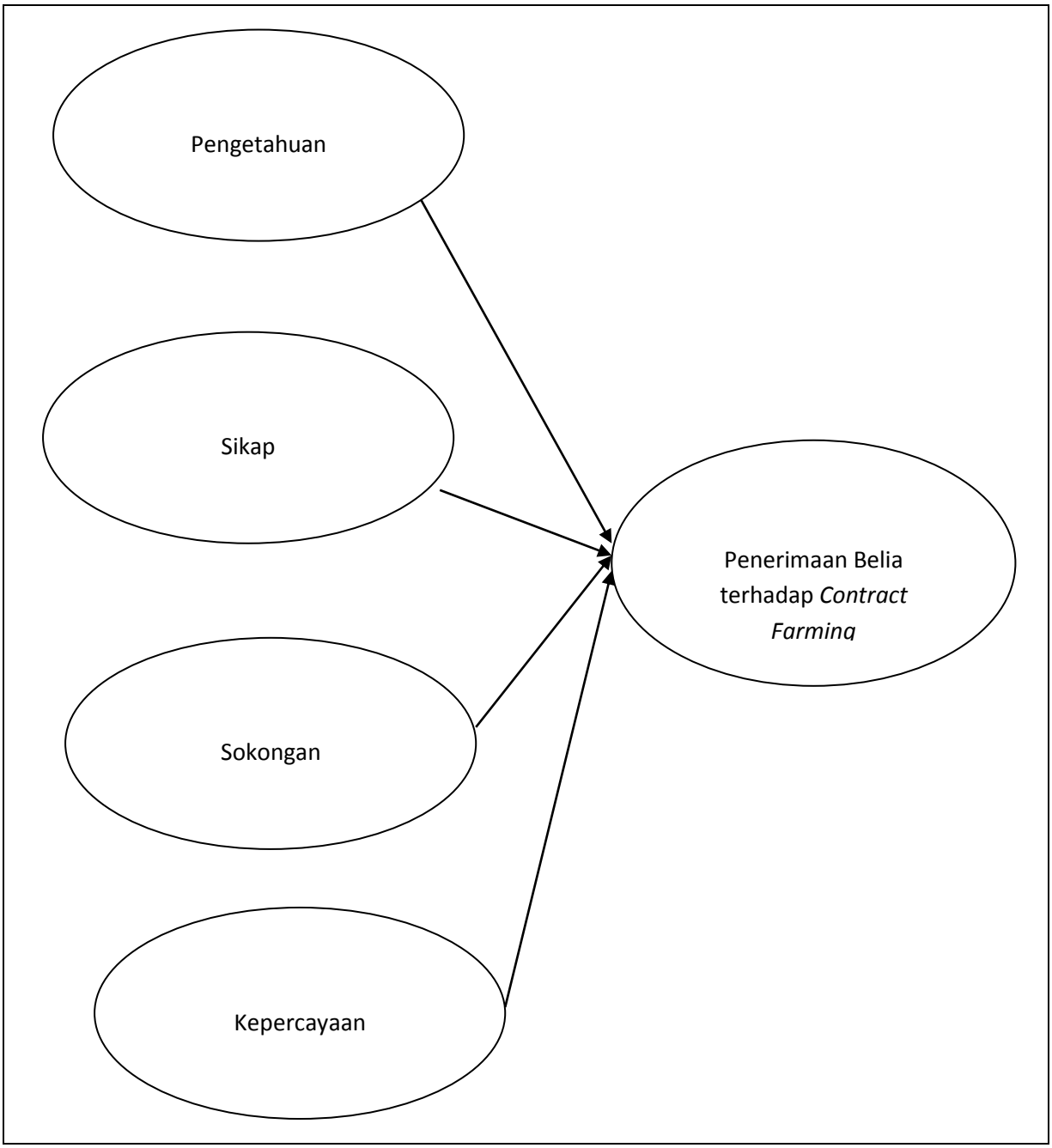
Sementara pengetahuan, sikap dan sokongan merupakan penyumbang kepada penerimaan terhadap *contract farming*, kepercayaan turut memainkan peranan yang signifikan untuk mempertingkatkan penerimaan belia terhadap *contract farming* (Adrian et al., 2005). Apabila

masyarakat percaya bahawa *contract farming* membawa faedah kepada mereka, ini sememangnya akan meningkatkan penerimaan mereka terhadap *contract farming*.

Kerangka Kajian

Rajah 1 menunjukkan hubungan hipotetikal pemboleh ubah-pemboleh ubah yang dapat diaplikasikan untuk meramal penerimaan belia terhadap *contract farming*. Berdasarkan kepada literatur, pemboleh ubah- pemboleh ubah utama yang telah dikenal pasti untuk meramal penerimaan belia terhadap *contract farming* adalah pengetahuan, sikap, sokongan dan kepercayaan.

Rajah 1: Kerangka Kajian



Perbincangan dalam bab ini akan merujuk kepada pengaruh faktor-faktor yang akan mempengaruhi penerimaan belia terhadap *contract farming*. Kajian sistematik mengenai arah tuju para belia umumnya berkaitan dengan bidang pertanian dan khasnya berkenaan dengan *contract farming* akan banyak membantu pihak kerajaan untuk menyediakan polisi-polisi yang bersesuaian untuk meningkatkan penglibatan para belia dalam bidang pertanian.

Hasil Kajian

Data yang dianalisis dalam bab ini diambil daripada tinjauan yang dibuat terhadap 400 mahasiswa/i yang kini sedang menuntut di empat universiti/kolej di Malaysia dan bidang pengajian mereka adalah pertanian, ekonomi, sains tulen dan sains kemasyarakatan. Merujuk kepada Jadual 1, analisis deskriptif menunjukkan majoriti responden adalah wanita (70.8%). Ini adalah selaras dengan situasi semasa di Malaysia di mana kaum wanita merupakan kumpulan yang mendominasi di institusi pengajian tinggi. Dapatan kajian turut memaparkan bahawa sejumlah 40.2% daripada responden berumur di antara 20-21 tahun dengan min umur ialah 20.78 tahun. Lebih ¾ daripada responden kini sedang menuntut di peringkat ijazah. Daripada data dalam Jadual 1, dapat dijelaskan bahawa sejumlah 31.8% daripada responden berbelanja di antara RM300-RM400 setiap bulan dengan min skor sebanyak RM395.85, separuh daripada mereka mengambil kursus pertanian, majoriti daripada mereka menetap di kawasan bandar (59.5%), lebih ¾ daripada keluarga responden mempunyai latar belakang pertanian sementara lebih daripada separuh daripada responden (54.8%) telah menerima maklumat mengenai *contract farming*.

Jadual 1: Profil responden

Pemboleh ubah	Frekuensi	Peratus	Min	Sisihan Piawai
Jantina				
Lelaki	117	29.2		
Perempuan	283	70.8		
Umur			**20.78**	**1.53**
18-19 tahun	111	27.8		
20 – 21 tahun	161	40.2		
22- 24 tahun	128	32.0		
Zon (lokasi universiti/kolej				
UUM	100	25.0		
UPM	100	25.0		
UMT	100	25.0		
Kolej RISDA	100	25.0		

Tahap pendidikan				
Ijazah	300	75.0		
Diploma	100	25.0		
Belanja Bulanan (Nilai dalam RM)			**395.85**	**217.18**
<200	57	14.2		
201-300	102	25.5		
301-400	127	31.8		
>401	114	21.5		
Kursus yang diambil				
Pertanian	200	50.0		
Ekonomi	100	25.0		
Lain-lain	100	25.0		
Penetapan				
Luar Bandar	162	40.5		
Bandar	238	59.5		
Latar belakang keluarga (n=381)				
Ada latar belakang pertanian	79	19.8		
Tiada latar belakang pertanian	302	75.5		
Pernah menerima maklumat mengenai contract farming				
Ya	219	45.2		
Tiada	181	54.8		

Seterusnya, perbincangan akan berkisar dengan melihat penerimaan responden terhadap *contract farming*. Seperti dalam Jadual 2, majoriti daripada responden (71.8%) menunjukkan penerimaan yang tinggi terhadap *contract farming*. Sementara itu sejumlah 28.2% daripada responden pula menunjukkan penerimaan sederhana terhadap *contract farming*. Sesuatu yang menarik daripada dapatan kajian ini ialah tidak ada mana-mana responden yang mempunyai penerimaan yang rendah terhadap *contract farming*. Ini adalah satu petanda yang baik untuk masa depan bidang pertanian di negara kita kerana para responden percaya bahawa kaedah-kaedah pertanian yang mutakhir akan banyak membantu mereka untuk melibatkan diri dalam aktiviti-aktiviti pertanian.

Jadual 2: Tahap penerimaan terhadap *contract farming*

Faktor	**Frekuensi**	**Peratus**	**Min**	**Sisihan Piawai**
Penerimaan			**7.29**	**1.15**
Rendah (1.0-3.33)	0	0		

Sederhana (3.34-6.67)	113	28.2
Tinggi (6.68- 10.0)	287	71.8

Jadual 3 menunjukkan empat faktor yang merupakan fokus kajian ini iaitu kepercayaan, pengetahuan, sokongan dan sikap yang merupakan pemboleh ubah untuk meramal penerimaan. Kajian ini mendedahkan bahawa pengetahuan bukanlah aspek utama yang mencatatkan nilai skor min yang tertinggi. Sebaliknya, skor min yang tertinggi dicatat oleh ciri-ciri yang berkaitan dengan kepercayaan (M=7.67, S.P.=1.25). Sementara itu skor min yang kedua tertinggi dicatat oleh variabel pengetahuan (M=7.54, S.P.=1.25) diikuti oleh variabel sokongan (M=7.53, S.P.=1.31). Jadual 3 juga menunjukkan bahawa nilai skor min yang terendah dicatat oleh variabel sikap (M=7.33, S.P.=1.38)

Jadual 3: Faktor mempengaruhi penerimaan terhadap *contract farming* (n=400)

Faktor	**Frekuensi**	**Peratus**	**Min**	**S.P.**
Kepercayaan			**7.67**	**1.25**
Rendah (1.0-3.33)	0	0		
Sederhana (3.34-6.67)	76	19.0		
Tinggi (6.68- 10.0)	324	81.0		
Pengetahuan			**7.54**	**1.25**
Rendah (1.0-3.33)	2	.5		
Sederhana (3.34-6.67)	105	26.2		
Tinggi (6.68- 10.0)	293	73.3		
Sokongan			**7.53**	**1.31**
Rendah (1.0-3.33)	1	.2		
Sederhana (3.34-6.67)	93	23.2		
Tinggi (6.68- 10.0)	306	76.6		
Sikap			**7.33**	**1.38**
Rendah (1.0-3.33)	3	.8		
Sederhana (3.34-6.67)	119	29.8		
Tinggi (6.68- 10.0)	278	69.4		

Satu daripada fokus kajian ini ialah untuk meninjau sama ada wujud sebarang hubungan di antara penerimaan terhadap *contract farming* dengan faktor-faktor yang telah dikenal pasti. Untuk mencapai objektif ini, Korelasi Pearson telah dilaksanakan. Data sebagaimana dalam Jadual 4 menunjukkan bahawa empat variabel iaitu sikap (p=.0001), pengetahuan (p=.0001), sokongan (p=.0001) dan kepercayaan (p=.0001) mempunyai hubungan yang positif dan signifikan terhadap penerimaan *contract farming*. Berdasarkan kepada data yang diperoleh, wujud hubungan yang sederhana di antara sikap dan penerimaan terhadap *contract farming* (r=.667), pengetahuan dan penerimaan terhadap *contract farming* (r=.583) dan kepercayaan dan penerimaan terhadap *contract farming* (r=.524).

Jadual 4: Hubungan di antara pemboleh ubah bebas dengan penerimaan terhadap *contract farming*

Pemboleh ubah	r	p
Sikap	.667	.0001
Pengetahuan	.621	.0001
Sokongan	.583	.0001
Kepercayaan	.524	.0001

Untuk mengukuhkan lagi penganalisisan data, analisis regresi berganda telah dilaksanakan yang bertujuan untuk mendedahkan peramal yang signifikan yang boleh menjelaskan penerimaan terhadap *contract farming*. Berdasarkan kepada analisis regresi berganda yang dijalankan, adalah didapati bahawa empat pemboleh ubah bebas yakni sikap, pengetahuan, sokongan dan kepercayaan memberi ramalan yang terbaik terhadap penerimaan *contract farming* dan menjelaskan lebih kurang 53% daripada variasi dalam penerimaan terhadap *contract farming*.

Daripada hasil kajian seperti yang dipaparkan di Jadual 5, adalah didapati bahawa responden yang mempunyai sikap yang positif akan lebih bersedia untuk menerima dan melibatkan diri dalam *contract farming*. Dapatan ini adalah selaras dengan penemuan kajian lepas yang menekankan tentang hubungan yang kuat di antara sikap dan penerimaan. Stobbelaar et al. (2007) dan Hyttia dan Kola (2006) telah membuktikan bahawa sikap akan membawa perubahan yang besar kepada manusia dan mendorong mereka untuk menerima *contract farming*. Selalunya, sikap yang positif terhadap sesuatu benda/perkara akan mendorong manusia untuk menerima sesuatu dengan hati yang lebih rela berbanding dengan sebaliknya.

Jadual 5: Faktor yang menyumbang kepada penerimaan terhadap *contract farming* menggunakan regresi linear berganda

Pemboleh ubah bebas	Beta	t	P
Pemalar		5.823	.0001
Sikap	.388	8.220	.0001
Pengetahuan	.229	4.423	.0001
Kepercayaan	.159	3.519	.0001

R= .773, R^2= .538, Adjusted R^2= .533, F= 114.830, sig= .000

Data yang dipaparkan di Jadual 5 menyimpulkan bahawa terdapat hubungan signifikan yang sederhana di antara pengetahuan dan penerimaan terhadap *contract farming*. Para belai yang mempunyai tahap pengetahuan yang lebih tinggi tentang *contract farming* diramal mempunyai penerimaan yang lebih baik terhadap *contract farming*. Pengetahuan tidak dapat dinafikan tentang kepentingannya untuk mewujudkan penerimaan positif terhadap *contract farming*. Ilmu pengetahuan merupakan kunci utama kepada hampir semua perkara di alam ini dan ia berupaya untuk menjadi pemangkin kepada pembangunan kepada setiap insan yang

bergantung kepadanya. Begum (2005) melalui kajian beliau telah mendapati bahawa pemilikan pengetahuan teknikal akan memainkan peranan penting untuk menjana individu untuk menerima *contract farming*.

Suatu hubungan yang sederhana dan signifikan turut wujud di antara kepercayaan dan penerimaan terhadap *contract farming*. Berdasarkan kepada dapatan yang diperoleh, adalah dijangka bahawa para belia yang mempunyai kepercayaan yang positif terhadap *contract farming* akan mewujudkan satu tahap yang lebih berkesan terhadap penerimaan *contract farming*. Duncan et al. (2004) menyatakan bahawa kepercayaan akan memainkan peranan yang signifikan untuk menghebatkan lagi penerimaan dan pengetahuan belia terhadap bidang pertanian. Lebih banyak belia percaya tentang keupayaan bidang pertanian untuk menghasilkan pulangan yang lumayan, maka lebih tinggi akan tahap penerimaan mereka terhadap bidang pertanian. Osborne dan Dyer (2000) turut berpandangan sama tetapi mereka menekankan bahawa kepercayaan positif akan mengakibatkan wujudnya sikap yang positif terhadap pertanian dan ini akan mendorong belia untuk menerima pertanian khasnya pertanian yang bercorak inovatif seperti *contract farming*.

Kesimpulan

Dalam dunia yang semakin mencabar ini penglibatan para belia amat penting sebagai pemangkin untuk menggerakkan kaedah pertanian yang mutakhir seperti *contract farming*. Kajian ini telah berupaya untuk mengenal pasti faktor-faktor signifikan yang dapat digunakan untuk meramal tentang penerimaan terhadap *contract farming* dan antara yang utama ialah sikap, pengetahuan dan kepercayaan. Para belia perlu diterapkan dengan sikap yang positif supaya mereka akan melibatkan diri dalam kegiatan pertanian dan memiliki mind yang positif yang akan menggalakkan mereka untuk berkecimpung dalam *contract farming*. Di samping itu, belia juga melihat pengetahuan dan kepercayaan sebagai antara yang asas kepada mereka untuk turut sama dalam kegiatan pertanian. Maka, dapatan kajian ini merupakan maklumat penting kepada pengamal dasar untuk menggunakan pendidikan sebagai senjata untuk meningkatkan sikap belia terhadap pertanian. Adalah disarankan melalui kajian ini masih terdapat banyak yang perlu kita buat untuk menggalakkan para belia untuk berkecimpung dalam bidang pertanian antara lain termasuklah memperkenalkan kursus-kursus yang berkaitan dengan *contract farming* supaya ia dapat meningkatkan kesedaran dan penerimaan para belia. Akhirnya, ini akan mewujudkan arah tuju untuk membolehkan lebih ramai belia terlibat dalam aktiviti-aktiviti pertanian yang bercirikan inovatif dan lantaran dari ini bidang pertanian boleh mengekalkan keistimewaan dan keunikannya.

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THE SEA HAS CHANGED? WHAT FISHERMEN LIVING AT THE EAST COAST ZONE OF PENINSULAR MALAYSIA SAY ABOUT IT AND DOES IT HAS ANY IMPACT ON THEIR ECONOMIC, SOCIAL AND HEALTH ASPECTS?

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Abstract

The sea is one of the main components of our environment. Millions of people all around the world depend on it as their sources of protein and income. However, the sea has never been the same as before. As been proven by a number of international studies, a lot of changes that occur on the sea are mainly caused by the environment and the human activities. Nevertheless, do the results of the international studies are also applying to the situation in Malaysia especially at the east coast zone of Peninsular Malaysia? The main objective of this study is to discover fishermen perception on the current situation of the sea, coastal areas, rain and temperature. Moreover, this study would like to identify whether these changes have something to do with the economic, social and health aspects of the fishermen living in the east coast zone of Peninsular Malaysia. This is a quantitative study where a developed questionnaire was used to gain the data needed. A total of 300 registered fishermen have involved as the respondents for this study. SPSS was used to run the appropriate analyses. Findings have revealed that majority of the fishermen agreed that the environment has changed. The sea, temperature, rain and coastal areas according to them are no longer same as before. Furthermore, the environment changes have been identified to have moderate effects on the aspect of economic, health and social of the fishermen. A number of recommendations have been outlined such as more scientific and social studies to be conducted, more information dissemination and more training need to be provided to enhance the alternative skills of the fishermen.

Keywords: *Fishermen, East coast zone of Peninsular Malaysia, Environmental changes, Economic, Social and Health.*

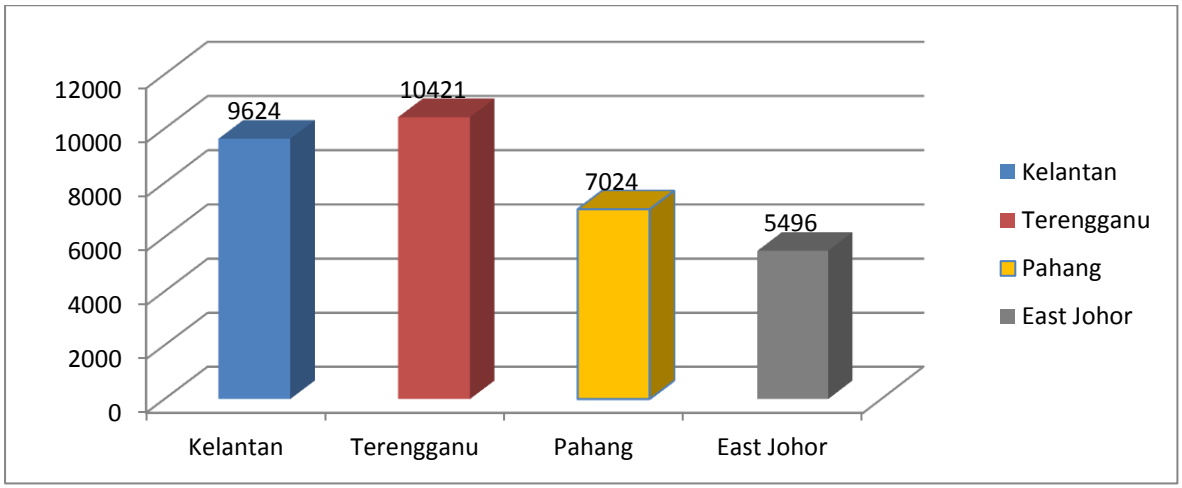
Introduction: The Fisheries Industry in Malaysia

The fisheries industry in Malaysia is an important economic sector. It contributes about 1.62% to the national Gross Domestic Product (GDP) and creates more than 125,000 job opportunities (Department of Fisheries, 2009). The fisheries industry plays a significant role in strengthening the economic sector. It is an important industry as it is crucial for the nation food security, providing pivotal sources of protein and uplifts the rural development status by providing job opportunity to thousands of people. The fisheries industry consists of marine (deep-sea and inshore) as well as inland fishing activities. Inshore fishery is the main contributor of fisheries productivity by generating more than 80% of the fish landed;

exceeding 1 million tonne. Apart from this, deep-sea fishery landing generates about 15 % of the total fisheries industry productivity.

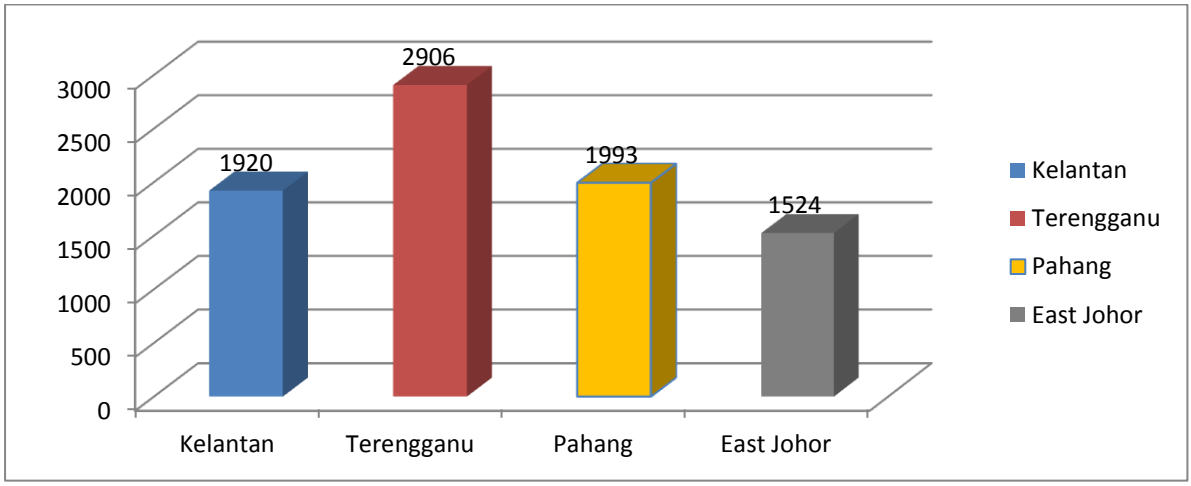
The recent statistic provided by the official website of Department of Fisheries Malaysia (DOF) informed that there are 125,632 registered fishermen in Malaysia and 32,565 of the registered fishermen are coming from Kelantan, Terengganu, Pahang and East Johor; states located in the east coast zone of Peninsular Malaysia (Figure 1). In Malaysia, all of the registered fishermen are given RM200 per month as their allowance; step taken by DOF to provide economic supports to the fishermen and to attract more people to this industry. There are also a big number of registered vessels in Malaysia. Overall, there are 48,475 registered vessels all over Malaysia with 8,343 vessels are registered at the east coast zone of Peninsular Malaysia. In Malaysia, vessels are given license according to their zone (A, B, C0 and C2). Moreover, registered fishermen are given subsidy for buying diesel and petrol for their boats.

Figure 1: Number of Registered Fishermen in the East Coast Zone of Peninsular Malaysia



Source: Department of Fisheries Malaysia (2009).

Figure 2: Number of Registered Vessels in the East Coast Zone of Peninsular Malaysia



Sources: Department of Fisheries Malaysia (2009).

The east coast zone of Peninsular Malaysia is one of the major contributors for marine protein supply. As been depicted in Table 1, there are 17 fisheries districts in east coast zone of Peninsular Malaysia whereby 7 of the districts are located at Terengganu, 4 at Kelantan and 3 each at Pahang and East Johor.

Table 1: Fisheries districts on the east coast zone of Peninsular Malaysia

States	Fisheries districts
Kelantan	• Tumpat • Kota Bharu • Bachok • Pasir Puteh
Terengganu	• Besut • Setiu • North Kuala Terengganu • South Kuala Terengganu • Marang • Dungun • Kemaman
Pahang	• Kuantan • Pekan • Rompin
Johor (East)	• Mersing • North Kota Tinggi • South Kota Tinggi

Possible causes of the sea changes

Climate change-global warming

Global warming as been proven by International Panel on Climate Change (IPCC) (2007) can cause significant changes to the sea. World nowadays become hotter and has resulted in a raise sea level. More over IPCC (2007) forecasted that the global average sea level will increase between 0.6 and 2 feet in the next century. Phenomena that will increase salinity of surface and ground waters through salt water intrusion. If sea level rise pushes salty water upstream, then the existing water intakes might draw on salty water during dry periods. Salinity increases in estuaries can be a threat to sea fauna which are not suitable to live at the high salinity area. Apart from this, global warming will harm cool and cold water species in low latitudes which can result in the species extinction. Moreover, coral reef can be affected by the global warming. Ocean warming is directly reducing coral cover through coral bleaching and can indirectly kill corals by enlarging the impacts of infectious diseases. Furthermore the global warming will result in more acidic world ocean (Bruno, 2010). Scientist revealed that the sea water flow will be slowed by the global warming and cause

some parts of the world to be cooler or less warm as the rest of the globe swelters (Bazilchuk, 2009).

Bottom trawling

Uncontrolled and illegal bottom trawling technique will destroy the sea. It involves dragging huge, heavy nets along the sea floor. Large metal plates and rubber wheels attached to these nets move along the bottom. Lot of catches will be deposited into the net, nonetheless, only half of the catches can be sold while the remaining catches are wasted. Additionally, this technique can destroy coral reef, sea mounts, bottom dweller and others. It is a concern to know that flora and fauna destroyed by this technique take a long time to recover from such damages; if they are able to do so. On the long term, this technique will risk the food security of the nation due to the fact that more than 30% of the sea species are facing extinction due to this technique (Gulf Coast Preservation Society, 2010). Who knows in the future we may not be able to have adequate protein from the sea due to this technique.

Fishing pressure

Fishing pressure occurs due to the marine species been captured faster than their reproduction pace. Good markets and high demands have contributed to this problem. Apart from this, deprived management and the rise of new and modern fishing technologies such as GPS and sonar are also among the contributing factors. This problem should be tackled at the earliest stage. Worm et al. (2006) stressed that three quarter of the world fish stocks are being harvested faster than they can reproduce and if this trend tend to continue, world will be out of sea protein in 2050. Probably, impacts of fishing pressure have been felt. Referring to Table 2, the number of registered fishermen and productivity of fisheries industry have increased year by year. But, looking specifically at the number of productivity per registered fishermen recorded, it is a concern when the amount of fish landed per registered fishermen is kept declining year by year starting from 2006 to 2009.

Table 2: Average of Marine Fish Landings per Registered Fishermen

Year	Number of registered fishermen	Total of marine fish landed (in tonnes)	Average of marine fish landed per registered fishermen (in tonnes)
2005	90,702	1,209,601	13.336
2006	97,947	1,379,770	14.087
2007	99,617	1,381,424	13.867
2008	109,771	1,394,531	12.704
2009	125,632	1,391,579	11.077

Do Sea Changes Have Any Impact on the Aspects of Economic, Social and Health of the Fishermen?

The changes occur on the sea indeed have a huge impact on the economic aspect of the fishermen as their productivity can be influenced by these changes. This is not surprising as it has been proven by Allison et al (2007). Warmer and hotter temperature was revealed to impinge significant impacts on sea fauna. Deep sea species (particularly tropical species) have been proven to have the adaptation ability, nonetheless, as warm water ranges are expanded nobody knows just how the warmer world would influence upwellings and the marine food chain over the long run (PCFFA, 1998). The most possible results would be to greatly impoverish the fisheries industry in Malaysia for several decades while marine ecosystems are adapting. This might risk this industry due to not all of the marine species are able to adapt. Due to these changes, valuable marine protein sources may face the risks of extinction and certainly this will negatively affect the economic aspects of the fishermen. The unstable weather condition will result in difficulties among fishermen to go out to the sea. Besides, these changes will expose fishermen to disease such as fever, flu and cough; a common disease related to the warmer world resulting in less time for them to go out to the sea, thus lower their income.

Health is another affected aspect. Warmer world for example is associated with increase in heart related diseases (asthma, allergic disorders, and cardiorespiratory). Apart from this, unstable weather condition will drive toward an expansion of the area under the influence of the malaria mosquito; if this trend persists, it is expected that the total of global population exposed to malaria will increase by 15% by the next half of the next century (Matsuoka and Kai, 1995). Moreover, Matsuoka and Kai (1995) have concluded that the population exposed to risk of the malaria would increase by about 30% in the Asia- Pacific region under climate change. Furthermore, Cline (1992) and Fankhauser (1995) have predicted that this phenomenon would increase the death rate by about 27- 40 persons per million populations. Other than these, skin disease, fever, flu and cough are also related with extreme temperature of global warming (Epstein, 2002).

Changes happen on the sea doubtlessly will lower the quality of social life among the fishermen. Different people will have different vulnerability and capacity to adapt to the effects of these changes and those with lower ability to adapt have the high risk of being exposed to the negative impacts brought by these changes (Tugwell, 2007). The elderly have weakened immune systems making them more susceptible to diseases caused by changing weather conditions, especially heat waves, along with being highly vulnerable to weather-related disasters due to reduced mobility (Tsai and Liu, 2005). The extreme temperature will obstruct them from doing their usual activities such as recreations and sports (Tucker and Gilliland, 2007). Frequent storm flood will result people to lose their home, places and basic services which directly can lower their quality of social life. Shortage of food supply caused by these changes would also affect the social life of the community.

Methodology

This is a quantitative study. Data were collected using a developed questionnaire. The questionnaire was earlier pre tested to know its reliability and validity. The pre test process

took place at Dungun, Terengganu. Through a multi-stage random sampling, a total of 300 respondents were selected as the respondents. The selected respondents were among the registered fishermen at the four states located at the east coast zone of Peninsular Malaysia namely Kelantan, Terengganu, Pahang and East Johor. Survey was employed to gain the data needed. Enumerators were hired to do the survey. On average each enumerator took 25 minutes to complete the survey process. SPSS was used to analyse the data gained. Analyses such as frequency, percentage, mean and standard deviation were employed to describe the general data of the study.

Results

Table 3 informs on the socio-demographic data of the respondents studied. Majority of the respondents studied can be considered as "senior" fishermen based on the mean score recorded for age and experience of being a fisherman of 42.21 years and 25.10 years respectively. Not too many youth have been involved in the fisheries industry based on the percentage recorded for respondent whose age <40 years (33.0%). More than half of the respondents (51.3%) possess primary school level of education while the mean score recorded for income per month (as a fisherman) is RM669.62; still below the poverty level set by the Economic Planning Unit (EPU) which is RM720. A total of 52.0% of the respondents have <5 family members. Majority of the respondents spend 16-20 days a month at the sea for catching fish while a large majority of the respondents (71.0%) were the coastal area fishermen.

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Table 3: Socio-demographic data of the respondents.

	Frequency	Percentage	Mean	SD
Age (years)			42.21	12.96
≤30	42	14.0		
31-40	57	19.0		
41-50	79	26.3		
51-60	75	25.0		
≥61	47	15.7		
Level of Education				
Never been to school	21	7.0		
Primary school	154	51.3		
PMR/SRP	55	18.3		
SPM/SPMV	66	22.0		
Skill certificates	3	1.0		
Degree/Master/PhD	1	0.3		
Income per month (as a fisherman) (in Ringgit Malaysia)			669.62	724.71
<500	136	45.3		
501-750	99	33.0		

>751	65	21.7		
Number of household				
≤5 members	156	52.0		
>5 members	144	48.0		
Experience as a fisherman (years)			25.10	14.29
<10	61	20.3		
11-20	82	27.3		
21-30	58	19.3		
31-40	56	18.7		
>41	43	14.3		
Average (days) going out to the sea for catching fish			18.90	4.86
<15	93	31.0		
16-20	118	39.3		
>21	89	29.7		
Category of Fishermen				
Coastal area	213	71.0		
Deep sea	87	29.0		

Table 4 to Table 7 demonstrate the perception of fishermen on the changes that happen. There were asked on the changes related to four elements of environment which are the temperature, sea, rain and coastal areas. Their agreement on the questions asked is considered as low if the mean score recorded is between 1.00-2.33, moderate if the mean score is between 2.34-3.67 and high if the mean score is between 3.68-5.00. The justification of this level is based on the equal distribution of each level. With regard to their agreement on the changes of the temperature, all of the questions asked recorded a moderate level ranging from 3.34 to 3.61. It seems that the respondents studied agreed that the temperatures either at the sea or in the land are getting hotter (Table 4).

Table 5 shows on the agreement of the respondents on the changes that happen on the sea. It has been discovered that all the statements asked to the respondents recorded a high level of agreement ranging from 3.87 to 4.24. It is no wonder why all the statements recorded the high level of agreement as the respondents do feel the changes occurred as they "interact" daily with the sea. Respondents were also asked questions related to the rain. Out of three statements asked, one statement recorded a high level of agreement and the statement was "the rainfall season is uncertain in this area" (M = 3.99) while the other two statements recorded a moderate level of agreement with the mean score ranging from 2.99 to 3.25 (Table 6).

The respondents were also asked on questions regarding to the coastal areas. Five statements have been asked to the respondents and majority of the respondents have a high level of agreement on the statement of "number of fish landed in this coastal areas are reducing" (M =

3.79). Comparatively, respondents have embarked a moderate level of agreement and lowest mean score on the statement of "mangrove areas are reducing" (M = 2.79) (Table 7).

Table 4: Perceptions of fishermen towards the changes of the environment (temperature)

Statement	Mean	SD
Temperature gets hotter in your area (land)	3.61	1.00
Temperature gets hotter in your area (sea)	3.57	1.01
The area here become too dry	3.34	0.97

Table 5: Perceptions of fishermen towards the changes of the environment (sea)

Statement	Mean	SD
The weather at the sea is unpredictable nowadays	4.24	0.82
The wind velocity are uncertain nowadays	4.16	0.88
The water current at the sea are uncertain nowadays	4.10	0.89
The waves actions are uncertain nowadays	3.87	1.07

Table 6: Perceptions of fishermen towards the changes of the environment (rain)

Statement	Mean	SD
The rainfall season is uncertain in this area	3.99	0.84
More frequent rain in this area	3.25	0.93
More frequent thunderstorm in this area	2.99	0.99

Table 7: Perceptions of fishermen towards the changes of the environment (coastal areas)

Statement	Mean	SD
Number of fish landed in this coastal areas are reducing	3.79	0.98
The coastal area are eroded	3.71	0.97
The coastal area become more shallow	3.47	1.16
Lots of coral reef have been destroyed by the uncertain weather	3.23	1.18
Mangrove areas are reducing	2.75	1.21

Tables 8,10 and 12 demonstrate the overall level of mean score of environmental changes impact on the aspects of economic, health and social of the fishermen living along the South China Sea coastal areas. It can be concluded that the environmental changes that occur have a moderate effects on the aspects of economic (M = 3.59), health (M = 3.10) and social (M = 2.96) of the fishermen studied. Findings revealed that majority of the respondents agreed that the quantity of the fish landed are keep reducing (Table 9) and this is consistent with the finding on Table 13 where majority of the respondents agreed that food supply from the sea

catching are keep reducing. Furthermore, majority of the respondents studied were found to have a high level of agreement on three other statements which were "Due to uncertain weather condition, it is difficult for me to go out to the sea for catching fish" (M = 3.84), "The rise of water temperature cause potential catches to move into another basin" (M = 3.70) and "There are some species (fish, crab, prawn, cuttlefish) are extinct (M = 3.69).

For the aspects of environmental changes impacts on the health aspects of the fishermen, it can be concluded that the fishermen are always caught by cough, flu and fever; a common disease related to the uncertainties of weather conditions. Nonetheless, findings revealed that not too many dengue areas exist in their settlement (Table 11). For the negative environmental changes impacts on the social life of the fishermen, all of the questions asked have recorded a moderate level of agreement based on the mean score recorded ranging from 2.67 to 3.41. The statement of "Food supply for family (from the catching) are keep reducing" recorded the highest mean score (M = 3.41) while the statement of "Due to uncertain weather condition I do not like leaving the house for holidays" recorded the lowest mean score (M = 2.67).

Table 8: Overall level of the negative environmental changes on the sea and its impact on the economic aspects of the fishermen living at east coast zone of Peninsular Malaysia

Aspect	Frequency	Percentage	Mean	SD
Economic			3.59	.540
Low (1-2.33)	5	1.7		
Moderate (2.34-3.67)	163	54.3		
High (3.68 – 5.00)	132	44.0		

Table 9: Negative environmental changes on the sea and its impact on the economic aspects of the fishermen living at east coast zone of Peninsular Malaysia

Statement	Mean	SD
The quantity of the fish landed are reducing	4.03	.815
Due to uncertain weather condition, it is difficult for me to go out to the sea for catching fish	3.84	.926
The rise of water temperature cause potential catches to move into another basin	3.70	.966
There are some species (fish, crab, prawn, cuttlefish) are extinct	3.69	.944
Size of the fish landed are smaller compared to the previous years	3.63	1.03
Boat and tools used to catch the fish are damaged caused by the extreme weather and need to be replaced	3.52	.955
My income from my part time job (tourism, recreations) are reducing caused by less tourist/anglers come to this place	2.74	1.23

Table 10: Overall level of negative environmental changes on the sea and its impact on the health of the fishermen living at east coast zone of Malaysia

Aspect	Frequency	Percentage	Mean	SD
Health			3.10	.801
Low (1-2.33)	61	20.4		
Moderate (2.34-3.67)	163	54.3		
High (3.68 – 5.00)	76	25.3		

Table 11: Negative environmental changes on the sea and its impact on the health of the fishermen living at east coast zone of Peninsular Malaysia

Statement	Mean	SD
Due to uncertain weather condition now I always have cough	3.24	.969
Due to uncertain weather condition now I always have flu	3.21	1.04
Due to uncertain weather condition now I always have fever	3.14	1.02
Due to uncertain weather condition, it causes problem to my skin	2.92	1.17
There are increasing numbers of dengue cases at my area	2.64	1.01

Table 12: Overall level of negative environmental changes on the sea and its impact on the social aspects of the fishermen living at east coast zone of Malaysia

Aspect	Frequency	Percentage	Mean	SD
Social			2.96	.586
Low (1-2.33)	57	19.0		
Moderate (2.34-3.67)	224	74.7		
High (3.68 – 5.00)	19	6.3		

Table 13: Negative environmental changes on the sea and its impact on the social aspects of the fishermen living at east coast zone of Malaysia

Statement	Mean	SD
Food supply for family (from the catching) are keep reducing	3.41	.979
Due to uncertain weather condition, there are some facilities and accommodation in this area damaged and need to be replaced	3.26	1.05
Due to uncertain weather condition I hardly ever went out with family for holidays.”	2.92	.931
Due to uncertain weather condition, it hinder me from doing my recreational activities	2.79	.792
Due to uncertain weather condition it hinders me from doing my social activities (eg: fishermen gathering)	2.69	1.03
Due to uncertain weather condition I do not like leaving the house for holidays.”	2.67	.961

Discussion/Recommendations

The sea has changed a lot and Malaysian fishermen have admitted it. The sea, temperature, rain and coastal areas have changed and fishermen studied have agreed on this. Globally, study done by IPCC has revealed that phenomena known as global warming is one of the main causes of these changes. Changes in temperature were obviously felt by the fishermen studied. Majority of them have complaint to the researcher that the temperature nowadays is far hotter compared to their early days as a fishermen. Findings of this study is consistent with study done by Tanggang et al (2006); they revealed temperature in Malaysia recorded increase between 0.5 Celsius to 1.5 Celsius for the last for decades and interestingly three of their studied areas were in Kuantan, Mersing and Kota Bharu which situated at the east coast zone of Peninsular Malaysia. Furthermore, a local study done by Wai et al. (2005) have identified that temperature in Malaysia have recorded a significant increase in the past 30 years with values ranging from 1.35 to 6.33°C per 100 years. The fishermen also informed on the changes that happen on the coastal area, water current, wind velocity and waves actions. They have informed that these elements especially water current, wind velocity and waves actions are not easy to be predicted in this day; it can easily change and endanger them while they are on the sea and bring difficulties in them for catching the fish. Results demonstrated here is not surprising as the environmental changes do have negative impacts all these (IPCC, 2007). Observation are already supporting projection of increasing sea and air temperature, rising sea levels, acidifying oceans, intensifying storms, changing rainfall patterns and water currents (IPCC, 2007). Furthermore, in this study it is not a wonder why fishermen do admit the changes that occur on the coastal areas as it is in line with the concerns that raised regarding to the increase number of eroded coastal areas due to the environmental changes. From out of 4,809 km coastal areas recorded in Malaysia, 1,400 km areas are in the category of having a critical erosion problem. The areas consist of 65 coastal areas and majority of the areas located at east coast zone of Peninsular Malaysia (Mohd Ekhwan, 2006).

Based on the results gained, the environmental changes that happen do have moderate impacts on the aspects of economic, health and social of the fishermen. Nevertheless, the fishermen must be warned that they must be mentally and physically prepared for the changes. IPCC in their recent study have concluded that the negative changes on the sea would be greater in the upcoming decades. Fishermen should be provided with information on the impacts on environmental changes on their socio-economic aspects and with this kind of information will aid them to prepare against such changes. Moreover, Fishermen should be provided with trainings to strengthen their additional skills other than skills being a fisherman. To have this is essential as the fishermen will have selections of job if they are no longer be a fisherman in the future due to the environmental changes.

Doubtlessly a lot of scientific studies either internationally or locally have been conducted to investigate the environmental changes happen on the sea. Comparatively, within the context

of this study, it would like to know whether the fishermen themselves have felt the environmental changes. Their vast experience and daily "interaction" with the sea is important as it will provide the study with the data needed. Data from this study can be used for conducting more future scientific and social studies. It is recommended that future studies on the impacts of the environmental changes on the sea productivity should be conducted. Furthermore, more scientific studies on the changes of the pattern of wind, water current and waves at the South China Sea should be conducted as the fishermen at this area do admit and have concerns on the changes that happen on these sea components. Information of such studies is crucial for the health, safety and security of the fishermen.

Conclusion

It can be seen that majority of the fishermen in the east coast zone of Peninsular Malaysia have agreed that the environment have changed. The sea, temperature, rain and coastal areas according to them are no longer same as before. Even though environment changes have moderate effects on the aspect of economic, health and social of the fishermen, nonetheless they must be prepared against such threats as a number of previous studies have proven that the effects of such changes will be greater and harmful in the future. A number of recommendations have been outlined such as more scientific and social studies to be conducted, information dissemination and more training need to be provided to the fishermen,

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PENILAIAN PAPARAN MAKLUMAT LAMAN WEB PERTANIAN DI MALAYSIA : PERSPEKTIF DARIPADA ISU-ISU PERTANIAN

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Abstrak

Pertanian masa kini lebih dikenali sebagai pertanian alaf baru yang lebih banyak menggunakan peralatan moden bagi mempertingkatkan kuantiti dan kualiti hasil yang lebih bermutu. Laman web adalah salah satu daripada saluran untuk menyebarkan maklumat pertanian melalui internet. Tujuan utama kertas kerja ini adalah untuk menilai maklumat berkaitan pertanian yang dimuatkan dalam laman web pertanian. Kajian ini melibatkan 55 laman web pertanian yang diselenggarakan oleh agensi-agensi kerajaan. Justeru itu, laman web yang diselenggarakan oleh agensi swasta adalah tidak ambil dikira. Laman web ini terdiri daripada empat kumpulan utama iaitu Kementerian Pertanian, Jabatan Pertanian, Jabatan Perikanan dan Jabatan Perkhidmatan Veterinar. Laman web tersebut telah di buat analisis kandungan berdasarkan jenis maklumat pertanian yang dimuatkan dalam laman web berkenaan. Hasil kajian mendapati hampir kesemua maklumat pertanian yang dinilai dipaparkan oleh laman web. Namun begitu, beberapa maklumat tambahan perlu diperbanyakkan lagi bagi sesetengah laman web untuk membantu pelawat mendapatkan maklumat dengan selengkapnya. Di antara maklumat pertanian yang mendapat perhatian daripada pihak jabatan ialah maklumat tanaman/perikanan/ternakan yang mempunyai potensi yang tinggi untuk di usahakan di negara ini, maklumat latihan/kursus yang boleh diikuti bagi mempertingkatkan kemahiran dan pengetahuan dalam bidang pertanian dan maklumat berkenaan kewangan yang boleh dipohon.

Kata Kunci: *Laman web, Kementerian Pertanian, Jabatan Pertanian, Jabatan Perikanan, Jabatan Perkhidmatan Haiwan*

Pengenalan

Media massa adalah suatu medium yang penting dalam era masa kini bagi menyalurkan maklumat dengan cepat dan berkesan. Bahaman et al.(2009), menghuraikan bahawa ICT terdiri daripada sembilan jenis alatan iaitu mesin faks, komputer, internet, CD, telefon, telefon bimbit, PDA, radio dan television. Di Malaysia, pelbagai saluran yang dapat digunakan hari ini bagi mendapatkan maklumat yang di ingini dengan cepat. Antara saluran

yang menjadi pilihan pengguna ialah seperti Television, Radio, Surat Khabar, Majalah dan juga Internet

Pelbagai peralatan media massa boleh digunakan dalam penyebaran maklumat pertanian. Ini kerana, kajian Irfan et al. (2006) dan Md Salleh et al. (2010) ada menyatakan bahawa media massa masih merupakan pilihan utama di kalangan komuniti tani bagi mendapatkan maklumat pertanian. Antara medium yang bakal diminati oleh para petani dalam mendapatkan maklumat terkini pertanian ialah melalui laman web. Ini kerana kajian Md Salleh et.al.(2009), ada menyatakan bahawa majoriti penduduk di Malaysia hari ini mempunyai perkhidmatan internet di rumah. Ini bermakna, tahap penggunaan internet makin meluas dari masa ke semasa. Justeru itu, pihak kerajaan harus mengambil peluang ini untuk membantu komuniti tani dalam mendapatkan maklumat semasa dalam bidang pertanian melalui internet. Mengikut kajian Chan-Ho (2001), beliau menyatakan bahawa agensi kerajaan adalah agensi yang bertanggungjawab dalam menyediakan maklumat pertanian melalui web termasuk maklumat pasaran kepada petani. Oleh yang demikian, sektor pertanian tidak akan ketinggalan dalam mengaplikasikan teknologi media malah terus cemerlang dalam proses penyebaran maklumatnya amnya komuniti tani.

Methodologi

Kajian ini dijalankan secara kuantitatif dengan mengaplikasi teknik analisa kandungan (*content analysis*) yang melibatkan pengkaji dan seorang jurukod. Analisa keputusan dinilai menggunakan perisian SPSS versi 20. Melalui perisian ini, data kajian telah di analisa bagi mendapatkan keputusan deskriptif yang berlandaskan objektif yang telah dibina pada peringkat awal kajian. Analisa kandungan dijalankan berdasarkan jenis maklumat pertanian yang di paparkan di laman web berkenaan.

Keputusan

Jadual 1 menunjukkan senarai 55 laman web pertanian di seluruh Malaysia telah dipilih sebagai bahan untuk dinilai. Penilaian ini hanya mengambil kira laman web yang diselenggarakan oleh pihak kerajaan. Justeru itu, laman web pertanian yang diselenggarakan oleh pihak swasta tidak di ambil kira dalam kajian ini. Kesemua laman web itu telah dibahagikan kepada empat bahagian iaitu bahagian Kementerian (28 laman web), Jabatan Pertanian (14 laman web), Jabatan Perikanan (3 laman web) dan Jabatan Perkhidmatan Veterinar (10 laman web). Penilaian bermula sejak April 2011 dengan membuat pra-ujian sebanyak lima laman web dan kajian sebenar mengambil masa selama tiga minggu iaitu bermula 19 Mei 2011 sehingga 9 Jun 2011.

Jadual 1: Senarai Laman Web Pertanian

NO.	ORGANISASI/ JABATAN	LAMAN WEB PERTANIAN
		KEMENTERIAN
1.	Kementerian Pertanian dan Industri Asas Tani **(MOA)**	http://www.moa.gov.my/web/guest/home
2.	Lembaga Kemajuan Kemubu	http://www.kada.gov.my/web/guest/home

	(MADA)	
3.	Lembaga Pemasaran Pertanian Persekutuan **(FAMA)**	http://www.famaxchange.org/web/guest/home
4.	Institut Penyelidikan Dan Kemajuan Pertanian Malaysia **(MARDI)**	http://www.mardi.gov.my/home;jsessionid=1347EB147DAE54AEE19AA5779F0FD652
5.	Kementerian Kemajuan Pekebun Kecil Perusahaan Getah **(RISDA)**	http://www.risda.gov.my/web/guest/home
6.	Lembaga Koko Malaysia	http://www.koko.gov.my/lkm/index.cfm
7.	Lembaga Kemajuan Tanah Persekutuan **(FELDA)**	http://www.felda.net.my/feldav2/
8.	Lembaga Penyatuan Dan Pemulihan Tanah Persekutuan **(FELCRA)**	http://www.felcra.com.my/home
9.	Universiti Putra Malaysia **(UPM)**	http://www.upm.edu.my/
10.	Lembaga Pertubuhan Peladang **(LPP)**	http://www.lpp.gov.my/web/guest/home
11.	Lembaga Kemajuan Pertanian Muda **(MADA)**	http://www.mada.gov.my/web/guest/home
12.	Lembaga Perindustrian Nanas Malaysia	http://www.mpib.gov.my/web/guest/home
13.	Tabung Ekonomi Kumpulan Usaha Niaga **(TEKUN)**	http://www.tekun.gov.my/web/guest/home
14.	Lembaga Minyak Sawit Malaysia **(MPOB)**	http://www.mpob.gov.my/
15.	Taman Botani Negara Shah Alam	http://www.tbnsa.gov.my/web/guest/home
16.	Agrobank	http://www.agrobank.com.my/
17.	Majlis Promosi Eksport Getah Malaysia	http://www.mrepc.com/
18.	kementerian Perusahaan Perladangan Dan Komoditi **(KPPK)**	http://www.kppk.gov.my/
19.	Lembaga Kemajuan Ikan Malaysia **(LKIM)**	http://lkim.gov.my/web/guest/home
20.	Pusat Pembangunan Perniagaan Pertanian Dan Makanan	http://www.agribdc.gov.my/home
21.	Majlis Kelapa Sawit Malaysia	http://www.mpoc.org.my/
22.	Lembaga Getah Malaysia	http://www.lgm.gov.my/
23.	Lembaga Lada Malaysia	http://www.mpb.gov.my/

24.	Majlis Latihan Pertanian Kebangsaan	http://www.natc.gov.my/carta;jsessionid=EE9D2602DE59479636D2FBA1481AA848
25.	Lembaga Kenaf dan Tembakau Negara **(LTN)**	http://www.lktn.gov.my/
26.	Kementerian Pembangunan Pertanian Dan Industri Makanan	http://www.sabah.gov.my/madfi/
27.	Kementerian Permodenan Pertanian	http://www.moma.sarawak.gov.my/modules/web/
28.	Koperasi Nelayan Sabah	http://www.sabah.gov.my/konelayan/
		JABATAN PERTANIAN NEGERI
29.	Jabatan Pertanian Malaysia **(DOA)**	http://www.doa.gov.my/web/guest/home
30.	Selangor	http://pertanian.selangor.gov.my/main.php
31.	Kedah	http://pertanian.kedah.gov.my
32.	Kelantan	http://jpkn.kelantan.gov.my/
33.	Pahang	http://agri.pahang.gov.my/
34.	Perak	http://www.pertanianperak.gov.my/
35.	Melaka	http://www.agricmelaka.gov.my/template4/sitemap.asp
36.	Terengganu	http://jtn.terengganu.gov.my/
37.	Johor	http://www.johordt.gov.my/pertanian/
38.	Negeri Sembilan	http://www.ns.gov.my/jabatan/pertanian/
39.	Penang	http://jpn.penang.gov.my/
40.	Sabah	http://www.sabah.gov.my/tani/
41.	Sarawak	http://www.doa.sarawak.gov.my/
42.	Perlis	http://pertanian.perlis.gov.my/
		JABATAN PERIKANAN NEGERI
43.	Jabatan Perikanan Malaysia **(DOF)**	http://www.dof.gov.my/home
44.	Perak	http://perikanan.perak.gov.my
45.	Sabah	http://www.fishdept.sabah.gov.my

		JABATAN PERKHIDMATAN VETERINAR
46.	Jabatan Perkhidmatan Veterinar Malaysia **(DOV)**	http://www.dvs.gov.my/web/guest/home
47.	Kelantan	http://www.dvs.gov.my/web/guest/sumber_genetik
48.	Pahang	http://vetphg.pahang.gov.my/
49.	Selangor	http://www.dvssel.gov.my/cms/index.php
50.	Melaka	http://jpvmelaka.gov.my/bm/main.php?option=utama
51.	Kedah	http://www.jpvkedah.net/portal
52.	Perak	http://www.jpvpk.gov.my/
53.	Perlis	http://veterinar.perlis.gov.my/utama.php
54.	Pulau Pinang	http://www.jpvpp.gov.my/
55.	Sabah	http://vet.sabah.gov.my

Ciri paparan yang baik pada laman web pertanian

Sesebuah laman web yang mempunyai laman web yang bagus adalah ditentukan oleh beberapa kriteria bagi memastikan ia nya berkualiti.

Kandungan maklumat tambahan yang dimuatkan dalam laman web pertanian

Antara maklumat tambahan yang dimaksudkan dalam laman web pertanian ini ialah maklumat yang boleh membantu pelawat untuk mengenali sesebuah laman web pertanian itu dengan lebih mudah. Selain itu, sesebuah laman web pertanian itu juga perlu memaparkan maklumat-maklumat terkini dalam bidang pertanian.

Maklumat Pertanian

Antara tujuan utama penilaian ini ialah untuk menilai maklumat pertanian yang perlu dititikberatkan bagi membantu untuk penyebaran maklumat pertanian melalui laman web ini. Beberapa jenis maklumat tambahan ini perlu dinilai bagi membantu untuk tujuan penambahbaikan pada masa depan. Sebanyak 42 laman web pertanian adalah berkaitan.

Jenis maklumat Pertanian yang melibatkan industri tani ialah seperti maklumat dalam industri bercucuk tanam sama ada di kebun yang berskala kecil mahupun di ladang yang berskala besar. Hasil penilaian yang dipaparkan dalam jadual 2 mendapati 80.95% daripada laman pertanian menyediakan maklumat tanaman yang mempunyai potensi yang tinggi di negara ini bagi membantu pelawat laman ini yang ingin menceburkan diri dalam bidang pertanian. Hal ini boleh memberikan semangat dan pendedahan awal kepada golongan yang masih mencari hala tuju dalam bidang pertanian.

Pihak kerajaan juga telah memperuntukkan pelbagai latihan/kursus bagi membantu kumpulan komuniti tani yang baru berjinak-jinak dalam komuniti tani ini. Ini terbukti apabila hampir 71.43% laman pertanian memaparkan latihan/kursus yang ditawarkan oleh jabatan masing-masing. Selain itu, sebanyak 66.67% laman pertanian turut memaparkan hasil penyelidikan dan penerbitan dalam bidang pertanian ini.

Beberapa maklumat pertanian yang turut diberi perhatian adalah seperti maklumat persediaan tanah pertanian (52.38%), diikuti maklumat input pertanian dan maklumat tentang perosak (54.76%), maklumat tentang pinjaman (45.24%) dan maklumat tentang cara penjagaan tanaman (42.86%).

Disebabkan semakin ramai komuniti tani yang boleh menerima maklumat pertanian melalui teknologi internet ini, setiap organisasi pertanian patut mengambil peluang ini bagi membantu komuniti tani dengan menyediakan ruang untuk mereka memaparkan hasil tanaman mereka di laman pertanian tersebut. Ini kerana, hanya 4.76% iaitu laman Lembaga Koko dan laman Pertubuhan Peladang yang mula memberi ruang kepada petani bagi memasarkan hasil pertanian mereka di laman tersebut.

Jadual 2: Jenis Maklumat Pertanian

Bil.	**Jenis Maklumat Pertanian (n=42)**	**Kekerapan**	**%**
1.	Maklumat tanaman yang mempunyai potensi yang tinggi	34	80.95
2.	Maklumat latihan/kursus	30	71.43
3.	Pendidikan (contoh: penyelidikan,penerbitan)	28	66.67
4.	Maklumat input pertanian (baja/racun)	23	54.76
5.	Maklumat tentang perosak dan cara mengatasi	23	54.76
6.	Maklumat persediaan tanah pertanian	22	52.38
7.	Maklumat kewangan/modal/pinjaman	19	45.24
8.	Maklumat Peralatan pertanian. Contoh: Jentera	18	42.86
9.	Cara penjagaan tanaman	18	42.86
10.	Cara penuaian hasil	16	38.10
11.	Senarai harga tanaman	12	28.57
12.	Maklumat genetik (klon tanaman)	9	21.43
13.	Lain-lain maklumat	7	16.67
14.	Cara memasarkan hasil secara *online.*	2	4.76

Maklumat Perikanan

Melalui kajian ini, empat buah laman web perikanan dan 16 laman web pertanian yang terlibat dalam penilaian kali ini disebabkan beberapa kriteria tidak dipenuhi oleh laman web perikanan yang lain. Ini kerana, kebanyakan laman web perikanan di peringkat negeri tidak membina laman web sendiri tetapi hanya menumpang laman web perikanan di peringkat kementerian bagi menyalurkan maklumat pegawai yang perlu dihubungi bagi setiap bahagian di negeri tersebut.

Walau bagaimanapun, penilaian tetap dijalankan ke atas empat buah laman web tersebut. Hasil yang diperoleh mendapati 40% laman menyediakan maklumat ikan yang berpotensi dan mempunyai nilai pasaran untuk diceburi di negara ini. maklumat tentang kesesuaian tempat habitat ternakan ikan turut mendapat perhatian daripada pihak jabatan apabila 20% daripada laman web tersebut telah memaparkan maklumat tersebut.

Sebanyak 20% daripada laman web tersebut juga menawarkan program seperti latihan/kursus kepada pelawat bagi mendalami bidang perikanan ini. Selain itu, hasil penyelidikan turut dikongsi apabila hampir 30% jabatan perikanan turut memandang perkara ini sebagai langkah yang penting bagi membantu perkembangan industri perikanan di negara ini.

Antara maklumat tambahan lain yang telah dikongsi kepada pelawat ialah cara penjagaan ikan (25%), cara pengendalian hasil tangkapan (20%), maklumat makanan dan maklumat tentang penyakit masing- masing (10%).

Jadual 3: Jenis Maklumat Perikanan di Laman Web

Bil.	**Jenis Maklumat Perikanan (n=20)**	**Kekerapan**	**%**
1.	Maklumat ikan yang sesuai dan berpotensi tinggi	8	40
2.	Maklumat kewangan/modal /pinjaman	7	35
3.	Pendidikan (Penyelidikan/penerbitan)	6	30
4.	Cara penjagaan ikan	5	25
5.	Cara pengendalian hasil tangkapan	4	20
6.	Maklumat kesesuaian tempat habitat	4	20
7.	Maklumat latihan/kursus	4	20
8.	Maklumat makanan	2	10
9.	Maklumat tentang penyakit dan cara mengatasi	2	10
10.	Senarai harga ikan	1	5
11.	Cara memasarkan hasil secara *online.*	1	5
12.	Maklumat genetik (spesis ikan)	1	5
13.	Lain-lain maklumat	1	5

Maklumat Penternakan

Melalui kajian ini, 10 laman web Jabatan Perkhidmatan Veterinar dan 17 laman web Jabatan Pertanian telah dipilih bagi melihat keberkesanannya memaparkan maklumat dalam bidang penternakan. Antara maklumat yang turut diberi perhatian untuk dipaparkan ialah maklumat tentang ternakan yang mempunyai potensi yang tinggi untuk diceburi di negara ini (62.96%), maklumat penyakit ternakan (44.44%) dan memaparkan hasil rumusan penyelidikan/penerbitan dalam bidang penternakan(40.74%).

Selain itu, beberapa maklumat yang turut diberi perhatian oleh sesetengah laman web ternakan ialah seperti maklumat cara pengendalian hasil ternakan (33.33%), baka ternakan, cara penjagaan, maklumat makanan (29.63%), maklumat kewangan dan latihan/kursus (22.22%), maklumat genetik (7.41%) dan beberapa maklumat tambahan lain.

Jadual 4: Jenis Maklumat Penternakan di Laman Web

Bil.	Jenis Maklumat Penternakan (n=27)	Kekerapan	%
1.	Maklumat ternakan yang mempunyai potensi tinggi	17	62.96
2.	Maklumat penyakit dan cara mengatasi	12	44.44
3.	Pendidikan (Penyelidikan/penerbitan)	11	40.74
4.	Cara pengendalian hasil ternakan	9	33.33
5.	Maklumat baka ternakan	8	29.63
6.	Cara penjagaan ternakan	8	29.63
7.	Maklumat makanan ternakan	8	29.63
8.	Maklumat kewangan/modal/ pinjaman	6	22.22
9.	Maklumat latihan/kursus	6	22.22
10.	Senarai harga daging/ternakan	2	7.41
11.	Maklumat genetik (klon ternakan)	2	7.41
12.	Lain-lain maklumat	2	7.41
13.	Cara memasarkan hasil secara *online.*	1	3.70

Rumusan

Secara kesimpulannya, kajian ini dapat menilai ciri paparan laman web pertanian dan sekaligus dapat mengenal pasti status kandungan laman web pertanian di negara ini. Penilaian ini penting bagi membantu komuniti tani yang gemar untuk mendapatkan maklumat pertanian terkini melalui laman web.

Pelbagai maklumat tambahan dalam bidang pertanian dibincangkan bagi mengenal pasti dengan lebih terperinci. Kajian mendapati majoriti laman web yang dinilai mempunyai inisiatif untuk menyiarkan maklumat berkenaan bidang pertanian masing-masing. Walau bagaimanapun, masih terdapat maklumat tambahan pertanian yang patut diberi perhatian terutamanya laman web di peringkat negeri. Ini kerana, hasil kajian jelas menunjukkan bahawa majoriti laman web yang kurang menyalurkan maklumat terkini dan mengemas kini

maklumat terutama laman web di peringkat negeri. Terdapat juga beberapa laman web di peringkat negeri hanya bergantung pada laman web Kementerian Pertanian dan Industri Asas Tani dalam menyalurkan maklumat.

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PEMANTAPAN PROGRAM INTERVENSI PELAJAR AGENSI ANTI-DADAH KEBANGSAAN

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Abstrak

Hampir seluruh Negara di dunia menghadapi isu penyalahgunaan dadah. Kumpulan sasaran mereka yang menagih dadah tidak mengambil kira usia mahupun jantina. Terdapat pelbagai program yang telah diwujudkan oleh pelbagai agensi untuk mengatasi dan membenteras gejala penagihan dadah, sama ada untuk penagih sendiri atau untuk ahli keluarga penagih dadah. Di Malaysia, program untuk membenteras penagihan dadah berbentuk program pemulihan dan pencegahan. Program bertujuan meningkatkan kesedaran orang ramai tentang bahaya dadah dijalankan di samping operasi pemusnahan dan rampasan secara besar-besaran oleh pihak berkuasa, tetapi masih tidak banyak memberi kesan kepada pengurangan kuantiti atau jumlah kes penyalahgunaan najis dadah dalam negara. Agensi Antidadah Kebangsaan (AADK) sebagai salah sebuah agensi yang bertanggungjawab secara khusus di pihak kerajaan berkenaan permasalahan dadah telah melaksanakan pelbagai program yang bukan sahaja tertumpu kepada program pemulihan dadah tetapi turut melibatkan program-program (antidadah) pencegahan dadah. Program-program (antidadah) pencegahan yang dianjurkan melibatkan pelbagai kumpulan sasaran dalam masyarakat, salah satu darinya ialah Program Intervensi Pelajar (PIP) yang memberi tumpuan kepada pelajar sekolah menengah yang berisiko. Namun sejauhmanakah PIP yang dianjurkan berjaya mengurangkan kemungkinan golongan sasaran terjebak dengan dadah? Hasil penilaian ke atas keberkesanan perlaksanaan PIP dalam tahun 2010 mendapati PIP yang dianjurkan AADK mendatangkan manfaat kepada pelajar yang berisiko. Seramai 161 orang peserta PIP 2010 yang terlibat dalam kajian ini menunjukkan majoriti responden memberikan persepsi yang positif dengan skor penilaian yang tinggi berkenaan kesan PIP ke atas peningkatan pengetahuan, sikap dan amalan yang baik. Sungguhpun begitu, aspek pencegahan lanjutan selepas program sangat memainkan peranan yang penting di dalam membantu pelajar yang berisiko kekal dengan perubahan perlakuan yang dialami.

Kata kekunci: *Keberkesanan program, Program Intervensi Pelajar, Antidadah, AADK*

Pengenalan

Gejala penagihan dadah merupakan masalah global yang melanda negara yang mengeluarkan bahan mentah penghasilan dadah, malahan juga negara yang menjadi transit dan pusat pengedaran dadah. Penagihan dadah tidak mengambil kira usia dan jantina. Mesipun pelbagai program telah dilaksanakan oleh banyak negara, isu penagihan dadah masih merupakan isu yang menjadi keutamaan kepada kerajaan. Banyak program yang diwar-warkan lebih tertumpu kepada program pemulihan seperti pembangunan pusat pemulihan dadah, Cure and Care Service Centres, PENGASIH antara lain. Namun begitu, Kerajaan juga memberi fokus kepada program pencegahan meskipun kurang mendapat perhatian pihak media. Program kesedaran bagi golongan masyarakat dan kumpulan sasaran kurang diwar-warkan sehinggalah isu penagihan menjadi gejala dalam masyarakat. Oleh itu, AADK telah

menjalankan inisiatif untuk mencagah penularan gejala penagihan dadah melalui program bebas dadah bersama keluarga, komuniti, organisasi dan pelajar. Inisiatif penganjuran PIP oleh AADK harus dilihat oleh semua pihak sebagai satu mekanisme kawalan yang penting ke atas masalah penyalahgunaan dadah dalam kalangan pelajar sekolah di mana golongan ini merupakan golongan yang mudah untuk menerima sesuatu yang ditawarkan terutamanya sesuatu yang negatif. Program dengan kerjasama Kementerian Pelajaran Malaysia ini merupakan strategi yang dianggap paling berkesan dalam usaha membanteras dadah melalui tumpuan kepada pengurangan bilangan jumlah penagih baru dalam negara khususnya dalam kalangan pelajar.

PIP merupakan program yang dijalankan secara efektif melalui sukatan kurikulum dan ko-kurikulum sekolah di samping penglibatan guru dan juga ibu bapa. Melalui aktiviti secara perkhemahan, program ini dijalankan ke atas pelajar sekolah menengah yang telah terlibat dengan dadah atau berisiko untuk terlibat dengan dadah. Pelajar yang mengikuti PIP akan didedahkan dengan maklumat dan pengetahuan tentang bahaya serta risiko penagihan dadah melalui aktiviti antara 3 hari sehingga seminggu. Selain itu, mereka akan diterapkan dengan pengetahuan tentang bagaimana untuk menyekat diri dari terus terlibat dalam gejala negatif tersebut di samping mengamalkan gaya hidup yang sihat.

Pelaksanaan dan Matlamat PIP

PIP dilaksanakan dengan matlamat untuk: (1) mengesan dan mengenal pasti pelajar yang berpotensi tinggi dan terlibat dengan pengambilan dadah dan bahan; (2) memberi kesedaran supaya pelajar yang terlibat dengan penyalahgunaan bahan dan pengambilan dadah tahu tentang bahaya dadah dan berhenti dari mengambil dadah; (3) memberi kefahaman kepada pelajar tentang akta dadah di Malaysia; dan (4) membina benteng ketahanan diri daripada terlibat dengan perkara-perkara negatif terutama penyalahgunaan bahan dan dadah. Program ini menggunakan modul yang disediakan oleh pegawai-pegawai AADK yang berpengalaman dan berkemahiran dengan kerjasama pihak Kementerian Pelajaran Malaysia. Modul PIP ini telah disemak pada tahun 1996 dan ditambah baik sebanyak dua kali iaitu pada tahun 2008 dan 2009.

PIP dilaksanakan mengikut tiga fasa iaitu: (1) Fasa I: Ujian Saringan Air Kencing, (2) Fasa II: Kem Intensif, dan (3) Fasa III: Pengukuhan Sahsiah. Pada fasa pertama, ujian saringan air kencing akan dijalankan ke atas pelajar sekolah yang berisiko tinggi oleh AADK Negeri dengan kerjasama Jabatan Pelajaran Negeri. Tujuan ujian ini dijalankan adalah untuk mengesan pada peringkat awal pengambilan dadah dalam kalangan pelajar. Selain itu, ujian ini dapat membantu pihak sekolah mengenalpasti pelajar yang mengambil dadah dan seterusnya mengambil langkah untuk mengurangkan risiko pengambilan dadah dalam kalangan pelajar, serta memberi intervensi awal sekiranya pelajar terlibat dengan pengambilan dadah. Pelajar yang didapati positif dan berisiko tinggi akan disenaraikan oleh pihak sekolah dan dihantar untuk mengikuti fasa kedua program iaitu Kem Intensif.

Menerusi Kem Intensif ini, kehidupan pelajar akan diteroka bagi menyedarkan pelajar tentang kehidupan yang lebih baik di samping melahirkan pelajar yang berakhlak dan berdisiplin serta meningkatkan motivasi pelajar. Kem ini mengambil masa lebih kurang tiga hari sehingga seminggu dan dipantau oleh AADK dan wakil Jabatan Pendidikan Negeri. Sepanjang kem ini, pelajar akan terlibat dalam beberapa aktiviti seperti ceramah, tayangan video, latihan dalam kumpulan, perbincangan, riadah, bicara hati, ujian urin dan penilaian

program. Namun pengisian kem ini bergantung kepada kreativiti fasilitator kem masing-masing dan bilangan hari yang ditetapkan.

Selepas pelaksanaan Kem Intensif, pelajar tersebut akan mengikuti fasa ketiga iaitu Pengukuhan Sahsiah. Pada fasa ini, pelajar akan dipantau sepenuhnya oleh guru kaunseling sekolah dan pegawai AADK negeri/daerah. Tujuan fasa ini adalah untuk memastikan pelajar yang mengikuti program kekal bebas daripada dadah. Pemantauan secara berterusan terhadap pelajar yang pernah terlibat dengan dadah akan dijalankan secara berkala bagi memastikan semua pelajar yang terlibat akan bebas daripada dadah.

Isu Penagihan Dadah

Berdasarkan statistik dari Agensi Anti Dadah Kebangsaan (AADK), didapati sejumlah 126,153 penagih baru ditemui sepanjang tempoh 2000−2008, secara purata melibatkan 14,017 penagih baru setiap tahun (Perangkaan Sosial Terpilih siri 12/2010). Dari laporan yang sama, didapati juga bagi tempoh 2001−2004, bilangan penagih dadah baru dikesan melebihi bilangan penagih berulang, namun pada tahun berikutnya sehingga 2008 bilangan penagih berulang menyumbang lebih daripada 50 peratus jumlah penagih dadah di Malaysia. Penurunan penagih dadah baru tertinggi dicatat pada 2006 begitu juga dengan penagih berulang dengan peratusan masing−masing sebanyak 32.5 dan 28.6 peratus. Akhbar New Straits Times bertarikh 8 September 2009 pula pernah melaporkan bahawa sebanyak 306 pelajar sekolah berusia antara 13-17 tahun didapati positif dadah dalam pemeriksaan air kencing yang dilakukan dalam tempoh tujuh bulan dalam tahun 2009 berbanding 115 kes pada tahun 2008 sekaligus menunjukkan peningkatan hampir tiga kali ganda. Ini menggambarkan bahawa penyalahgunaan najis dadah masih menjadi masalah yang membelenggu golongan muda di negara ini.

Masalah penyalahgunaan najis dadah ini memberi implikasi yang tidak sihat kepada negara. Sehingga ke hari ini kerajaan terpaksa membelanjakan berjuta-juta ringgit untuk membina pusat pemulihan dadah, sedangkan wang tersebut boleh digunakan untuk projek-projek lain yang lebih bermanfaat. Kos ini belum lagi mengambil kira perbelanjaan penyelenggaraan pusat pemulihan serta pembiayaan untuk merawat para penagih. Statistik rasmi 2008 menunjukkan seramai 6,605 orang penagih telah menerima rawatan atau pemulihan di 28 buah pusat serenti (PUSPEN) di seluruh negara (Agensi Antidadah Kebangsaan, 2008).

Selain daripada itu, penyalahgunaan dadah juga seringkali menyebabkan berlakunya perpecahan keluarga, penyeksaan ke atas anak dan isteri, merogol dan lain-lain perbuatan yang berkaitan dengan keruntuhan moral. Beberapa kajian melaporkan bahawa terdapat hubungan yang kuat antara penyalahgunaan dadah, minuman keras dengan keganasan rumahtangga (Hampton & Conor-Edwards, 1993). Sungguhpun masalah dadah bermula dengan masalah individu tetapi jika tidak dibendung ianya akan memberi kesan kepada masyarakat dan negara keseluruhannya.

Tinjauan umum mendapati seseorang yang pernah terlibat dengan penyalahgunaan dadah amat sukar dipulihkan, maka strategi mencegah adalah lebih baik dari mengubati. Oleh itu, adalah wajar program pencegahan dilaksanakan ketika anak-anak berada di usia yang sangat berkemungkinan terdedah kepada gejala ini iaitu diusia awal remaja. Namun begitu, sejauh manakah PIP yang dianjurkan berjaya mengurangkan kemungkinan golongan sasaran program terjebak dalam penagihan dadah? Apakah modul-modul PIP yang dijalankan selama

ini menyokong Dasar Dadah Negara yang dibentuk oleh kerajaan? Sejauhmana input yang disediakan dan digembeleng dalam perlaksanaan PIP mencukupi, bersesuaian dan berkualiti? Sejauhmana proses perlaksanaan PIP kondusif dalam menghasilkan pengajaran dan pembelajaran yang berkesan? Sejauhmana PIP yang telah dijalankan AADK memberi impak kepada aspek perubahan pengetahuan, sikap dan amalan kumpulan sasaran? Sejauhmana tahap penerimaan kumpulan sasaran terhadap ? Adakah penilaian susulan yang sistematik mengikut jangkamasa tertentu dijalankan ke atas peserta PIP? Justeru kertas ini membincangkan keberkesanan PIP ke atas kumpulan sasaran yang terlibat berasaskan kajian penilaian yang dijalankan ke atas PIP 2010. Maklumat awal yang diperoleh pengkaji daripada pihak AADK, penilaian secara sistematik ke atas PIP sememangnya belum pernah dilaksanakan secara keseluruhan terutama di dalam memastikan keberkesanannya.

Metodologi

Kajian ini menggunakan kaedah pengumpulan data secara temubual mendalam dan soal selidik. Instrumen kuantitatif dibentuk berasaskan model penilaian yang merangkumi aspek pengetahuan, sikap dan amalan. Manakala, kaedah temubual mendalam ke atas *key informant* setelah PIP tamat digunakan bagi menentukan maklumbalas keberkesanan PIP ke atas prestasi responden dari perspektif penilaian pihak yang berkaitan iaitu kaunselor sekolah dan ibu bapa.

Pengumpulan data kuantitatif menggunakan borang soal selidik yang ditadbir sendiri oleh responden. Sesi pengumpulan data ini dijalankan pada slot khusus hari terakhir PIP setelah penyelidik mendapat keizinan daripada AADK negeri. Secara purata, responden mengambil masa antara 20 hingga 25 minit untuk melengkapkan borang soal selidik.

Perbincangan mengenai persoalan dalam konstruk kajian dibuat terlebih dahulu dan kata sepakat penyelidik dipastikan di dalam menentukan pemboleh ubah yang dibangunkan mempunyai *face validity*. Modul pelaksanaan PIP juga turut dirujuk supaya persoalan kajian yang dibentuk bertepatan dengan pengukuran keberkesanan PIP.

Pensampelan berkelompok digunakan bagi mendapatkan sampel yang dapat memenuhi keperluan penilaian program. Responden terdiri daripada peserta sekolah menengah terpilih yang telah menghadiri PIP 2010. Jumlah keseluruhan responden adalah seramai 161 orang dan melibatkan empat buah negeri iaitu Negeri Sembilan, Perak, Selangor dan Melaka. Jumlah ini amat bergantung kepada bilangan PIP yang dilaksanakan AADK serta tertakluk kepada *milestone* kajian yang harus dipenuhi pengkaji. Tempoh pengumpulan data mengambil masa selama tiga bulan.

Data kuantitatif dianalisis menggunakan perisian SPSS. *Exploratory Data Analysis* (EDA) dijalankan terlebih dahulu bagi memastikan data yang dimasukkan sesuai bagi ujian parametrik yang digunakan serta menyingkirkan nilai data yang dianggap sebagai ekstrem. Data kemudiannya dianalisis secara deskriptif dengan menggunakan skor min sampel. Sementara itu, dialog temubual penyelidik dengan guru dan ibu bapa responden terpilih ditranskrip serta dianalisis bagi menentukan petunjuk penting yang dapat dijadikan sandaran dalam mengukur keberkesanan PIP.

Hasil Kajian dan Perbincangan

Secara amnya kajian ini melibatkan seramai 161 orang responden lelaki sahaja. Tiada penyertaan daripada peserta perempuan berikutan maklumat yang diperoleh pengkaji bahawa PIP bagi pelajar perempuan dijalankan secara berasingan dan program bagi pelajar perempuan tidak dijalankan dalam tempoh pengumpulan data. Hasil kajian mendapati daripada jumlah keseluruhan peserta sebanyak 78.3 peratus responden tinggal kawasan luar bandar manakala 21.7 peratus yang lain adalah dalam kalangan responden yang mendiami kawasan bandar.

Peratusan penyertaan responden luar bandar yang tertinggi dicatatkan dalam PIP N. Sembilan (100%), diikuti Perak (80%), Melaka (77.8%) manakala terendah dicatatkan di Selangor (48.5%). Dalam pada itu, majoriti responden PIP 2010 yang mendiami kawasan bandar dicatatkan di Selangor (51.5%), diikuti Melaka (22.2%), Perak (20%) manakala tiada langsung penyertaan peserta bandar dicatatkan di PIP N. Sembilan.

Seterusnya, dua kumpulan etnik sahaja yang menjadi peserta PIP 2010 iaitu Melayu (99.4%) dan India(0.6%). Penyertaan yang tidak mewakili semua etnik dan kawasan ini mungkin disebabkan faktor lokasi kediaman, di mana penyertaan PIP oleh pelajar luar bandar di tiga buah negeri kecuali Selangor mencatatkan peratusan yang tinggi dan ketara sekaligus berkait rapat dengan dapatan aliran persekolahan responden yang menunjukkan peratusan tertinggi pada aliran Sekolah Menengah Kebangsaan (96.9%), Sekolah Menengah Teknik (2.5%) dan Sekolah Menengah Agama (0.6%). Tambahan pula, kemungkinan ramai pelajar yang berisiko yang telah dikenalpasti dari semua sekolah ini hanya terdiri dari pelajar Melayu dan India.

Secara demografi dapatan kajian menunjukkan aliran persekolahan responden di sekolah menengah kebangsaan luar bandar didominasi pelajar berbangsa Melayu mempunyai persamaan dengan jangkaan pengkaji bahawa bilangan majoriti pelajar Melayu mudah didapati di seluruh kawasan luar bandar di Malaysia berbanding pelajar dari bangsa yang lain. Ringkasan profil demografi responden seperti di Jadual 1.

Jadual 1: Profil Demografi Responden berdasarkan Pemboleh ubah Terpilih

Pemboleh ubah	**Frekuensi (N=161)**	**Peratusan**
Lokasi		
Bandar	35	21.7
Luar Bandar	126	78.3
Umur (tahun)		
14-15	10	6.2
16-17	151	93.8
Kaum		
Melayu	160	99.4
India	1	0.6
Aliran persekolahan		
Sek. Men. Keb.	156	96.9

Sek. Men. Agama	1	0.6
Sek. Men. Teknik	4	2.5

Keberkesanan PIP di dalam kajian ini adalah berteraskan kepada model CIPP. Pengukuran keberkesanan konteks, input, proses dan produk adalah berdasarkan skor min angkubah yang dibangunkan pada setiap bahagian pengukuran. Terdapat 12 angkubah yang dibangunkan bagi mengukur keberkesanan konteks PIP, diikuti 14 angkubah bagi input, 9 angkubah proses dan 30 angkubah produk.

Penilaian konteks PIP mengukur jangkaan awal responden di dalam menterjemah serta mengesahkan perjalanan program yang dijalankan supaya ianya dapat dijadikan sebagai strategi asas kepada penilaian seterusnya. Hasil kajian mendapati, majoriti responden (91.1%) menilai keberkesanan konteks PIP di tahap tinggi, manakala 8.2 peratus membuat penilaian di tahap sederhana dan bilangan yang kecil (0.6%) sahaja menilai keberkesanan konteks PIP di tahap rendah.

Penilaian input PIP juga menunjukkan majoriti responden (87.6%) menilai keberkesanan input pelaksanaan PIP 2010 di tahap tinggi, manakala 11.2 peratus membuat penilaian di tahap sederhana dan bilangan yang kecil (1.2%) sahaja menilai keberkesanan input pelaksanaan PIP di tahap rendah. Pengukuran input PIP adalah merangkumi penilaian rekabentuk latihan, kandungan modul, pengisian program, bahan latihan, kelayakan jurulatih serta logistik pelaksanaan.

Seterusnya, hasil penilaian proses PIP yang menyentuh keseluruhan aspek perjalanan program daripada fasa permulaan sehingga penghujung program turut menunjukkan majoriti responden (85.7%) menilai keberkesanan di tahap tinggi, manakala 13.0 peratus membuat penilaian di tahap sederhana dan bilangan kecil (1.2%) menilai keberkesanan proses PIP di tahap yang rendah.

Dalam merumuskan penilaian keberkesanan program dari segi konteks, input dan proses PIP, penyelidik melihat secara umum pihak AADK telah berjaya menyediakan satu rekabentuk program yang boleh diterima baik oleh responden. Penilaian yang tinggi ini juga turut merangkumi penerimaan responden terhadap inisiatif penganjuran PIP, kesesuaian kandungan modul, kesesuaian pengisian program, kesesuaian bahan latihan, kelayakan serta komitmen jurulatih, logistik pelaksanaan dan perjalanan keseluruhan program daripada fasa awal sehingga ke penghujung PIP. Dengan kata lain, penilaian konteks, input dan proses merupakan penilaian responden terhadap kekuatan PIP yang dianjurkan AADK. Jadual 2 meringkaskan taburan penilaian responden terhadap aspek konteks, input dan proses PIP.

Jadual 2: Penilaian Responden Terhadap Konteks, Input dan Proses PIP (N=161)

Penilaian	Rendah	Sederhana	Tinggi
Konteks	91.1%	8.2%	0.6%
Input	87.6%	11.2%	1.2%
Proses	85.7%	13.0%	1.2%

Berbeza daripada penilaian konteks, input dan proses, penilaian produk merupakan persepsi responden terhadap keberkesanan program ke atas perubahan yang dirasakan dalam diri mereka. Penilaian ini bertujuan mengaitkan konteks, input dan proses dengan produk (hasil) PIP. Kejayaan sesebuah program boleh ditafsirkan dengan pencapaian matlamat penganjuran program. Dalam konteks ini, kejayaan program dilihat melalui jawapan persoalan sejauhmana PIP berkesan ke atas perubahan pengetahuan, sikap dan amalan peserta.

Hasil kajian mendapati majoriti responden (85.7%) menyatakan PIP berkesan dalam meningkatkan pengetahuan yang positif terhadap diri mereka di tahap tinggi, manakala 13 peratus menyatakan peningkatan di tahap sederhana dan 1.2 peratus menyatakan berlakunya peningkatan yang sedikit. Peningkatan aspek sikap turut menunjukkan majoriti responden (88.8%) menyatakan PIP berkesan meningkatkan sikap yang positif terhadap diri mereka di tahap tinggi, 10.6 peratus menyatakan berlakunya peningkatan yang sederhana dan 0.6 peratus lagi menyatakan terdapat peningkatan yang sedikit. Begitu juga dengan peningkatan aspek amalan di mana majoriti responden (91.3%) menyatakan PIP berkesan dalam meningkatkan amalan yang positif terhadap diri mereka di tahap tinggi, 8.1 peratus menyatakan berlakunya peningkatan yang sederhana dan 0.6 peratus lagi menyatakan terdapat peningkatan yang sedikit. Jadual 3 merumuskan dapatan ringkas berkenaan perkara ini.

Jadual 3: Keberkesanan PIP dalam Peningkatan Pengetahuan, Sikap dan Amalan (N=161)

Peningkatan	**Rendah**	**Sederhana**	**Tinggi**
Pengetahuan	1.2%	13.0%	85.7%
Sikap	0.6%	10.6%	88.8%
Amalan	0.6%	8.1%	91.3%

Dapatan berhubung keberkesanan PIP ke atas peningkatan aspek pengetahuan, sikap dan amalan yang dinyatakan sebelum ini adalah berasaskan dapatan kuantitatif. Ia merupakan persepsi peribadi responden terhadap peningkatan yang dirasakan oleh diri mereka sendiri dalam tempoh sejurus selepas melalui program. Pengkaji melihat elemen-elemen peningkatan telah pun menyerap dalam jiwa responden seperti yang diakui mereka, namun sejauhmana peningkatan yang berlaku terutama dari aspek pengetahuan berjaya mempengaruhi pengekalan sikap dan amalan responden ketika mereka berada dalam suasana rutin dan berterusan?

Hasil temubual mendalam pengkaji bersama beberapa orang *key informant* penting kajian yang dilaksanakan dalam tempoh beberapa minggu selepas pelajar melalui kem perkhemahan menunjukkan perubahan yang ditunjukkan responden setelah mengikuti PIP adalah dilihat tidak begitu ketara terutama dalam aspek sikap dan amalan yang ditunjukkan.

> *"Sikap dia selepas program tu.. dia banyak diam. Kalau tak, ada juga lah jawabnya kalau ditegur. Cuma kalau bab sekolah.. dia masih malas nak pergi… merokok tetap merokok juga..."* ***[Puan A]***

> *"Tak ada perubahan pun yang saya nampak. Sama saja. Tapi tak taulah sebab saya ni bekerja diluar selalu.. cuma saya harap dia dah ikut program tu, dia tahu mana yang elok mana yang tak elok. Supaya ada pengajaran bagi dia supaya untuk tidak terlibat dengan dadah."* ***[Encik A]***

Walau bagaimanapun, semua *informant* yang ditemubual mengakui bahawa faktor *follow up* ke atas peserta yang telah mengikuti PIP perlu diberi perhatian oleh kerana suasana persekitaran mempunyai pengaruh yang kuat ke atas peserta untuk terus berisiko terlibat dengan dadah sepertimana yang dinyatakan oleh mereka.

> *"Macam pelajar si A ini, pengaruh dari kawan-kawan dia yang tak pergi tu… dengan sejarah abang-abang dia pernah terlibat dengan dadah dan kurangnya perhatian dari ibu dia juga satu faktor… tapi pelajar si B ini pula, ayah dia cari alternatif suruh dia mengajar berenang..lagipun mak dia garang… jadi ada family yang monitor dia… jadi adalah positif sedikit dari dulu."* ***[Cikgu A]***

> *"Dia berubah sekejap je.. ada lah nampak dia kurang melepak kat luar... pergi sekolah.. tapi lebih kurang seminggu jadi balik… mungkin kawan-kawan kat sekolah buat dia terpengaruh balik."* ***[Puan B]***

Maka dalam merumuskan keberkesanan PIP, pengkaji melihat bahawa secara prinsipnya kekuatan PIP yang dinilai secara positif oleh majoriti responden telah berjaya meningkatkan pengetahuan, sikap dan amalan mereka ke arah yang lebih positif dalam tempuh jangka masas pendek. Walaupun, hasil dapatan kualitatif tidak selari seperti apa yang digambarkan responden, namun pengkaji melihat aspek *follow up* yang sebenarnya kurang diberi perhatian sehingga menyebabkan perubahan yang berlaku tidak bertahan lama. Oleh sebab itu, sinergi di antara AADK dengan pihak sekolah, AADK dengan ibu bapa dan pihak sekolah dengan ibu bapa peserta harus diperkemas serta dipertingkatkan dengan lebih giat lagi.

Antara cadangan pemantapan progran intervensi pelajar yang boleh dilaksanakan oleh pelbagai pihak adalah seperti berikut:

Pihak AADK:

- Meneruskan usaha ke arah menyediakan program intervensi yang lebih banyak ke atas pelajar sekolah yang meliputi pelajar berisiko dan tidak berisiko. Ini adalah kerana analisis awal tentang bilangan peserta PUSPEN dan peserta yang melalui PIP didapati bahawa hanya peratusan yang sangat kecil mereka yang menghadiri PIP berada di PUSPEN.
- Mewujudkan bank data peserta PIP supaya dapat membuat pemantauan lanjut ke atas pelajar yang pernah mengikuti PIP supaya dapat melatih mereka menjadi role model bagi pelajar lain terutama bagi mereka yang dikategorikan disekolah sebagai 'hardcore' tetapi telah mengalami perubahan.
- Membawa masuk bersama ke kem perkhemahan PIP kaunselor yang terlatih supaya setiap sesi yang melibatkan penerokaan diri akan mendapat 'closure' yang sewajarnya kerana sering juga diperhatikan bahawa pelajar akan menceritakan lebih banyak masalah diri dan keluarga mereka dalam sesi penerokaan diri. Fasilitator dilatih mengambil nota secara sistematik untuk pemantauan lanjutan oleh pihak sekolah.

Pihak sekolah:

- Kaunselor disekolah membuka fail lengkap dan menggunakan maklumat dari nota fasilitator untuk membantu pelajar mengatasi masalah yang dihadapi. Kerapkali dalam sesi penerokaan, penyelidik mendapati melalui pemerhatian bahawa masalah pelajar yang berisiko ini adalah lebih besar dari hanya mengambil dadah.
- Meneruskan usaha meningkatkan kesedaran pelajar tentang bahaya dadah melalui kempen dan pelajaran di dalam kelas terutamanya bagi pelajar yang didapati tidak berisiko. Ini adalah kerana sebilangan besar remaja yang berada di PUSPEN didapati tidak melalui program PIP.

Ibubapa:

- Peranan ibubapa dalam meningkatkan kesedaran dan memastikan momentum anak yang telah melalui kem perkhemahan PIP adalah sangat penting bagi menentukan kejayaan program. Namun begitu, dari temubual bersama guru dan ibubapa, kerap kali didapati bahawa tiada keprihatinan ibubapa dalam mengambil maklum apa yang telah dilalui oleh anak mereka menyebabkan anak mereka cepat kembali ke rutin lama. Namun begitu, latarbelakang kehidupan ibubapa juga perlu diberi perhatian di mana sebahagian dari pelajar ini datang dari latarbelakang sosioekonomi yang rendah.

Kesimpulan

Ringkasnya, pelaksanaan PIP oleh AADK mendatangkan manfaat yang besar kepada kumpulan sasaran. Walaupun tempoh pelaksanaan PIP 2010 dilihat singkat serta tidak memenuhi kehendak modul PIP sebenar yang mengehendaki PIP dilaksanakan selama tujuh hari, namun pengisian program memenuhi konstruk modul sebenar. Ini jelas apabila dapatan kajian membuktikan bahawa peserta menerima baik elemen konteks, input dan proses pelaksanaan PIP sekaligus menyumbang kepada peningkatan pengetahuan, sikap dan amalan mereka. Kebanyakan sarjana dalam bidang latihan menyatakan penilaian pengetahuan, sikap dan amalan peserta sebagai *learning outcomes* sangat berkesan apabila diukur dalam keadaan rutin seseorang walaupun ia boleh sahaja kadangkala diukur semasa peserta berada di tempat latihan. Oleh sebab itu, sinergi yang lebih kukuh harus lebih kerap dilaksanakan di antara bahagian kaunseling AADK dengan guru sekolah bagi memastikan keberkesanan PIP ke atas peserta kekal berpanjangan. Pada hemah penyelidik, terdapat keperluan untuk menyediakan peruntukan yang lebih besar bagi penganjuran PIP pada masa hadapan yang kemudiannya diseragamkan mengikut AADK negeri. Ini kerana pelaksanaan PIP boleh dianggap sebagai satu strategi yang berkesan di dalam mencegah peningkatan jumlah penagih baru terutama dalam kalangan pelajar sekolah. Malah perkara ini turut diakui oleh pihak guru dan ibu bapa kepada peserta yang terbabit. Oleh itu, pemantapan program intervensi ini amat diperlukan untuk memastikan remaja dan belia di masa akan datang bebas dari gejala penagihan dadah.

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HEALTH BACKGROUND OF CANCER SURVIVORS IN MALAYSIA

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Abstract

In Malaysia, the incidence of cancer is on the rise but with effective treatment and care many cancer patients have better survivorship. This study describes the health background of cancer survivors in Malaysia. Respondents were 457 women who have been diagnosed with breast, colorectal, cervix, ovarian and stomach cancers. All cancer patients were interviewed using a pre-tested questionnaire and physically measured by trained enumerators. Most were diagnosed with Stage I (47.5%) and Stage II (42.7%) cancers and underwent surgery (96.9%), chemotherapy (83.8%) and radiotherapy (78.7%). More than half of respondents were overweight (34.4%) and obese (17.7%) while 41.8% had normal body weight. About 66% of the women had at risk waist circumference (≥ 80cm). For all food groups except meat/fish/poultry/legumes, the mean number of servings was less than the recommended servings. More than two thirds of the women had moderate (39.4%) and high (37.4%) levels of physical activity. Nearly half (49.7%) of respondents reported the use of CAM as complementary to conventional treatment and the common reasons for CAM use were to increase the body's ability to perform daily activities (72.7%), to enhance immune function (60.8%) and to improve emotional well-being (32.6%). In conclusion, background information on cancer survivors is important for the development and implementation of strategies to improve cancer survival.

Keywords*: Nutrition, CAM and Cancer survivors*

1 Introduction

Cancer is one of the top ten leading causes of death worldwide (WHO, 2008). While it is ranked second in the developed countries, it is among the three leading causes of death in the developing countries (Ferlay et al., 2004; WHO, 2004). In 2007, 8 million people died of cancer with about 72% from low and middle income countries. If the current trend continues, the number of deaths from cancer is projected to increase by 45% from 2007 to 2030 (from 7.9 million to 11.5 million deaths) and this is influenced in part by increasing and aging world population (WHO, 2008). Cancers of the lung, stomach, liver, colon and breast cause the most cancer deaths annually.

In 2008, 11.2% of deaths registered in Ministry of Health Malaysia hospitals were attributed to cancer, making it the third leading cause of death in Malaysia. It is also projected that in 2030, cancer will remain as the third leading cause of deaths in Malaysia (Mathers et al., 2006). In 2006, the Malaysian National Cancer Registry reported a total of 21,773 cancer

cases were diagnosed in Peninsular Malaysia with more cases in women (54.2%) than men (45.8%). The most common cancer diagnosed were breast (16.5%), colorectal (13.2%), lung (9.4%), cervical (4.9%) and nasopharynx (4.5%). While breast cancer was the most common cancer diagnosed among women, colorectal cancer was most prevalent among men.

Cancer is a preventable disease that is largely determined by environmental rather than genetic factors. About 40% of all cancer deaths worldwide are attributed to preventable risk factors with smoking alone contributed to 21% of cancer deaths (Danaei et al., 2005). Alcohol use, low intakes of fruits and vegetables, physical inactivity, overweight and obesity are estimated to have caused another 14% of cancer deaths. While smoking, alcohol use and low fruit and vegetable intakes were primary causes of cancer deaths in low and middle income countries, smoking, alcohol use, overweight and obesity are the leading causes of cancer deaths in high income countries. In Malaysia, smoking, overweight and obesity have been estimated as major risk factors for cancer deaths (Ono et al., 2005).

Worldwide, it is projected that the number of people diagnosed with cancer will double by the year 2030 with higher rates occurring in both middle and low income countries (WHO, 2009). With increasing world population and exposure to cancer, preventive efforts could be a challenge to health professionals and policy makers. In addition, as more people with cancer survive longer due to advances in medical technology, they are also at risk of cancer recurrence and chronic diseases. Knowledge on health and nutrition of cancer survivors is important as this information could give insights for the planning and development of strategies to reduce cancer risk and improve cancer survival. As such information is lacking in Malaysia, this paper aimed to describe health and nutrition of cancer survivors in Malaysia.

2 Methods

2.1 Subjects

This was a cross-sectional survey conducted in eight general hospitals and four breast cancer support groups in seven states of Peninsular Malaysia. A total of 457 women with cancers of the breast, colorectal, cervix, ovarian and stomach voluntarily participated in this study. Pregnant and lactating cancer patients as well as those with cancer recurrence at the time of data collection were excluded from this study. This study was registered with The National Medical Research Register (NMRR) and approved by The Ethical Committee of Medical Research, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia and The Medical Research Ethics Committee (MREC), Ministry of Health Malaysia.

2.2 Measurements

All cancer patients were interviewed and measured by trained enumerators using a pre-tested questionnaire.

The questionnaire consisted of seven sections:

1. Socio-demographic characteristics and cancer history

2. Anthoropometric measurements
3. Dietary intake
4. Physical activity
5. Complementary and Alternative medicine (CAM) practices

3 Result

3.1 Socio-demographic characteristics and cancer history of women

Table 1 presents the socio-demographic characteristics and cancer history of women (N=457). The mean age of cancer survivors was 52.96 ± 9.51 years. More than half (58.6%) of the women were Malays followed by Chinese (30.6%) and Indian (10.8%). A majority (81.8%) of the women was married. The mean year of schooling was 8.91 ± 3.76 years. About 68.7% of women were unemployed. The mean monthly individual and household income was RM 632.45 ± 1269.50 and RM 2120.27 ± 2490.60 respectively. Majority (86.2%) of women were breast cancer survivors. The mean age of cancer diagnosis was 48.57 ± 9.32 years and the mean years of survival was 4.9 ± 4.13 years. Most women were diagnosed with cancer at Stage I (47.5%) and Stage II (42.7%) and had undergone surgery (96.9%), received radiotherapy (78.7%) and chemotherapy (83.8%) treatments.

Table 1: Socio-demographic characteristics and cancer history of women (N=457)

Variable	**n (%)**	**Mean ± SD**
Age (years)		52.96 ± 9.51
Ethnicity		
Malay	268 (58.6)	
Chinese	140 (30.6)	
Indian	49 (10.8)	
Marital status		
Single	24 (5.3)	
Married	374 (81.8)	
Divorced/ widowed	59 (12.9)	
Years of education (years)		8.91 ± 3.76
Emplyment status		
Employed	143 (31.3)	
Unemployed	314 (68.7)	
Monthly personal income (RM)		632.45 ± 1269.50
Monthly household income (RM)		2120.27 ± 2490.60
Types of cancer		
Breast	394 (86.2)	
Other cancers	63 (13.8)	
Age at cancer diagnosis (years)		48.62 ± 9.32
Years of survival (years)		4.91 ± 4.13
Stage of cancer		
Stage I	217 (47.5)	
Stage II	195 (42.7)	
Stage III	45 (9.8)	
Current treatment/ treatment received		
Lumpectomy[a]	71 (15.5)	
Mastectomy[a]	310 (67.8)	
Other types of surgery[b]	62 (13.6)	
Radiotherapy	350 (78.7)	

Chemotherapy	380 (83.8)
Tamoxifen[a]	156 (34.1)
Reloxifen[a]	3 (0.7)

[a] Breast cancer patients
[b] Colostomy, polypectomy, hysterectomy, total hysterectomy unilateral, bilateral, gastrectomy

3.2 Anthoropometric measurements

The distribution of body mass index (BMI) and waist circumference (WC) of the cancer patients in this study are presented in Table 2. More than half of respondents were overweight (34.4%) and obese (17.7%) while 41.8% had normal body weight. About 25.2% of the women had waist circumference ≥ 80 cm (increase risk of metabolic complications) while approximately 40.9% of the women had ≥ 88 cm (substantial risk of metabolic complications). In other words, more than half of the women (66.1%) had at risk waist circumference.

Table 2: Body mass index and waist circumference of respondents (N= 457)

Variable	**n (%)**	**Mean ± SD**
Body Mass Index (kg/m^2)[a]		25.80 ± 5.20
< 18.5	28 (6.1)	
18.5-24.9	191 (41.8)	
25.0-29.9	157 (34.4)	
> 30	81 (17.7)	
Waist circumference (cm) [a]		84.78 ± 11.72
< 80	155 (33.9)	
≥ 80[b]	115 (25.2)	
≥ 88[c]	187 (40.9)	

[a]World Health Organization (1995)
[b]Increased risk of metabolic complications
[c]Substantial risk of metabolic complications

3.3 Dietary intake

Dietary intake of women after cancer diagnosis is shown in Table 3. The mean energy intake was 1342 ± 410.48 kcal/day. The mean percentage of energy from carbohydrate, protein and fat were 56.12 ± 10.39%, 16.39 ± 4.68% and 27.72 ± 8.62%, respectively. A majority of the women consumed <8 servings of grains and cereal products (78.6%), <3 servings of vegetables (96.1%), <2 servings of fruits (81.8%) and <1 serving of milk and dairy products (84.7%). More than half (55.4%) of respondents had ≥2 servings of meat/ fish/ poultry/ legumes.

Table 3: Dietary intake of women after cancer diagnosis (N=457)

Variable	**n (%)**	**Mean ± SD**
Calories (kcal/day)		1342 ± 410.48
Percentage of energy from carbohydrate (%)		56.12 ± 10.39
Percentage of energy from protein (%)		16.39 ± 4.68
Percentage of energy from fat (%)		27.72 ± 8.62
Number of serving for food groups (servings/day)		
Grain/cereal/tuber (8-12)		6.17 ± 2.12
< 8	359 (78.6)	
≥ 8*	98 (21.4)	
Vegetable (3)		1.18 ± 0.86
< 3	439 (96.1)	

≥ 3*	18 (3.9)	
Fruit (2)		0.70 ± 0.99
< 2	374 (81.8)	
≥ 2*	83 (18.2)	
Meat/fish/poultry/legumes (2-3)		2.08 ± 1.19
< 2	204 (44.6)	
≥ 2*	253 (55.4)	
Milk/dairy product (1-2)		0.33 ± 0.57
< 1	387 (84.7)	
≥ 1*	70 (15.3)	

* Recommended servings

3.4 Physical activity

Table 4 shows the type and level of physical activity of cancer survivors. On average, the respondents spent 100.94 ± 110.72 minutes daily for moderate to vigorous physical activity. The most time spent was on activities at workplace (72.48 ± 96.95 minutes/day), followed by recreational activities (15.43 ± 30.36 minutes/day) and travel related activities (13.04 ± 22.66 minutes/day), respectively. The mean time spent for sedentary activity by the respondents was 213.25 ± 141.93 minutes daily. More than half of the respondents had moderate (39.4%) and high (37.4%) level of physical activity.

Table 4: Types and level of physical activity (N=457)

Type (minutes/day)	**n (%)**	**Mean ± SD**
Total physical activity		100.94 ± 110.72
Activity at work		72.48 ± 96.95
Travel to and from places		13.04 ± 22.66
Recreational activities		15.43 ± 30.36
Sedentary activity		213.25 ± 141.93
Level of activity		
Low	106 (23.2)	
Moderate	180 (39.4)	
High	171 (37.4)	

3.5 Use of Complementary and Alternative Medicine (CAM)

About 49.7% (N= 227) of cancer patients reported use of CAM as complementary rather than alternative therapy (Table 5). Of the 5 categories of CAM, biologically based therapies were the most commonly used CAM. Vitamins were reported to be commonly used among CAM users (46.7%) followed by other dietary supplements (31.7%) and herbs and herbal products (14.3%). For spiritual activities, most CAM users were practicing prayer and meditation.

Table 5: CAM use among cancer patients (N=457)

Type of CAM	**n (%)**
CAM use	
No	230 (50.3)
Yes	227 (49.7)
Alternative medical systems	
Hemotherapy	3 (1.3)
Biologically based therapies	
Vitamins[a]	106 (46.7)
Minerals[b]	23 (10.1)

Other dietary supplements[c]	72 (31.7)
Herbs and herbal products[d]	39 (14.3)
Healing water	16 (7.0)
Mind-body therapies	
Spiritual activities	84 (37.0)
Yoga	2 (0.9)
Energy therapies	
Qi gong	8 (3.5)
Tai chi	4 (1.8)
Manipulative and body-based therapies	
Message	2 (0.9)
Reflexology	3 (1.3)

[a] Multivitamins, vitamin C, vitamin B-complex, vitamin E, vitamin A, vitamin B1, vitamin D
[b] Calcium, Ferum
[c] Sea cucumber (gamat), spirulina, honey, EPO, fish oil, omega-3, habatussaudah, fiber
[d] Chinese herbs, hearbal products (e.g. Herbal life and CNI), dukong anak (*Phyllanthus niruri*), misai kuching *(Orthosiphon stamineus)*, mas cotek *(Ficus deltoidea)*, ginseng, pegaga *(Hydrocotyle asiatica)*, kacip Fatimah *(Labisia Pumila)*

Table 6 presents the reasons for using CAM and the perceived benefits of CAM use among cancer patients. Most respondents were using CAM to increase their body's ability to perform daily activities (72.7%), to enhance immune functions (60.8%) and to improve physical and emotional well-being (32.6%). Other reasons included CAM was recommended by physicians (9.3%), to prevent cancer recurrence (5.7%) and to relieve symptoms and stress associated with side effects of conventional treatments (5.3%). On the positive effects of CAM, many CAM users perceived that CAM increased their body's ability to performb daily activities (79.7%), improved their physical and emotional well being (63.0%) and reduced side effects of conventional treatment (33.0%). None of the CAM users reported adverse effects of CAM.

Table 6: Reason for using CAM and perceived benefits of CAM

	Reason for using CAM n (%)	**Perceived benefits n(%)**
To increase body's ability to perform daily activities	165 (72.7)	181 (79.7)
To enhance immune function	138 (60.8)	48 (21.1)
To improve physical and emotional well-being	74 (32.6)	143 (63.0)
Recommended by physicians	21 (9.3)	-
To prevent cancer recurrence	13 (5.7)	8 (3.5)
To counteract side effects of conventional treatments	12 (5.3)	75 (33.0)

4 Discussion

4.1 Weight status

The present study showed that more than half of the women were overweight (34.4%) and obese (17.7%) and at an increased risk of metabolic complications due to high waist circumference (≥ 80 cm) (66.1%). A study of Canadian cancer survivors showed similar

findings in that more than 18% were obese and another 34% were overweight regardless of the types of cancer and gender (Courneya et al., 2008). Demark-Wahnefried et al. (2005) reported an approximately 70% of breast and prostate cancer survivors were overweight or obese. A review by Toles et al. (2008) identified that the overweight individual is more prevalent in obesity-related cancers (breast, prostate and colorectal cancer). Several studies have shown that cancer survivors increased their weight after cancer diagnosis (Skeie et al., 2009; Wayne et al., 2004; Irwin et al., 2005). Additional weight gain can occur during or after active cancer treatment and this has been frequently documented in individuals with breast cancer and recently among testicular and gastrointestinal cancer patients (Demark-Wahnefried et al., 2005). This might be due to the cancer treatment in which patients were given steroid to control the side effects of chemotherapy drugs.

4.2 Dietary intake

The present study showed that the average daily energy intake of women was 1,342 kcal, which was lower than the Recommended Nutrient Intakes (RNIs) for Malaysian adult women in all age groups (19-29 years: 2,000 kcal/day; 30-59 years: 2,180 kcal/day; ≥ 60 years: 1,780 kcal/day) (RNI, 2005). The mean energy intake (1,342 kcal) was also slightly lower than 1,447 kcal reported for women in the Malaysian Adults Nutrition Survey (2003 (Mirnalini et al., 2008). However, the daily intake of this present study was similar to the mean intake of 1,369 kcal reported by the Health, Eating, Activity and Lifestyle (HEAL) study (Wayne et al., 2004). The low daily energy intake in the present study and the HEAL study supported the findings that women with breast cancer were more likely to make dietary changes after breast cancer diagnosis.

A majority of the women consumed < 8 servings of grains and cereal products (78.6%), < 3 servings of vegetables (96.1%), < 2 servings of fruits (81.8%) and < 1 serving of milk and dairy products (84.7%). More than half had ≥ 2 servings of meat/fish/poultry/legumes (Table 3). The number of servings for all food groups, except for meat/fish/poultry/legumes was less than the recommended servings. The daily intake of fruits and vegetables among women in the present study is similar to the findings of the Malaysian Adult Nutrition Survey, which reported that about 75.5% of Malaysian women aged 18 to 59 years did not meet the dietary guideline for fruit and vegetable intakes (3 to 5 servings per day) (MOH, 2006). Similarly, another national survey in Malaysia (Malaysia NCD Surveillance I 2005 – 2006) reported that about 73% of Malaysian adults did not meet the recommended intake of fruit and vegetables in 2005 (MOH, 2006). Holmes et al. (1999) showed that women with metastatic cancer with a higher intake of vegetable, carotenoids and fibre (4.2 servings per day) had lower mortality compared to those with a lower intake (≤ 2.1 servings per day). Although there are no studies to date that confirm which compounds in fruits and vegetables are most protective against cancer, cancer patients and survivors are encouraged to consume five or more servings of a variety of coloured fruits and vegetables daily for health benefits.

4.3 Physical activity

Most of the respondents (76.8%) in the present study had moderate and high physical activity level while 21.9% reported low. Emaus et al. (2009) also found that about 70% of women with breast cancer had moderate physical activity while 10% had high physical activity. In addition, Bellizzi et al. (2005) reported that cancer survivors were slightly more active than non-cancer controls. However, another study (Abdul-Samad et al., 2008) among breast cancer survivors reported that majority (74.6%) had low physical activity and only 25.4% had moderate and high physical activity. Cancer survivors are more likely to be making healthier lifestyle changes (Patterson et al., 2003) which could explain why most of the respondents in this study had at least a moderate physical activity.

The cancer survivors in this study spent most time in work-related activity, followed by recreational and travel-related activities. The WHO report on Global Strategy on Diet, Physical Activity and Health (2003) indicated that population in developing countries spent their energy more on work and travel-related activities than recreational activity. Industrialization and modernization that have taken place in South East Asia countries in the last few decades may have an impact on the mode of travelling (Ng et al., 2009) as can be seen in Malaysia where cars and motorcycles ownership are increasing (Tien-Pen et al., 2003). As many (69%) of the women in this study were housewives, they were responsible for moderate-intensity household chores such as sweeping, washing clothes, mopping, gardening and taking care of small children. For those employed as rubber tappers, personnel in food and beverages business (e.g. stall or restaurant), factory workers and cleaners, they were required to be mobile. Golfing, Qi Gong, Tai Chi and yoga were among the recreational activities reported by cancer survivors in this study. Patterson et al. (2003) also found that golfing, Qi Gong, Tai Chi and yoga were routinely practiced by cancer survivors.

4.4 Use of Complementary and Alternative Medicine (CAM) among cancer survivors

The percentage (49.7%) of CAM use among cancer patients in this study is similar to the prevalence reported in other studies. A survey in 14 European countries found that 35.9% cancer patients used some forms of CAM, ranging from 15% to 73% among countries (Molassiotis et al., 2005). The use of CAM among cancer survivors was also reported in Singapore (56%) (Shih et al., 2005), Japan (44.6%) (Hyodo et al., 2005) and Iran (35%) (Montazeri et al., 2006). The finding of this study was similar to that of Mirnalini and Lim (2006) in that the researchers reported about 50% of cancer survivors were using CAM therapies together with conventional treatment.

Previous studies reported that there are various types of CAM therapies commonly used by cancer patients. The therapies include herbal remedies, dietary supplements, homeopathy, spiritual therapies, massage (Cassileth et al., 2001; Richardson et al., 2000; Swisher et al., 2002). Similarly, this study showed that cancer patients were more likely to use dietary supplements such as vitamin and spiritual activities. Mirnalini and Lim (2006) also found that dietary supplements and religious activities were the most common types of CAM therapies used by cancer survivors in Malaysia.

Cancer patients may have their own reasons to use CAM therapies. Harris et al. (2003) and Swisher et al. (2002) reported that most cancer patients use CAM as they believed that CAM can improve their physical and psychosocial well being, increase their hope for survival, reduce pain, relief stress, increase quality of life, boost the immune systems, cope with the side effects of conventional medical treatment and prevent cancer recurrence. The researchers also found that cancer patients were attracted to CAM because of dissatisfaction with some aspects of conventional health care and poor doctor–patient relationship. CAM users perceived that CAM practitioners were better listeners and provide more emotional support than physicians (Boon et al., 2000). In addition, availability of multiple sources of information on CAM may also increase their interests to use CAM (Shen et al., 2002; Molassiotis et al., 2005). In this study, the main reasons for CAM use among cancer patients were to increase body's ability to perform daily activities, enhance immune functions and improve physical and emotional well-being.

We showed that most CAM users reported positive effects of CAM such as CAM increased the body's ability to perform daily activities, improved physical and emotional well being and reduced side effects of conventional treatment. Harris et al. (2003) reported that 71.2% of cancer patients in Wales were satisfied with CAM use and about 43% of cancer patients reported that CAM helped to improve physical and emotional well-being (Swisher et al., 2002). Despite the positive effects of CAM, there are also perceived adverse side effects reported by cancer patients. Molassiotis et al. (2005) showed that reported side effects of taking herbs and minerals included stomachaches, gastric upset and nausea, itching, headaches and migraine, diarrhoea and poor renal status. Burstein et al. (1999) found that the use of CAM was associated with a decreased quality of life among breast cancer patients. However, in this present study, there were no negative effects reported by CAM users.

5 Conclusion

This study provides information on health and nutrition of cancer survivors in Malaysia. As the number of cancer survivors in Malaysia is increasing, this information is important for identifying appropriate health and nutrition interventions to improve cancer survivorship. Strategies are required to address overweight and obesity in this population as the conditions could put cancer survivors at increased risk for cancer recurrence and chronic diseases. Diet, physical activity and other lifestyle factors (e.g. stress, smoking and alcohol consumption) should be the focus of the strategies as these lifestyle factors are linked to development, progression and recurrence of cancer. It is also important that health professionals be knowledgeable to facilitate the adoption of healthful lifestyle behaviours by cancer survivors. There is also a need to provide health professionals and the general public particularly cancer patients with guidelines on safe use of CAM.

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ON BEING A TRADITIONAL HEALER IN THE 21 ST CENTURY

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Abstract

Traditional healers referred to as "bomoh". They are embedded in the Malay culture and locally are recognized in many parts of the world. It is estimated that upwards of 80% of Malaysians consult "bomoh" related to their health at some time in their life. Our qualitative study was designed to find out 1) how they became one, 2) why they become one and 3) how they diagnose and treat cancer patients. Findings from in depth interviews with fourteen healers indicated that most of them were male, average 58 years old and mean experience as healer was 26 years. They became a healer by inner intuition and learning from other healers. The healers diagnosed cancer patients by "scanning" by aura, hand and woods and also with observation. The treatments prescribed utilized recitation of Quranic verses, recitation of Quranic verses and herbs and mixed methods; a combination of herbs, plant roots, incantation of verses of Quran, and acupuncture. Thus, recognition the values of traditional healers may enlighten their positive role in a Malay community.

Keywords: *Traditional healer, Cancer patients/survivor, Bomoh, Malaysia*

1. Introduction

Traditional healer is " a local non- biomedical health practitioner who has inherited, trained in, or created methods that utilize botanical, animal, and mineral products, perhaps symbolic methods and ingredients as well, and is sought out to threat physical, mental and social diseases, and conflicts in his or her community" (McMillen, 2004, p. 891).

Traditional healers are recognized in many parts of the world. The 1978 Alma Ata Declaration on primary health care which acknowledged the potentially positive role of traditional indigenous practitioners (Muller & Steyn, 1999). More recently, policy makers

including the World Health Organization (2002) acknowledged the role traditional practitioners can play in alleviating health conditions especially in the developing world.The growing trend in the West to seek alternative, complementary and traditional healing may be a reaction to Western approaches to health with its focus on psychopathology (Moodley & Oulanova, 2010).

Traditional practices are related to physic and spiritual ways of healing like "Zar Cult" practiced in Ghana, Ethiopia and Sudan. Meanwhile, "Rub Calt" in Senegal, the "Hougans" from Haiti, the Hakims from Pakistan and Vaidya and Shamans from India (Moodley and Sutherland, 2010). An estimated 80% of the world's population obtains their primary health care from traditional healers. They are "unofficial" health workers in developing countries and are frequently consulted and trusted for their therapeutic methods (Asefzadeh & Sameefar, 2001).

In Malaysia, traditional healers are an important component of healthcare and it is estimated that upwards of 80% of Malaysians consult "bomoh" at some time in their life for health-related issues (Razali & Yassin, 2008). They are locally referred to as "bomoh". Traditional healers are usually informal, unrecognized by the government, and do not interact with the rest of the health system (Razali, 2009, p. 14). Mostly in developing country, traditional healers are more accessible, affordable and accepted by community (Razali, 2009). Although, they are sought by patients, including those afflicted by cancer little is known about the Malay traditional healers. How do they become one? Why do they become a healer, and how do they diagnose and heal patients? Guided by these three research questions, the inquiry profiles the Malay traditional healers who treat cancer patients.

2. Methodology

Since our study sought to understand, (1) how traditional healers become one, (2) their motive for healing and (3) how they diagnose and treat disease from the healer perspective, a qualitative research approach was utilized. The primary data collection was through in depth interview (Merriam, 2009; Patton, 2002). The research team comprised of two researchers and a research assistant.

2.1 Data Collection

The in depth interviews were carried out with 13 traditional healers. There were identified through reputation, word of mouth, and by referrals from cancer patients themselves. Three had Internet web pages and several had been featured in local television programs, newspapers, and magazines. We purposefully sought healers who were known for treating cancer among other diseases. We interviewed both male and female healers from the four regions of Peninsular Malaysia. Of the 13 participants, 5 practiced in and around Kuala Lumpur, and eight in rural areas in the Northwest, Southern, and Northeast parts of Peninsular Malaysia.

Eleven interviews were conducted in Bahasa Malaysia, with occasional use of English in some. Since one of the researchers did not speak Bahasa Malaysia, the other researcher briefly paraphrased the respondent's responses during the interview itself. Two interviews were conducted primarily in English. Digital recordings were made of all but one interview. For the participant who refused to be recorded, the research team took notes, compiling the notes together into one record shortly after the interview. Verbatim transcriptions of the interviews formed the data base for analysis. The eleven Bahasa Malaysia transcripts were sent to a professional translation association for translation into English to ensure all data in Bahasa Malaysia were captured adequately.

No	Name*	Age	Gender	Type of practice	Years in practice	Occupation	Sources	Place of practice
1	Wan	80	M	Traditional healer (herbs, honey, white pepper and mangosteen)	40	Farmer/ Full time healer	Word of mouth	House (Rural)
2	Latif	52	M	Quranic healing	12	Cooperate sector/ Part time healer	Website	House (Urban)
3	Kamal	63	M	Quranic healing	24	Ustaz/ Part time healer	Website	Healing centre (Urban)
4	Zul	70	M	Traditional healer (herbs and bone healer)	48	Retired teacher/ Full time	Name card	House (Urban)
5	Salleh	49	M	Traditional healer (egg, flowers, fruits and acupuncture)	11	Retired policeman/ Full time healer	Website	Healing centre (Rural)
6	Ibrahim	64	M	Traditional healer (roots, betel nut)	40	Farmer/ Part time healer	Word of mouth	House (Rural)
7	Shah	43	M	Traditional healer (herbs)	23	Business/ In training	Word of mouth	House (Rural)
8	Ali	67	M	Traditional healer (roots)	43	Small business/ Part time healer	Word of mouth	House (Rural)
9	Ecah	71	F	Traditional healer (gambir, betel nut, lime and sugar)	15	House maker/ Part time healer	Word of mouth	House (Rural)
10	Lena	42	F	Traditional healer (channels a medical doctor)	21	Small business/ Part time healer	Word of mouth	House (Rural)
11	Abas	59	M	Traditional healer (invisible surgery)	20	Retired teacher/ Part time healer	Word of mouth	House (Rural)
12	Aziz	39	M	Traditional healer	10	Business/ Part time healer	Name card	House (Rural)
13	Azian	58	F	Herbalist	34	Lecturer/ Part time healer	Word of mouth	House (Urban)

2.2 Data Analysis

Constant comparative method was used to analyze the data (Merriam, 2009; Corbin & Strauss, 2007; Patton, 2002). This procedure consists of first open coding each interview transcript for relevant data responsive to the study's research questions. These coded segments were then combined through axial coding into themes/categories that are explanatory of the phenomenon. The same process was undertaken with the transcript of the second interview. Themes/categories from the second transcript were compared with the first transcript and one set of themes/ categories were derived from the two interviews. This process continues through subsequent interviews. The final sets of themes/categories were the findings of the study. These findings are in turn supported by quotes from the transcripts. These quotes are the evidence for the findings.

Data analysis is best done concurrently with data collection. We informally debriefed after each interview and informally compared respondents' perspectives as we were collecting data. Concurrent data analysis allows for theoretical sampling to take place (adjusting who we want to interview according to our emerging findings) and allows for checking for internal validity (whether we are representing participants' perspectives and understandings as we check our emerging understanding with participants). We concluded data collection after the 13 interviews as the data were saturated; that is, no new insights were forthcoming in the final interview.

2.*3 Ethical Consideration*

Formal ethical approval was obtained from the university in Malaysia where both researchers were employed. Informed consent was explained to each participant and written consent forms were obtained. A certificate of appreciation (signed by the researchers) for participation in the study was given to each participant along with cancer education materials from the university's Cancer Education and Resource Centre (CaRE).

3. **Finding**

The findings are described according to themes that emerged from evidences that addresses the research questions; 1) Why the traditional healer become one, 2) How they become a healer, and 3) How they diagnose and treat patients. This section first describes the healers.

3.1 Traditional healer profile

Ten of the 13 were men, their age range from 43 to 80 (see Table 1). Their healing practice range from 11 to 48 years**.** Most interviews were held in traditional healers' homes where they saw patients; two were held in the office of the healer's "day" job, and two were held at the healers' clinics. Majority (61.5%) of the healers interviewed are located in the rural area.

Table 1: Profile of Participants

*All the names are pseudonyms

Both With regard to type of practice, two calls themselves Quranic healers, one is an herbalist, and ten identify as "traditional healers" using a variety of spiritual/religious methods, herbs, flowers, fruits, and roots. One of the healers had training in acupuncture which he occasionally incorporates into his treatment. Lena, another traditional healer

channels a medical doctor and Aziz does invisible "surgery" in his practice. Most do healing as part time job. Patients get to know and access them in various ways, both traditional and contemporary. Most did through the traditional words of mouth. A few resort to modern means. For example Zul and Aziz, distribute their personal name card with contact address and number. Latif, Salleh and Kamal can be accessed at their own websites. All can be contacted by phones, a few the mobile versions. Similarly their place of abode varies, from "normal house" to huge "mansion" (by Malaysians standard). Irrespective where they are located, most healers are easily accessible by patients.

3.2 Motives become a traditional healer

Most study respondents reported doing the healing for the altruistic reason; to help those afflicted with a health issue.

3.3 Ways become a traditional healer

According to the traditional healers interviewed, there were various ways on they became a healer's. They can be categorized into with two: (1) intuition, and (2) learning

3.3.1 Intuition

The data reveal that intuition is a common way of becoming a traditional healer. Inner intuition is the act or faculty of knowing or sensing without the use of rational processes; immediate cognition which suggested to be divided. Intuition can be inherited from family member or not inherited

3.3.1.1 Intuition inherited from family members

Three informants reported inherited the way of healing intuitively from their family member. Zul explained, *"It's hereditary. This knowledge comes down naturally, being inherited"*. The family members can be a father, or grandfather. Ecah who's husband also was the healer narrated how her husband inherited the healing skill, "*My husband [the healer] gets it from his grandfather. His grandfather is a healer. He (the grandfather) gets from his family and give it to him (Ecah's husband)*".

3.3.1.2 Intuition not inherited

The study revealed that the intuition may not be inherited. One informant, Latif became one in such way. According to Latif, *"I don't dream and I don't hear voices. It comes to me like a telepathic".* He further added *"I knew it intuitive and it comes at point the time when I do the healing"*.

3.3.2 Learning

Most respondents reported learn to become a healer. For some, they starts learning to become one after they intuitively realized that they are gifted the healing skill. For others, they may not be gifted with the intuition but they learn to become one.

3.3.2.1 Intuition plus learning

A few healers reported became a healer by an intuition coupled with learning more about it. For example, according to Salleh, :

> *"My capability is gifted from God since I was still a little child". During my childhood too I've already got this (gift), but I did not really realize what happened to me. When I was in my secondary school, I felt that I need to deepen (my knowledge) and learn more about Islam and practice it.*

After completing his secondary school Salleh become a policeman. He then realized his special intuitive capability and took advantage of it when performing his duty, for example when catching law breakers:

> *"At a time, when I had to catch an outlaw, I've set in my mind that he (the law breaker Salleh is chasing) can't move. It really happened that the outlaw really cannot move (so he was able to catch him) But at that time I still can't see my capability and the gifted knowledge"*

Upon resigning from his police service, Salleh went back to hometown. He furthered his religious study. A personal infliction and self healing became a turning point for Salleh to become a healer**:**

> *In my hometown I further my full time study at religious school. In 1999, I was struck by an undetected sickness. At one time when I was thinking about myself, then suddenly a woman appear in front of me. She asked me to treat others. She said that if I'm not willing to treat them, I will (continue) to suffer from the sickness. Once I agree with her, the disease seems to disappear. Since then, I started to treat others until right now."*

From then on Salleh's learning journey took him even to Taiwan, China and Indonesia to sharpen and acquire new traditional healing skills.

3.3.2.2 Learn from others healer

The traditional healers studied also learn from other healers. The other healers may be their own family members as in the case of Ibrahim; "*I followed what my grandfather and father taught me. They taught me the method of healing. It's not like the work of a doctor. They used the Quran verses. They didn't make use of the jinn".* For Abas the healing knowledge was learned from other healers who are non family members; *"I learned for about one year and after that I involved in this area".*

3.4 Traditional healer's diagnosis

The healer's interview reported diagnosed a sickness by scanning and observation. The "scanning" can be by (1) aura, (2) hand, or (3) wood.

3.4.1 "Scanning"

3.4.1.1 "Scanning" by aura

A healer may scan a patient through his inner intuition or aura. For example, according to Salleh, *"Sometimes I* **"***scan***"** *and I know that is a cancer. But normally I ask them to confirm first with the hospital".*

3.4.1.2"Scanning" by hands

Three informants reported that they diagnose the patients by "*scanning*" with their hand. We observed Wan, scanned his patient by moving his hand over the patient. In such way, Wan claimed he was able to detect the disease, *"My hand can detect if a patient has cancer"*.

3.4.1.3 "Scanning" by woods

Scanning may be done with the assistance of a tool for example a piece of wood. Shah who was still learning more about healing form his uncle recounted that his uncle are able to detect a sickness with a piece of wood. According to him, when a patient is with breast cancer, the wood would become longer. When the patients have a colon problem and the wood also will become longer.

3.4.2 Observation

A few healers count on their observation skill to diagnose a patient. For example Ibrahim able to diagnose by observing his patient's face, *"I can tell (what disease afflicts the patient). I observe his or her face and there are symptoms like blue eyes and black finger nails"*

3.5 Traditional healer's treatment

Most healers studied reported treating cancer patients in two ways; (1) recitation of Quran verses alone or (2) mixed methods, which include the recitation of Quran plus herbs or / other means.

3.5.1 Only recitation of Quranic verses

A healer interviewed only utilized the holy Quran as healing tool. Latif recited some verses of Quran towards the patients. He also gave specific (for the patient) verses of the Quran to be practice by the patient himself/herself. Latif narrates:

> *I do the healing, she (patient) feels the pain, I didn't touch (her). Usually I just point my hand at the chest, she feels the pain. The patients have to read this Surah Al- Israk 3 times a day in morning. Then, I give another ayat (for her to read)"*

3.5.2 Mixed method

3.5.2.1 Herbs and recitation of Quranic verses

Three healers studied reported using betel plant in combination of Quranic verses. According to Ibrahim narrated how he treat his patient,

> *"I make use of betel nut, betel nut leaves and water. I just blow and spray at the stomach area for 4 days. I ask her to recite certain (Quranic) verses. I recite al-Fatihah. I teach her other verses. Those verses come (to me) by themselves. I also ask the patient to recite the 'ayat Kursi".*

Another healer, Zul who utilized betel nuts in combination of Quranic verses further explains the treatment procedure:

> *"I'll dip the betel nut leave in honey. Then I'll recite some verses. I'll transfer the pain (elsewhere). I'll say "you don't stay there (in the breast), come here (transfer to finger). I'll point towards the breast and then touch my finger. Meaning, the disease don't stay at the person. It should transfer to my finger*".

For Ecah, she treats her patients with incantation of Quranic verses on the betel leaf with gambir (clove), lime paste and a little bit of sugar. Ali recites some incantation (quranic verses) on natural resources like plant roots.

3.5.2.2 Herbs, recitation of Quranic verses and acupuncture

Most informants used mix methods which comprise combination of herbs, plant roots, incantation verses of A-Quran, massage and acupuncture. One was Salleh who described his mixed treatment practiced: *"I used the combination of treatment. I treat them using acupuncture, prayer, verses from Quran and eating some special herbs for cancer. I also use an egg to pull out the disease"*.

3.5.2.3 Recitation of Quran verses and spirits

A healer may draw upon the assistance of genie in trying to heal patients. In the study, Lena has the ability to channel the patients to the genie where the specialist (spirit doctors) prescribes patients with "medicine" appropriate to the patient. Lena explained that these genies are religious man who had passed away but come to her to help Lena in her healing effort.

4. Discussions

4.1 Healer's profile

Majority of traditional healers studied are male implying that the gender is still the bastion of this practice. They were experienced, mostly religious person who are familiar with Islamic healing. The places of treatment were mostly at the healers houses. According to Javaheri (2006) these private places create intimate atmosphere for patients.

4.2 Healing motives

Endowed with the healing gift, most respondents become healers as they believed it is their responsibility to help those in need. The value is in line with their Islamic tenet (Fardu Kifayah).

4.3 Ways becoming a healer

This study shows that most healers get to become healers by intuition. The finding is in line with Javaheri (2006) who stated that some healers had an inner intuition in many ways, for example telepathic and gift from ancestors. They also learn to become one, for example by apprenticeship as practiced by Shah. The role of apprenticeship in becoming a healer is also consistent with Salan and Maretzki (1983) report. They reported that the healer do apprenticeship with older religious teacher, as done by Salleh whom we interviewed. According to Javaheri (2006) and Osman (1972), apprentice was given permission to act as healers at the end of a learning period.

4.4 Diagnosing and treating patients

4.4.1 Diagnosis

Correct diagnosis is essential in healing. Majority of the healers reported have the ability to intuitively scan the patients, mostly with their hand. According to Salan and Maretzki, (1983) healers used the hand to examine patient by touching the forehead, feeling of the pulse, and palpating the diseased part of the body.

4.4.2 Healing practice

Recitation of Quran verses was commonly practiced by the healer studied. It can be done in various ways as also reported by Salan and Maretzki (1983). The practice of also giving a written prayer that the patients should recite or keep as a way for continuous treatment reported by Salan and Maretzki (1983) was also discovered in our study. But the healers recommend patient to only read the recommended Quranic verses, not to keep them. Similarly the practice of combining Quranic verses with herbs etc found in this study is consistent with that of by Salan and Maretzki (1983). The specific may slightly varies. For example Salan and Maretzki (1983) reported the treatment consist of herbs and holy water with the piece of paper with quotation of verses Quran that be placed at the disease part of the body. This is parallel to Ecah's practice of placing betel leaf that have been recited with Quran verses on the diseased part to shrink the cancerous lump. Rasanayagam, (2006) reports that the healer prepared herbal medicine and paper written with Quran verses dip in the tea that patient should drink. The practiced is in line with Zul who used betel nut dipped in the honey to be chewed by cancer patients.

5. Conclusions

The study suggests that a typical Malay healer is male, endowed with a special gift. Most are destined to become one, mainly through inheritance from their family. They continue the family tradition or become the first one in the family to become traditional healer due to their obligation and commitment to help the sick. Such value is consistent with their religious belief and socialization. The healers continue to improve their skill through continues learning and practice. Many healers appear to be practicing modern, 21st century lifestyle, for example in their dressing and way of life, and the use of name cards, mobile and internet to communicate with patients. Nevertheless their healing motive and practice (for example in diagnosis and treatment) remains the same. They are likely to stay with their continuous adaptation in ways to reach client and interest from patients (Mazanah et all, 2011).

6. Implications

Traditional healing is still popular among patients in this 21st century. Recognition of traditional healers and understanding on their healing motive and practice may enlighten their positive role as a complimentary healing choice in the Malay community. However, to date there is no scientific evidence to show they have been successful in curing cancer. Nevertheless they had been accredited for providing spiritual healing and remain to become a complimentary treatment for the Western medicine system. Patients would benefit if the country health system could provide an avenue for the collaborative effort between both Western and traditional healing systems.

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A COMPETENCY PROFILE OF MALAYSIAN CANCER CARE NURSES: FACTORS INFLUENCING COMPETENCY

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Abstract

In the context of cancer care nursing, nurses play a major role in health care teams alongside doctors and therefore they must be knowledgeable and competent in technical skills in serving cancer patients. Previous studies have uncovered many factors related to cancer care nurses' nursing competency, such as self-efficacy, personal values and motivation. In the context of Malaysia, few studies have explored factors related to the development of cancer care nurses' competencies. To address this gap, the purpose of this study was to explore the relationship between self-efficacy, personal values, motivation and competency (defined as personal, interpersonal and technical competency) among cancer care nurses in Malaysia. A survey using purposive sampling technique was used to collect the data. A total of 845 cancer care nurses from public hospitals in Peninsular Malaysia participated in the study. The survey instrument was developed through a combination of extensive literature review, qualitative focus group data and related established instruments. Descriptive statistics, Pearson Product-Moment Correlation and regression analysis were used to analyze the data. The findings revealed positive and significant relationships between self-efficacy and competency ($r = .54$, $p < .01$), personal values and competency ($r = .67$, $p < .01$), and motivation and competency ($r = .52$, $p < .01$). Regression analysis revealed that self efficacy ($\beta = .125$; $p < .000$), personal value ($\beta = .355$; $p < .000$), and motivation ($\beta = .110$; $p < .001$) influence cancer care nurses competency. The most significant predictor towards competency is personal value. This study shows that the factors explain 49% of the competency of cancer care nurses. From the findings, we conclude that self-efficacy, personal values, and motivation significantly related to cancer care nurses' competency. The findings imply the importance of individual attributes namely self-efficacy, personal values, and motivation in developing cancer care nurses competency.

***Keywords**: Oncology nurse, Cancer care nurse, Nursing competency, Factor influencing competency*

1.0 Introduction

Cancer is a worldwide issue and major killer disease in the world. Malaysia is a multi-racial country with a population of 28.3 million. The three main races in the country are the Malays (63.1%), Chinese (24.6%) and Indians (7.3%) (Department of Statistics, Malaysia, 2010). In line with the global situation, "cancer is one of the major health problems in Malaysia. This disease has become increasingly important as a public health concern with the development and progress that has been achieved in this country" (Lim, 2002, p.37). According to National Cancer Registry (NCR), a total of 67,792 new cases were diagnosed between 2003-2005 in Peninsular Malaysia (Zainal Ariffin *et al.*, 2006).

Cancer care nurses are one of the important people in healthcare team member and cancer care phases (Klemp *et al.*, 2011). Oncology nurses are important health care personnel in caring and handling cancer patients. Since nurses are the most essential team in health care; they must be skilled in taking care of cancer patients. According to Quinn (2008), beside the medical oncology, cancer care nurses works are focus on patient, assessment, education, symptom management and supportive care. Mary and Connie (2000) further mention that aassessment; diagnosis, outcome identification, planning, implementation and evaluation are the professional standard of care for oncology practices. Ekedahl & Wengstrom, (2006) defined oncology nurses as a group of professionals that work in various stressful life situations.

Competency is importance components in nursing setting to perform their role. Competency is a set of knowledge, skills, traits, motives and attitudes (Dunn S.V., 2000, Zhang et. al., 2001 and Davis et al., 2008). According to Oncology Nursing Society (2009), nurses have to regularly updating their oncology knowledge and skill to be more competent.

Oncology nurses who are not maintain their competence can affect the cancer patient outcome (Brixey and Mohan, 2010). Although a considerable number of studies related to profiling oncology nurses' competencies have been conducted by Zhang et al., (2001), Khomeiran et al, (2006) & Robabeh et al., (2007), similar research is wanting in non-Western contexts, particularly in developing countries like Malaysia. The inquiry is wanting due to cultural differences related to expectations of care, training and education, professionalism, understanding the needs of patients and other factors that may have an influence to cancer care nurses competency. Thus, the purpose of this study to (i) identify the profile of cancer care nurses in Malaysia, (ii) identify the cancer care nurses competency, (iii) identify the level of cancer care nurses competency, and (iv) determine the factors that influencing cancer care nurses competency.

2.0 Literature Review

Boyatzis (1982) stated that competency is a group of self image, motivation, skill and social role. Spencer & Spencer (1993) defined competence as a broad concept of knowledge, skills, values and actions. They further mentioned that, competency is used to describe required behavior which leads competence.

2.2 Factor influencing competency

According to Khomeiran et al, (2006) & Robabeh et al., (2007), opportunities, environment, personal characteristics, motivation, work experience, and theoretical knowledge are factors that affect competency in nursing setting.

2.2.1 Personal Value

Nursing value gives impact to themselves, society and the interdisciplinary teams (Shih et al., 2008). Nursing is a discipline that rich in values (Rassin, 2008). Nursing should not be just scientific knowledge and technical skills, but a profession founded on specific human values. Central values for nurses were human dignity, caring, humanity, and respect for personal privacy (Itzhaky, Gerber & Dekel, 2004). Personal values can reflect the nurses' attitudes and influence professional lifestyle (Altun, 2000 and Horton, Tschudin, & Forget, 2007). According to Horton, Tschudin, & Forget (2007), nurse has to understand his or her values in order to become a good nurse.

2.2.2 Work Environment

Healthy work environments are contributes to excellent patient care (Ulrich et al., 2007). Besides that, work environment can influence nursing outcome (Tervo et al., 2008, Spence Laschinger, Almost, & Tuer-Hodes, 2003). The nursing practice environment will facilitate and empower professional nursing practice (Lake, 2002).

2.2.3 Self Efficacy

Social cognitive theory provides a useful framework for understanding how determinants of behavior operate together to explain actions (Bandura 1997). Self-efficacy is a self perception of ability to perform competently and effectively in a certain task and setting (Bandura 1982, 1989).

2.2.4 Motivation

Work motivation can influence work healthcare outcome (Toode, Routasalo, & Suominen, 2011). Tripathi and Cervone (2008) noted that achievement motivation differs with individual's working experience. A previous study by Lambrou, Kontodimopoulos & Niakas (2010) shown that motivation was influenced by both financial and non financial incentive. Motivated nurses have reported stronger behavioral, verbal and outcome empowerment than unmotivated nurses (Suominen et al., 2001).

3.0 Methodology

3.1 Design

A quantitative cross-sectional survey was designed in this study to obtain information from the population on the competency of cancer care nurses and factors influencing competency.

3.2 Population and sample

Purposive sampling technique was used to collect the data. In this study, the term cancer care nurses, referred to any nurses which have a working experience in caring for cancer patients. 845 respondents were participated in this study from public hospital in Peninsular Malaysia.

3.3 Data Collection

The questionnaire was distributed to all cancer care nurses through Matron (nurses' supervisor). A brief instruction was given to the Matron regarding the questionnaire. The Matron will distribute the questionnaire to the respondents. The cancer care nurses participated voluntarily and anonymously in this study.

3.4 Instrument

The survey instrument was custom made developed from various resources including literature, qualitative focus group findings and related verified instruments. The questionnaire included item for competency (personal, interpersonal and technical) and factors influencing competency (personal value, motivation, self efficacy and work environment) using a scale ranging from 1 to 5 (strongly disagree to strongly agree). The three components of competency (personal, interpersonal and technical) are derived from findings from focus group discussion. Demographic section in questionnaire was developed by the authors to obtain information related to cancer care nurses' socio demographic data and profile. This questionnaire consisted of five sections, Section A: Demographic information of respondents; Section B: Personal Competency; Section C: Interpersonal Competency; Section D: Personal Competency; Section E: Technical Competency and Section D: Factors influencing competency. Cancer care nurses were given a questionnaire that they have to fill independently. Respondents took about 20 – 30 minute to complete the questionnaire. Prior to conducting the study, the questionnaire was reviewed by a panel of experts from Health College who have a teaching experience in oncology field. The questionnaire was pilot tested on a convenience sample of registered nurses in three selected hospital. Cronbach's alpha coefficients for scales were ranged from 0.770 to 0.892**.**

3.5 Data Analysis

Statistical Package for Social Sciences (SPSS) version 19.0 was used for statistical analysis. Descriptive statistic, Pearson Product-Moment Correlation and Multiple Linear Regression were used to analyze the data.

3.6 Ethical Consideration

Ethics approval to conduct this study was obtained from the Malaysia National Institute of Health and Institute of Health Behavioral Research. All respondents signed written consent form to participate in this study.

4.0 Findings

4.1 Socio Demographic Profile

The total number of respondents in this study was 845 registered nurses from 38 hospitals in Peninsular Malaysia. Table 1 show the demographic characteristics of the respondents. Majority were Female (98.2%) and Malay (94.3%). The respondents' ages ranged between 22 to 60 years with a mean of 34.55 years. Their nursing experience range from 1 to 40 years with a mean of 11.41 years. Their oncology nursing experience range from 1 to 26 years with a mean of 4.93 years. A majority (80.1%) of the respondents had a diploma in nursing and majority were married (77.9%).

4.2 Mean of Competency

Table 2 described mean of competency. The competency includes personal, interpersonal and technical. The highest mean of competency is personal (4.278), followed by interpersonal (4.0998) and technical (4.0145).

4.3 Level of Competency

Table 3 show the level of cancer care nurses competency. Majority respondents are in moderate level of competency which is 66.6%, while 26.5% respondent in high level of competency and 6.9% of respondents in low level of competency.

4.4 Relationship between self efficacy, work environment, personal value, motivation and competency.

The correlation between factors and competency was tested with a *Pearson Product Moment Correlation* analysis. The findings revealed positive, significant relationships between self-efficacy and competency ($r = .54$, $p < .01$), personal values and competency ($r = .67$, $p < .01$), and motivation and competency ($r = .52$, $p < .01$). A multiple linear regression was used in this study to determine predictor that influence cancer care nurse's competency. Regression analysis revealed that self efficacy ($\beta = .125$; $p < .000$), personal value ($\beta = .355$; $p < .000$), and motivation ($\beta = .110$; $p < .001$) influence cancer care nurse competency. The most significant predictor towards cancer care nurses competency is personal value. This study shows that the factors explain 49% of the competency of cancer care nurses.

5.0 Discussion

The purpose of this study to (i) identify the profile of cancer care nurses in Malaysia, (ii) identify the cancer care nurses competency, (iii) identify the level of cancer care nurses competency, and (iv) determine the factors that influencing cancer care nurses competency.

5.1 Profile of cancer care nurses in Malaysia

Majority of cancer care nurses in Malaysia are Malay women. The findings are consistent with Maslach et al. (2001) claim, that nursing area dominated by women. They have diploma level of education in nursing field. Majority respondents in this study have diploma level of education and not have post basic in oncology. Other than that, the nurses are working in different type of ward.

5.2 Cancer care nurses competency

In this study, we identified three components of competency. The components are personal, interpersonal and technical. In terms of competency mean score, personal value is the highest mean (4.2768), followed by interpersonal (4.0998) and technical (4.0145). Personal value includes an empathy, caring and supportive, and cultural/religious sensitivity. Majority cancer care nurses feel empathy with their cancer patient. They try to understand the patient's needs and feelings. Other than that, cancer care nurses also listen to the patients' problem. The cancer care nurses also care and support the patient when they were doing treatment of recovery. Besides that, cancer care nurses were having sensitivity in cultural/religious of cancer patients' belief. The nurses respect their patients' religious belief and sometimes, they accommodate their patients' religious ritual in the ward.

Interpersonal competency includes a communication between cancer care nurses and patients, educating/informing patient, and educating/informing patients' family. Cancer care nurses communicate effectively with their patient and give full attention when a cancer patient communicates with them. Besides that, cancer care nurses also keep smiling, maintain eye contact and use an appropriate voice when talk to the patient. Their patients will feel comfortable if the nurses do that. Cancer care nurses also educate the patients and their family in giving information about cancer treatment, side effects, healthy lifestyle and religious/spiritual practices. For the patients' family, cancer care nurses also educate them how to taking care their family members at home. Cancer care nurses encourage the family member to participate in taking care of the cancer patients at home. Other than that, cancer care nurse also tell the patients' family about the pain management of the cancer patient.

Technical competency in this study is about the drugs administration, referral, palliative care and planning. Generally, all nurses are competent in technical clinical. In this study, beside the other clinical procedure, cancer care nurses are involving in chemotherapy treatment process. The cancer care nurses able to administer chemotherapy according to the procedure/guidelines. Nurses also as a referral for a cancer patient in getting the information

about resource centre, counsellor and cancer support group. Cancer nurses also suggest to the doctor to advice some cancer patient to see the counsellor or support group. Cancer care nurse also able to provide spiritual and emotional support to patient in palliative care.

5.3 Level of cancer care nurses competency

This study shows that majority of cancer care nurses in Malaysia are in moderate level of competency (66.6%). Therefore, they need to increase their competency to fulfil the cancer patients' need. In this study, the nurses are from different setting of ward. So, the need and demands from the patients is different. Majority cancer care nurses in this study do not have specific training in post basic oncology.

5.4 Factors that influencing cancer care nurses competency

The results indicated significant relationship between personal value, self efficacy, work environment, motivation and competency among Malaysian cancer care nurses.

5.4.1 Personal value

A significant moderate positive relationship between personal value and competency in this study was supported by the findings of Altun, (2000) & Horton, and Tschudin, & Forget, (2007). According to them, personal values can reflect the nurses' attitudes and influence professional lifestyle. Horton, Tschudin, & Forget (2007) stated that nurse has to understand their values in order to become a good nurse. Cancer care nurses should have high personal value in order to become a good and competent cancer care nurse. Personal value of nurses can influence their attitude as nurses and also influence their professional career

5.4.2 Work Environment

There are moderate significant relationship between work environment and competency. In this study, work environment have a significant impact to the cancer care nurses competency. This finding is consistent with Tervo et al., (2008) that work environment can influence nursing outcome. Relationship between nurse supervisor and doctor is related to good work environment. They have to work each other to make a conducive environment among them.

5.4.3 Motivation

Motivation will influence nurses' behavior and can encourage them to work effectively in order to help cancer patient better cure. In consistent with Huber (2006), motivation is the force of direct behavior. There are intrinsic and extrinsic factor in motivation. Salary, promotion and recognition are component of extrinsic motivation in this study. All the extrinsic are important but the cancer care nurses in this study are more motivated based on their intrinsic motivation. They become motivated towards their job because they really need to help the cancer patient and enjoy doing their work. This is supported by Suominen et al., (2001) that motivated nurses have reported stronger behavioral, verbal and outcome empowerment than unmotivated nurses.

5.4.4 Self efficacy

Self efficacy will motivate nurses to provide an excellent care to the cancer patient. Self-efficacy is a self perception of ability to perform competently and effectively in a certain task and setting (Bandura 1982, 1989). In this study, cancer care nurses' self efficacy was derived them to high responsibility to take care of the cancer patient.

The most significant predictor towards competency is personal value. This study show that the factors explain 49% about the competency of cancer care nurses. Cancer care nurses believe that help and take care of cancer patient is one of the human values.

6.0 Conclusion

Competency is important in nursing setting especially in patient care. Competent nurses can contribute to cancer patient recovery. Personal, interpersonal and technical is a component of competency in this study. From the findings, we conclude that self efficacy, personal value and motivation are significantly related to cancer care nurses' competency.

7.0 Implication and Recommendation

Cancer care nurses need to be competent in health care setting. The findings imply that cancer care nurses in Malaysia must have all the factors to deal effectively with their work as well as cancer patients. For the policy maker, we must put all the aspects of competency that have been identified in the nurses' curriculum. Other than that, we have to develop a special designation or position for cancer care nurses in order to value their speciality in oncology setting. To achieve the competency of the oncology nurses they need opportunities to acquire and practice the needed skill. Cancer care nurses should attend the soft skill and training program related to their job scopes in order to increase their competency level. We have to recruit a cancer care nurses with high motivation and personal value. A cancer care nurses themselves have to develop their own personal value and motivation. Thus, it will contribute to their proficiency and will derive them to work effectively.

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Appendix 1

Table 1: Demographic Data of Respondents (N=845)

Characteristics	*N* (%)	*Mean*	*SD*
Gender			
Female	830 (98.2)		
Male	15 (1.8)		
Age (years)		34.55	10.085
Educational Level			
SPM/STPM	140 (16.6)		
Diploma	677 (80.1)		
Degree	21 (2.5)		
Master	3 (0.4)		
Other	4 (0.5)		
Marital Status			
Married	658 (77.9)		
Single	179 (21.2)		
Divorced	8 (0.9)		
Ethnic			

Malay	797 (94.3)		
Chinese	10 (1.2)		
Indian	29 (3.4)		
Others	9 (1.1)		
Nursing Experiences		11.41	9.291
Oncology Nursing Experience		4.93	4.054

Table 2: Mean of competency

	Mean	Std Deviation
Personal	4.2768	0.38115
Interpersonal	4.0998	0.36637
Technical	4.0145	0.44578
Total	845	100.0

Table 3: Level of Competency

	Frequency	Percentage
Low	58	6.9
Moderate	563	66.6
High	224	26.5
Total	845	100.0

Table 3: Mean Score factors

	Mean	Std. Deviation
Personal Value	4.2297	.39421
Self Efficacy	4.2209	.48447
Motivation	4.1456	.39803
Work Environment	3.9107	.38520

Table 4: Correlation

Variables	*r*	*p*
Personal Value	.663	.000
Work Environment	.607	.000
Self Efficacy	.536	.000
Motivation	.524	.000

***Correlation is significant at the 0.01 level (2-tailed)*

Table 6: Regression Analysis

	Competency		
	Beta	t	P
Motivation	.110	3.363	.001
Work Environment	.232	6.422	.000
Personal Value	.347	8.356	.000
Self Efficacy	.123	3.674	.000

R = 0.494 F = 205.320 Adjusted R Square = 0.492

AVAILABILITY OF UNIVERSAL DESIGN FOR DISABLED EMPLOYEES IN MALAYSIA

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Abstract

The Persons with Disability Act 2008 was gazetted and implemented in 2008. It focused on the rights rather than welfare of disabled people. It is also the purpose of the act to allow equal rights and full participation of the disabled in various aspects related to registration, protection, rehabilitation, development and well-being. As part of the evaluation towards the act, this paper examined and reported the responses of 165 disabled employees on the availability and their accessibility to facilities provided for disabled employees. Using data obtained from a performed survey, results showed that availability and accessibility to public transportation, reachable height of lift control buttons for wheeled-chaired employees, ramps in-between levels and accommodations near to work places ranked lower compared to other facilities such as toilets and parking spaces for the disabled. The contribution of this study is valuable because it helped to identify the inadequacies of current facilities for disabled employees and highlighted the areas which need further improvement.

Keywords*: Disabled employees, Accessibility, Universal design, Physical barriers, Malaysia*

Introduction

The Persons with Disability Act 2008 was passed in the Malaysian Parliament on December 24th 2007. The act which was gazetted on January 24th 2008 and implemented on July 7th 2008 focused on the rights rather than welfare of disabled people. It is also the purpose of the Act to allow equal rights and full participation of the disabled in various aspects related to registration, protection, rehabilitation, development and well-being. Part IV (Chapter 1) of the Persons with Disability Act 2008 proclaimed the aspect of accessibility in promoting and developing the quality of life and well-being of persons with disabilities. It included the access to public facilities, amenities and services and buildings, access to public transport facilities, access to education, access to employment, access to information, communication and technology, access to cultural life and access to recreation, leisure and sport. Its applicability was intended for the benefits of disabled individuals in Malaysia. In 2006, the Department of Statistics Malaysia reported a total of 1.3-2.6 millions of disabled persons from its total population of 26.64 million. However, it was reported that until November 2009 approximately 277,509 disabled people registered with the Department of Social Welfare (Department of Social Welfare, 2009). Table 1 detailed out the number of registered disabled persons based on 6 categories of disabilities including visual disability, hearing disability, physical disability, learning disability, cerebral palsy, and others. Those registered with learning disabilities ranked as the highest percentage, followed by the ones with physical disabilities, hearing disability and visual disability. The rest with cerebral palsy and others were of smaller percentage.

The National Council for Persons with Disabilities was established as the agency in charged to implement the objectives of the Act. The Committee of Universal Design, Committee of Transportation, and Committee of Quality Life Care were among the arms of committees responsible to monitor, coordinate, evaluate, make recommendations and oversee the implementation of the national policy and national plan of action related to persons with disabilities. A disclaimer statement on protection against suit and legal proceedings was interestingly identified in Part V of the Act, printed as follows:

> 'No action, suit, prosecution or other proceedings shall lie or be brought, instituted or maintained in any court against—
> *(a)* the Government;
> *(b)* the Minister;
> *(c)* the Council;
> *(d)* any member of the Council or any member of a committee; or
> *(e)* any other person lawfully acting on behalf of the Council,
> in respect of any act, neglect or default done or committed by him or it in good faith or any omission omitted by him or it in good faith in such capacity.'

Table 1 Number and Percentage of People with Disabilities Registered with Department of Welfare Malaysia, May 2009

Type of Disability	Frequency	Percentage (%)
Visual Disability	23,378	9.20
Hearing Disability	35,368	13.70
Physical Disability	86,485	33.40
Learning Disability	100,180	38.70
Cerebral Palsy	3,250	1.30
Others	9,897	3.80
Total	258,918	100.00

Source: Department of Welfare Malaysia (2009)

There was also The Malaysian Standard Code of Practice for Access for Disabled Persons to Public Buildings (MS1184) introduced in 1991 and Code of Practice for Access for Disabled People Outside Buildings introduced in 1993. The former was introduced to make it mandatory for all buildings to have facilities and amenities, which are accessible and usable, for disabled people. The latter was introduced as a guideline to monitor future plans on building constructions. Despite the establishment of the Act, relative bodies and codes to improve the quality of life of persons with disabilities, issue on ineffective implementation of the national policy remains serious. It is evident from various newspaper reports on societal failure to provide a free-barrier and accessible environment for disabled individuals in Malaysia. Among the most recent one was the decision by an airline company in Malaysia of not using the aero bridge for their near-completed airport (Utusan Malaysia Online, 2011). The aero bridge would actually be very accommodative for the disabled, pregnant women, elders and children. The emergence of more NGOs in Malaysia to vocalize the rights of the disabled made such issues even more visible. Thus, a study investigating the current

availability of universal design and accessibility of persons with disabilities to their environment would be beneficial to identify the inadequacies of current facilities for disabled employees and highlighted the areas which need further improvement for their good quality of life.

Literature Review

Universal Design

In 1973, the terms such as barrier-free design, trans-generational design, design for the broader average and design for the 'non-averages' was coined at the Polytechnic of Central London. Weisman (1978) described it as part of the politics of inclusion and wholeness, replacing the politics of tolerance and competing interests. It is a paradigm shift that celebrates human diversity.

Peloquin (1994) also suggested that universal design is a concept which emerged from 'barrier-free' and 'assistive technology'. It is a design applicable to environment, product and communication, characterized with the following basic principles: (1) equitable use; (2) flexibility in use; (3) simple and intuitive; (4) perceptible information; (5) tolerance for error; (6) low physical effort; and (7) size and space for approach and use. In other words, the existence of physical work environment built with universal design features should allow wide opportunities for disabled employees to engage in unlimited movement and activities for effective and efficient job performance. However, in a much global context, universal design is not only meant for people with disabilities but also among others for parents with young children, pregnant women, elders, people with heavy luggage, people with hidden impairments (diabetes, epilepsy), parents and carers, as well as people with temporary ailments. In the context of the Persons with Disability Act 2008, universal design means the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design and shall include assistive devices for particular groups of persons with disabilities where this is needed.

An Overview of Universal Design and Accessibility Studies for the Disabled in Malaysia

The number of studies and researches conducted on universal design and accessibility for disabled persons in Malaysia were found to be very limited. Reported below were among a few of the studies which aimed to report the accessibility level of buildings and information communication technologies facilities for the disabled. A review of those studies suggested the needs for rigorous efforts to inculcate values, perspectives and culture of inclusion within Malaysia society.

Abdul Rahim (2001) studied accessibility in various types of building in the Klang Valley. One of the findings was non-friendly pedestrian walk along Jalan Raja Laut for the disabled due to drops and inappropriate slopes on ramps. Another of his study related to accessibility in hospital buildings in 2007 reported no specific parking areas for the disabled, but good accessibility for wheel-chaired individuals to various hospital areas such as the lobby area, registration counters, doctors' rooms, cafeteria and toilets. Abdul Rahim (2008) also further reported some difficulties in the access to toilet facilities for wheelchair users of a high rise building constructed in the 1980s, which led to a renovation of the toilets by the management.

Rasimah Aripin and Zamalia Mahmud (2004) conducted a study on facilities and accessibilities for persons with disabilities in institutions of higher learning in five public and one private universities in Malaysia, as well as two universities in Singapore. The main

objective of their study was to assess the level of accessibility of these campuses based on the provisions outlined in the Code of Practice for Access for Disabled People to Public Buildings (Malaysian Standard, *SIRIM* Berhad, 1991). It found that one of the oldest universities in Malaysia were better equipped with facilities for the disabled compared to some newer universities due to its commitment and empathy towards the rights and development of the particular group.

Abdul Rahim and Nur Amirah Abd. Samad (2010) conducted a more recent study on accessibility to built environment involving hotels and resorts in Malaysia to assess the extent to which the premises were accessible to elderly and disabled tourists. Using the approach of access audit involving various equipments and procedures such as measuring tape, wheelchairs, gradient modelling and leveling, sketchbook, cameras, expert groups, and checklist, they found that the hotels were not fully accessible for disabled individuals particularly those on wheelchairs. Since the hotels were constructed earlier before the establishment of the Persons with Disability Act and active movements of disability NGOs in Malaysia, improvements for accessible parking space, redesigned ramp featured with railing on both sides and tactile warning surface at the edge of steps and beginning of the ramp, accessible toilets, tactile warning surface and Braille for individuals with impaired visions were filed.

Another study related to information communication technology (ICT) facilities were conducted by Maslina Abdul Aziz, Wan Abdul Rahim Wan Mohd Isa and Nurul Syahirah Mohd Fadzir (2011). Their study examined the accessibility of 100 websites chosen from four Malaysia portals for disabled users in Malaysia. They were the Malaysian Information Network on Disabilities (MIND), Malaysian Christian Association for Relief (Malaysian CARE), Kiwanis Disability Information and Support Centre (KDISC) and Hati. The study was in line with the increasing concern to safeguard the needs of the disabled in dealing with ICT. With reference to the WCAG 1.0 Guideline, the study reported 551 high critical errors on tables and borders in five federal websites, 196 high critical errors on table width in five federal websites and 749 high critical errors on fonts in five federal websites. Hence, the researchers made suggestions for web developers to prioritize more on accessibility of the disabled users in the process of their websites development.

Methodology

Sample

A total of 116 (70.3%) male and 49 (29.7%) female employed persons with disabilities participated in the survey. Average age of the respondents was 32.16 (S.D = 7.25), with the youngest aged 21 years old and the oldest 52 years old. Most of them were with physical disabilities (114) while quite a number were with vision impairement (45). Only two were with learning disabilities and one with hearing impairement. Since most of the respondents only became disabled during their adulthood, majority (82.3%) received mainstream education during primary years of schooling. Only a small number of them (17.7%) attended special education schools. A very slight decrease in receiving mainstream education (81.1%) and increased enrollment in special education (18.9%) during high schools indicated that a few of them were disabled just before entering high schools. In terms of the highest level of education, only 7.9% and 9.1% hold masters and bachelor degrees. Approximately 7.9% were diploma holders and 21.2% were certified with various vocational trainings. Majority of them only managed to complete high schools (47.3%). The rest (6.6%) were school

dropouts. Most of the respondents were fully employed (92.7%) and others (7.3%) worked part-time.

Instrument and Data Collection

Respondents were asked to complete their questionnaires composed of six sections. Two sections were developed to capture the sample's demographic profile and their responses on the availability of suitable facilities for disabled employees in their work places. The questions asked on demographic characteristics of the respondents were ages, gender, types of disability, stream of education, level of education, and their status of employment.

Another section listed the facilities provided in work places such as spacious corridors for wheeled-chaired employees, built ramps in between levels with suitable specifications and gradient, height of lift's control buttons reachable by wheel-chaired employees, information and communication technology facilities for the disabled, toilets for the disabled, and other supporting facilities such as accessibility to public transportation and reasonable accommodations near to the work places of disabled employees. More accurately, information and communication technology for the disabled included facilities such as accessible multimedia, written, audio, plain-language, human-reader and augmentative and alternative modes, means and formats of communication, Reasonable accommodation referred to necessary and appropriate modifications and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise of the quality of life and wellbeing on an equal basis with persons without disabilities.

Results and Discussion

More than half of the disabled employees (96%) strongly disagreed that ramps with appropriate gradient were provided at their workplaces. Another 30.3% and 11.5% of them agreed and quite agreed on the availability of ramps with suitable gradient at their workplaces. This particular result thus added new evidence to previous studies in Malaysia (Rasimah Aripin & Zamalia Mahmud, 2004; Abdul Rahim & Nur Amirah Abd. Samad, 2010) marked warranted needs to build or renovate ramps with more accurate specifications in Malaysia buildings.

In terms of suitable height of lift control buttons for wheel-chaired employees, 62.4% of the respondents strongly disagreed on the availability of such facility. Another 30.3% agreed and only 7.3% quite agreed on it. Nevertheless, more than half of them (58.8%) agreed that their workplaces were featured with spacious corridor for comfortable movement of wheeled-chaired employees. Only 26.7% disagreed and 14.5% quite agreed on it. The respondents' reactions to the availability of suitable parking spaces at their workplaces were almost similar, where 49.7% and 42.4% of them disagreed and agreed on it. Only 7.9% of them quite agreed on it.

Meanwhile, 37.6%, 15.8% and 46.7% of the disabled employees disagreed, quite agreed, and agreed on the availability of suitable toilets for the disabled. In terms of the availability and accessibility to information communication technology facilities at their workplaces, 46.7% of the respondents disagreed on the statement. However, almost similar percentage (40.6%) of the respondents agreed on the availability and their accessibility to such facility. A smaller percentage (12.7%) quite agreed with the statement. With regards to the availability and their accessibility to suitable public transportation, 58.8% of the respondents disagreed. Only 24.8% and 16.4% reported that they agreed and quite agreed with the statement. More than

half of the disabled employees (56.4%) disagreed that their employers managed to provide suitable accommodation which are near to their workplaces. Only 30.9% and 12.1% agreed and quite agreed that they were facilitated with such accommodation.

Figure 1 illustrated the mean scores of the disabled employees' responses towards the availability of suitable facilities at their workplaces. The availability and accessibility to public transportation to get them to their work places ranked the lowest (m=2.66, s.d=0.852). It was then followed by suitable height of lift control buttons for wheel-chaired employees (m=2.68, s.d=0.911), ramps (m=2.72, s.d=0.901) and suitable accommodations near their work places (m=2.76, s.d=0.918). The mean scores ranked higher for facilities such as parking spaces for the disabled (m=2.93, s.d=0.960), availability and accessibility to information and communication technologies for disabled (m=2.95, s.d=0.955), toilets for disabled (m=3.09, s.d=0.916) and spacious corridors at work places for disabled employees (m=3.32, s.d=0.882).

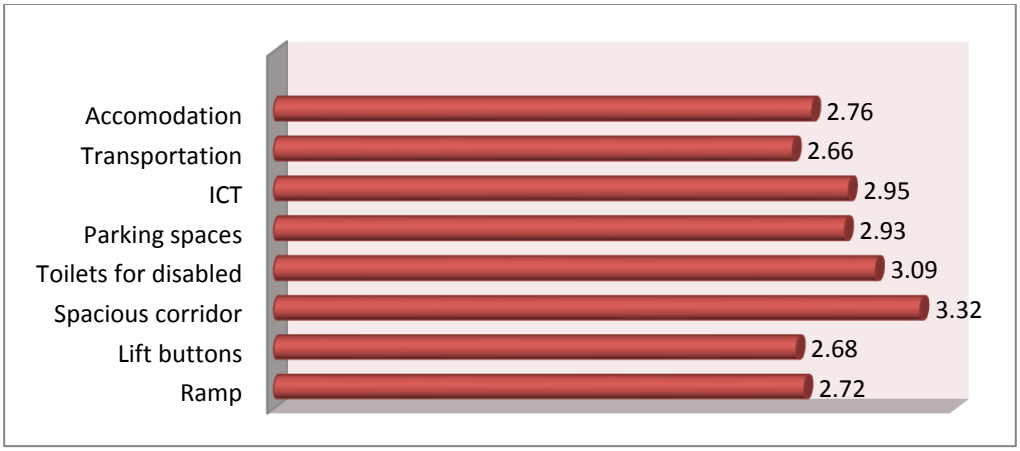

Figure 1 Availability of Facilities for Disabled Employees

In short, the results indicated that continuous efforts to ensure accessible environment for the disabled individuals are necessary so that they could enjoy a more comfortable and successful life.

Conclusions and Recommendations

The findings generated from this study suggested crucial needs to educate and enhance the awareness on equal rights of accessibility among Malaysian citizens. The lack of awareness, knowledge, information and right attitude on such issue could be a serious impediment for further actions to create a barrier-free environment for all. The challenge of attitudinal barrier should first be dealt with, as it critically influences efforts to eliminate other design barriers. Hence, pre-professional education could be a way to instill such thought, attitude and awareness among future and current design professionals.

It is also high time to reevaluate and introduce more effective policy instruments and legislations to strengthen the enforcement of the national policy and act for people with disabilities in Malaysia. Legal controls in other developing countries to promote equal rights of accessibility and prohibit discrimination in providing reasonable means of access to premises for the disabled, such as the Disability Discrimination Ordinance and the code for

Barrier Free Access Design in Hong Kong enacted in 1995, are among the useful sources of reference (Buildings Department, 1997).

Considerations for granting tenders for new premise construction should seriously emphasized on universal design features as one of the selection criteria. Universal design is not only a design. It is in fact the reflection of values which lie within a society. The concerns and values of a society towards equal rights of all human groups with different kinds of abilities and ages to access every opportunities, products, and communications within their environment lie in the design planned and constructed by the architects, engineers, graphic, interior and product designers of that particular society. In a longer term, commitment of all specialized parties in the design community to promote equality of human rights promises a good quality of life, and a more prosperous and harmonious society, as the sense of respect is materialized.

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SELF – REGULATORY FRAMEWORK OF MEDIA IN MALAYSIA: PERSPECTIVE OF CONTENT FORUM MEMBERS AND NON-MEMBERS OF CONTENT FORUM

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Abstract

Calls for self-regulation of online and broadcast media have recently been paid attention by media and telecommunication organizations in Malaysia. The purpose of this paper is to highlight a few central themes such as the mechanism, concept and implementation of self-regulations of Malaysian media organizations and environment, the issues, challenges, strength and weaknesses of self-regulations practices in local media content, the efficiency of self-regulations mechanism and practices in local media environment, and strategies to improve self-regulations mechanism framework for local media regulation practices. This study was conducted by using qualitative interview with 15 managers of members of Content Forum and 13 managers of non-members of Content Forum. Content Forum members are media industry practitioners who grouped themselves under the provision of the Malaysia Communication and Multimedia Act (1998). The Content Forum has developed The Content Code to be adopted by Content Forum Members. The qualitative approach allowed important insight to be gained from different angle and viewpoints. Based on the initial findings, a number of regulatory options are suggested ranging from various framework of full control (regulations, laws and acts) to self-regulations. However, most of the informants are in favour of the self-regulatory framework and suggested that the Content Code of Content Forum is in need of an improvement especially in terms of the language used. Furthermore, few others suggested that the Content Code is used only as a guideline for local industry to fully practice the self-regulatory framework. Hence, full cooperation of various government organizations and non-government organizations are needed in order for the best practices to be materialized.

Keywords: *Media Self-Regulatory Framework, Content Forum, Content Code, Media Regulation*

Introduction

Since Multimedia Super Corridor (MSC) was launched in 1995, Malaysian has moved forward and be part of competitive world. With the help of Information Communication Technology (ICT), Malaysian landscapes continuously change including media business sectors. This new era causes different challenges such as the crisis in the new regulatory approach, intellectual property, market power, and content power.

National Communication and Multimedia Policy was introduced along with MSC projects. The purpose is to encourage the industry of self-regulatory mechanism as guidelines for industry behavior and at the same time in line with government policy objectives. It involves industry ownership and involvement in regulation but within a framework of clear

guidelines and objectives of the government regulations (Shafie, 2000). It is intended that the media industry bodies recognized by the regulatory authority have implemented the industry voluntary codes of practice regarding various matters related to the subject of regulations.

However, with the emerging of cyber space, multimedia and online players (internet access providers, search engines, web host or content aggregators) there are difficulties to uphold media regulations and policies. They do not have full control over the content which passes through their servers or websites According to Madieha (2003), it has to be acknowledged that the rigid system of censorship as practised in the case of broadcasting, printing press and publication is not suitable in the cyber-world.

Communication and Multimedia Content Forum (CMCF) is the responsible body in supporting self regulatory. CMCF consists of the main key players in ICT and communication industries that worked together to uphold government policies.

This study will identify to what extend the self regulatory mechanism for the local media players would benefit the industry and the growth of future media technologies in this country. Besides, it will also investigate the key issues and problems faced by Malaysia media in respond to the winds of change through media convergence technology policies and legislation.

In addition, the finding from the study will shed information on the relevance and usefulness of local legislation and policies to the local media practitioners and the industry, how the media and the public in turn respond and interact with the implementation of Malaysian media legislations and the policies, and create a framework for the improvement of the local media "Self- regulation" mechanism and practices.

Background of Study

The term "self-regulation" means that the industry of profession rather than the government is doing the regulation (Campbell, 1999). Thus the term "self regulation" would be best reflect to the ways media organizations perform regulatory practices by developing a code of practice but the government may mandate that an industry adopt and enforce a code of self regulation and even monitor or guide them to impose those regulation (Ayres & Braithwaite, 1992).

Ten years of milestone (2001-2010) in self regulation has proven the effort of the Communication and Multimedia Content Forum of Malaysia (CMCF) to uphold government policies. CMCF was established in February 2001 under a clause in the Communications and Multimedia Act 1998 (CMA '98) to govern content and address content related issues. Malaysian Communications and Multimedia Commission (MCMC) is responsible in designated this forum on 29 March 2001. The CMCF is made up of six 'Ordinary' member categories, namely - Advertisers, Audio Text Hosting Service Providers, Broadcasters, Civic Groups, Content Creators/Distributors and Internet Access Service Providers.

CMCF was established with several objectives. The objectives are:

1. To establish Malaysia as a major global center and hub for communications and multimedia information and content services

2. To promote the national policy objectives
3. To enable a balanced representation of the relevant sectors of the industry and society to ensure that the Content Code developed reflects the views of the community at large
4. To develop, prepare and adopt a Content Code to set out guidelines which may include model procedures for classifying and dealing with indecent or offensive content disseminated by way of networked medium and from time to time amend, develop, modify, review and update the Code
5. To provide an avenue and channel for complaints in relation to content
6. To administer sanctions for breaches of the Content Code

With the introduction of this forum, it is very helpful in facilitating self-regulation of the industry. CMCF is responsible for the preparation of a Content Code, or codes as the need may arise. The Content Code demonstrates a commitment toward self-regulation. The objective of the Code is to encourage development of the communications and multimedia industry, while protecting the end user. Content as defined in Section 6 of the CMA '98 -is sound, text, still picture, moving picture, audio-visual or tactile representation, which can be created, manipulated, stored, retrieved or communicated.

This Content Code was drafted with sets guidelines for good practice and standards of content disseminated for public consumption by service providers in the communications and multimedia industry in Malaysia. This comprehensive Code, seeks to identify what is regarded as offensive and objectionable while spelling out the obligations of content providers within the context of social values in this country. For instance, Section 211 of the CMA '98 states that no Content Applications Service provider shall provide Content, which is indecent, obscene, false, menacing, or offensive in character with intent to annoy, abuse or harass any person. If the public, found some content is inappropriate or unsuitable for Malaysian situation, they can lodge a report to the Complaint Bureau under CMCF.

The CMCF houses a Complaints Bureau that is empowered to consider and deal with complaints relating to content as provided for in the Content Code. Besides; it also investigates any content which is considered to be in breach of the Content Code without being complaint. The Complaints Bureau comprises an appointed Chairman and six members of the Forum, one each representing the six affiliations. This bureau has similar set up like the media industry in Australia. With the amendment of the Broadcasting Act, the government has set up a Complaints Bureau under the aegis of the Australian Broadcasting Authority (ABA) that determines complaints on prohibited content. (Madieha, 2003)

Apart of the content sensitivity, the issue regarding freedom of speech always attracts a lot of interest. It is a desirable objective. Not every individual or person expresses himself or makes statements entirely and merely to cause despair or harm to others. In many cases statements are made with a desire and intention to serve the general and wider interest and welfare of the community and the country (Bhag Singh, 2008). Therefore this research will highlight how far the implementation of content code in communication and multimedia industry in several perspectives.

Methodology

This section will describe the research design, population and sampling, data collection method, instrument and data analysis.

Research Design

This study utilized qualitative research method. The qualitative method is used to clarify the knowledge of members of Content Forum and non-members of Content Forum regarding with the Content Code.

Research Instrument

The interview questions for members of Content Code consists of seven (7) key themes which are (i) the meaning and understanding of self-regulatory framework, (ii) mechanism used to implement Content Code, (iii) enforcement and monitoring mechanism of Content Code, (iv) issues and complaints on Content Forum/Content Code, (v) evaluation on Content Code, (vi) advantages and disadvantages of Content Code, and (vii) suggestions to improve the Content Code.

While for non-members of Content Code consists of eight (8) key themes which are (i) the understanding of self-regulatory framework and the awareness of the function of Content Code/Content Forum, (ii) regulatory and monitoring mechanism used in the organization, (iii) suitable mechanism used for media regulations (Self-regulation, Regulation, and De-regulation), (iv) difficulties faced in the organization (media related issues), (v) suggestions to improve the efficiency of media regulations mechanism, (evaluation on the effectiveness of existing regulatory mechanism, (vii) advantages and disadvantages of existing regulatory mechanism, and (viii) suggestions to improve the existing regulatory mechanism.

Location and Sample of the Study

The study was conducted in several media and telecommunication organizations around Klang Valley areas (Kuala Lumpur and surrounding area). The respondents of the study is further breakdown into three categories which are (i) Print media, (ii) electronic and new media, and (iii) telecommunication.

For members of Content Forum, total of 12 members were involved as informants while for non-members, 13 organizations have agreed to become the informant of the study. Table 1 shows the breakdown of informants according to types of organization.

Table 1: Distribution of Informants for In-Depth Interview

Status	Types of Organization			Total
	Print Media	Electronic and New Media	Telco	
Member	-	9	3	**12**
Non Member	4	7	2	**13**

Data Analysis

Qualitative data of this study was analyzed using the thematic approach. Information from the interview were transferred into the computer and transcribe verbatim based on the recording. The next step was categorizing the data into few key themes and analyzed it according to the theme.

Result

Members of Content Forum

This section presents the results gathered from the in-depth interviews with 12 members of Content Forum registered as media and telecommunications organizations. There are two groups of informants participated in this study: electronic and new media (9 companies) and telecommunications organizations (3 companies). Seven key themes are highlighted regarding the self-regulatory framework and the scenario in the Malaysian media industry: (1) the meaning and the understanding of self-regulatory framework; (2) the mechanism used to implement Content Code; (3) enforcement and monitoring mechanism of Content Code; (4) issues and complaints on Content Forum/Content Code; (5) evaluation on Content Code; (6) advantages and disadvantages of Content Code; and finally, (7) suggestions to improve the Content Code.

Key Theme 1: The Meaning and Understanding of Self-regulatory Framework

More than half of the members interpreted and understood that self-regulation basically is about the understanding of content code in setting out their own policy in accordance to the organizations' requirements as well as the national agenda. The members also believe that self-regulation is about applying and implementing what is right and what is wrong regarding media laws and regulations as well as ethical issues. The affirmation can be seen in the quotation of one informant as follows:

> "Self-regulation means (that), we as the industry eventually, understanding the frame (as) to set our own policy to be in accordance with the national objectives. I don't think we are unconsciously (in a dire state). We are doing self-regulation. We eventually create our own product as the media company (and) as the content company. …we are unconsciously followed the self regulation".

On the other hand, some members understood that self-regulation is regarded as abiding by strict guidelines and codes set by the commission or the authority. This matter can be seen in the quotation of one particular informant as follows:

> "Self-regulation (can be defined as) guidelines of content control based on content codes set by the commission".

Key Theme 2: The Mechanism Used to Implement Content Code

Majority of the members believe that they use suitable mechanism to communicate messages about Content Code to their staff through staff training (including the compliance training, internal training, technical training, in-depth training and journalism training), regular briefing, content code distribution, seminar and workshops. The appropriate quote can be extracted from one informant as follows:

> "Our staffs are required to attend a seminar when we invite someone from the content forum (CMCF) to deliver a talk. So whatever cautions highlighted by the staff, we actually impose that. We actually do that. I think it was last year (that) we organized (the seminar) and all our new staffs are told (to attend). They are required (to attend and) in fact they need to."

While few others affirm that the suitable mechanism is through close collaboration with Malaysian Communications & Multimedia Commission (MCMC) and Malaysian Censorship Board (LPF) as well as other related agencies. The outcome can be extorted from a particular informant who concluded:

> "After the training, the LPF officers (will) work with us. We let the LPF officers stay together with us (and checked whatever necessary). (There are) two officers for one channel. So the station (now) has two LPF personnel."

However, only one informant believes that the distribution of actual copy of Communications & Multimedia Act 1998 (CMA 98) is the suitable mechanism used to help implement the Content Code.

Key Theme 3: Enforcement and Monitoring Mechanism of Content Code

The outcome of the findings concluded that two third of the members consider using guidelines and Content Code itself as the appropriate enforcement and monitoring mechanism of Content Code. The appropriate answer can be quoted from one informant:

> "(We) follow the CMCF's content code because it's actually about the license. So, these (matter will go) through (by) referring to the guidelines (provided)."

While another few of the members think related laws and regulations, censorship, licenses, policies, evaluations, feedback and edited content (programs, articles, or documents) are the suitable methods used to enforce and monitor the Content Code implementation. However, two informants or members believe that complaint is the fitting option to enforce and monitor the Content Code. The suitable quote can be taken from one particular informant:

> "(There are) specific units if you join marketing (team where) we (will) brief you (regarding rules and regulations). It's not so much but you are told what it is but it's not how we reviewed it (but depending on) how many complaints we received."

One of the members chooses survey ratings and joint venture with related companies or organizations as the mechanism used to enforce and monitor the Content Code implementation.

Key Theme 4: Issues and Complaints on Content Forum/Content Code

Based on the findings, more than half of the members affirm that they have issues or complaint against Content Forum/Content Code and most of the issues or complaints are related to the commercial/advertisements, religious issue, and technical term as well as

inappropriate content issue. It can be quoted from one informant where the suitable statement is:

> "The biggest battle that I have in this building with my Legal Manager is actually the agencies and the clients (with) inappropriate content. (And) another common complaints that we get is about commercial"

However, the total numbers of the complaints or issues are very small. Additionally, another one third of the members stated that they have no issues or complaint on Content Forum/Content Code.

Key Theme 5: Evaluation on Content Code

As obtained from the findings, almost all of the members had conducted the evaluation on the Content Code and concluded that the Content Code is strict and quite detail, but do not comprehensively cover every aspect of each related media fields. As mentioned by one of the informant:

> "(This) Content code if you really ask me is too hard and heavily described. I would say it's quite details (and) too much to follow. On top of that, the content code did not cover every aspects that relates to the industry."

While few of the members had never conducted any evaluation on Content Code therefore had no comments or opinion regarding the matter.

Key Theme 6: Advantages and Disadvantages of Content Code

Based on the findings, all the members believe that Content Code has its own advantages and disadvantages. The advantages stated are:

i. The Content Code allows more creativity
ii. The Content Code always act as a reference
iii. The Content Code always act as a guideline
iv. Content Code is something that can be used as defense mechanism when necessary
v. The Content Code can act as a meeting point and source of information
vi. The Content Code can act as a medium to solve problems since it provides different perspectives or viewpoints from different players or party involved in the industry

While the disadvantages listed are:

i. The media players are not given much power/credibility to act on certain things
ii. The Content Code limits the creativity
iii. The Content Code need to be more "visible" for the media players to see
iv. The Content Code is quite descriptive and too details
v. The codes are not able to capture/cover everything
vi. The codes have some elements of politics
vii. The Content Code need to be reviewed often since the industry is evolving and changing every time

Key Theme 7: Suggestions to Improve the Content Code

There are several propositions suggested by the members/informants to improve the Content Code. The suggestions are:

i. The language used in the codes need to be improved
ii. A lot of repetition in the codes need to be minimized
iii. The Content Code need to have more accessibility for the industry
iv. There is the need for a lot of open dialogues session with all media players and agencies that involved with the media industry
v. The government and related agencies must allow the media to have a little bit of space on how the media want to disseminate news
vi. All media players and related agencies have to work together with the government on certain campaign to help improve the Content Code
vii. The Content Code need to be constantly updated
viii. Malaysian Communications & Multimedia Commission (MCMC) should educate those involved in the Content Code creation
ix. Malaysian Communications & Multimedia Commission (MCMC) have to evaluate on how well the people in the industry adopt and adapt to the Content Code as to see the impact or results of Content Code usage
x. Heavy promotion should be given since not all players involved in media industry know what is Content Code
xi. Those involved in formulating the Content Code should understand the Content Code well
xii. The Content Code need to be less descriptive or details
xiii. Each code needs to interplay, intertwine and support each other, not contradict.

Non-Members of Content Forum

This section illustrates the findings gathered from the in-depth interview conducted with 13 media and telecommunications organizations which are a Non-Members of Content Forum. The informants are also divided into three categories; Print Media (4 companies), Electronic and New Media (7 companies) and Telecommunications (Telco) organizations (2 companies). There are eight key themes highlighted regarding self-regulatory framework and the scenario in Malaysian's Media Industry: (1) the understanding of self regulatory framework and the awareness of the function of Content Code/Content Forum; (2) regulatory and monitoring mechanism used in the organization; (3) suitable mechanism used for media regulations (Self-regulation, Regulation and De-regulation); (4) Obstacles/challenges faced in the organization (Media related Issues); (5) suggestions to improve the efficiency of media regulations mechanism; (6) evaluation on the effectiveness of existing regulatory mechanism; (7) advantages and disadvantages of existing regulatory mechanism and finally, (8) suggestions to improve the existing regulatory mechanism.

Key Theme 1: he Understanding of Self-regulatory Framework and the Awareness of the Function of Content Code/Content Forum

The first key theme consists of two parts which is to seek the understanding of the informants on self-regulation/self-regulatory framework and the awareness of the function of Content Code/Content Forum. For the first part, more than half of the informants understood

that self-regulation means the media industry has very minimum government interference where the government plays a minimum role. It is also means that the industry is regulating on their own, conducting and managing as well as building their own system in producing the best services to the public.

The informants believe that self-regulation is when they have the freedom to choose on what content they want to produce as well as to fully understand the guidelines given by the authority and the existing regulatory mechanism. It can be seen in one significant response of one informant:

> "When you say on self regulatory, you have your own system of managing how to regulate certain things to fill out certain things (and) which information to serve. It is (also) a kind of business transaction or (particularly) environment where a government plays very minimum roles".

However, few of the informants believe self-regulation as following the existing guidelines as well as existing media regulations. The suitable answer can be quoted from one informant:

> "We will follow whatever those have been made ready by KDN to us. We should practice and abide the guidelines given as well as the content code that have been created by CMCF"

While another two of the informants do not know what is self-regulation therefore do not have any specific opinion or viewpoint. For the second part, almost all of the informants confirm that they are aware of the Content Code/Content Forum and its function whereas few of them declare that they are unaware of the Content Code/Content Forum and its function.

Key Theme 2: Regulatory and Monitoring Mechanism Used in the Organization

Based on the outcomes, most of the informants stated that the regulatory and monitoring mechanism used in their organization are license, related laws and regulations, censorship board, feedback, meetings and discussion, edited content (programs, documents and articles), training, briefing and self-monitor system. Additionally, another one third of the informants are using guidelines (from the existing guidelines and the one that their own organization has developed) as the regulatory and monitoring mechanism. The suitable quote to show the subject matter is taken from a particular informant:

> "They will give us several guidelines and we will finalize it. Then, they will choose and told us which can be used and which one that cannot be used. If we got a new offer, they will give us new guidelines which say this is the new offer and this is the specific guidelines. We just have to follow the given guidelines"

However, one informant confesses that he is using complaint as his regulatory and monitoring mechanism. It can be seen from his answer:

> "Yes. We use complaints. That is what I understand. If there are no complaints, we cannot get away with a lot of thing. Or else we will have a hard time to answer to the particular people. What we did now is we use complaints as to filter what we produce. Then, when there's a certain program come in, we have a team and they supposed to

be well verse in all the issues of the chosen of those aired. This is the process and this is what I understand"

Another informant concluded that religious principle or viewpoint is important and currently using it to help enhance the regulatory and monitoring mechanism. He states that:

> "We believe and hold firmly to the religious principle which is the Islamic principle or the Shariah law because firstly, its about sins and rewards that we'll get afterward in the Hereafter and secondly, we'll avoid things and cases that lead us to court whether its defamation, seditious or even fine."

Key Theme 3: Suitable Mechanism Used for Media Regulations (Self-regulation, Regulation and De-regulation)

Approximately, almost half of the informants believe that the practice of both Self-regulation and Regulation framework are the most suitable mechanism used to help improve media regulations in the industry. Generally, it can be shown through the quoted answer from one informant:

> "(We) must have both (where) you have the regulations and self regulation. It is good as it portray us as a person or people that have the responsibility towards (our) organization"

Whilst majority admit that Self-regulation is the only framework suitable to be used in media regulations structure. The appropriate answer can be extracted from one informant:

> "So to think that one word that guides my entire lifestyle and organization, I mean whatever we do is self-regulation. Self-regulation is the best way because the experts are in the field."

Additionally, a few of the informants stated that Regulation framework is the only suitable method to be used as mechanism for media regulations. However, only one informant affirms that De-regulation might be suitable for Malaysian media regulations and it can be affirmed by the quotation:

> "Yes. Deregulation (because) we promote the freedom of speech (and) we understand if the government argues that they need some forms of transition towards the deregulation in Malaysia"

Furthermore, one informant has no opinion or viewpoint regarding the issue.

Key Theme 4: Obstacles/Challenges Faced in the Organization (Media related issues)

In general, more than half of the informants accounted that they have faced a certain difficulties or complaints related to the media issues in the organization. Among the issues concern are dealing with people and public's indecent manner or behavior, inappropriate term or language used to portray something on national programs, religious or sensitive issues and finally content problems. The example of religious issue can be made known through quotation from one particular informant:

"There is one case when we made an observation to produce surveillance report regarding apostasy. Our visit to the church is not liked by the Christians and they file a police report against us. They got really angry but did not have or produce any letter to show real reasons why they behave in such a way"

However, a small number of the informants conclude that they have not faced any obstacles or complaints related to media issues in the organization while only one person confirms that he has no opinion or viewpoint regarding the matter.

Key Theme 5: Suggestions to Improve the Efficiency of Media Regulations Mechanism

There are several important propositions suggested by the informants regarding the improvement of media regulatory mechanism. Among the suggestions are:

To Regulator:

i. Regulators and related agencies need to be more creative but within the limit
ii. Regulators and related agencies need to continuously monitor the language and terms used in every media aspects especially printed articles or documents and broadcast programs
iii. There is a need to form a media council and the committees construct are from actual media practitioners/players
iv. Constantly conduct a discussion or meeting with related party or person's involved if there are a doubt about something particularly issues related to media regulations
v. There is a need to converge the new media
vi. The existing regulations need to be less restricted or not too strict
vii. There is a need to have more specific rules and regulations for specific type of media
viii. There is a need to create more awareness among the media practitioners

To Government:

i. Need to constantly alert and attend to all changes happened in the industry
ii. Malaysian Communications & Multimedia Commission (MCMC) and Ministry of Home Affairs (MOHA) particularly Print National Malaysia Berhad (PNMB) have to constantly monitor media activities
iii. Need to provide more information and educate the public as well as the media practitioners
iv. Government and related agencies need to conduct more seminars, workshop and training for all media practitioners/players
v. Government and related agencies need to create more awareness programs on the positive usage of the internet (i.e. Online newspaper)
vi. Government and related agencies need to provide educational training on ethics especially for media practitioners as it helps instill or strengthen ethical values
vii. There is a need for Malaysian Communications & Multimedia Commission (MCMC) to set up new rules or regulations that emphasize on the qualifications especially for radio announcers (DJs). The radio announcers

need to have a formal education/qualification (i.e. Bachelor Degree/Diploma) in relevant fields.

viii. Government need to give more freedom for the press or media practitioners in producing reliable content

ix. There is no need of government interference or if there is, keep it at a minimum level

Key Theme 6: The Evaluation on the Effectiveness of Existing Regulatory Mechanism

Overall, majority of the informants have conducted the evaluation on the effectiveness of existing regulatory mechanism whereas a minority of the informants affirmed that they did not conduct any evaluation on the matter and a small number of the informants claim that they did not have any specific comments, viewpoints or opinion regarding the subject matter. Additionally, few others stated that the existing regulatory mechanism are usually double standard, mostly depends on the public/media practitioners' complaints/feedback and can be different perspectives for different persons. Whilst another two informants affirm that the existing regulatory mechanism is good enough and had no problem regarding the matter. The proper quote regarding the matter is:

> "Nowadays, the one conducted the check and balance in the writing/producing industry will inquire for a written report from us if let's say there is a mistake in anything we produce. It's good actually since we have to explain why certain things done in that particular way. I think the control given towards the end product is actually good and that is also in line with the content code created by CMCF. And I think its good enough, I mean the code."

One of the informants concludes that the existing regulatory mechanism is not effective and the remaining balance of the informant confirms that they have no comments, viewpoints or opinion in regards to the issue.

Key Theme 7: Advantages and Disadvantages of Existing Regulatory Mechanism

Advantages:

i. The existing regulatory mechanism can act as a guideline
ii. The existing regulatory mechanism can act as a shield to local culture
iii. The existing regulatory mechanism can act as reference for the media organizations to function correctly
iv. The existing regulatory mechanism can help the industry to adhere until certain limitations
v. The existing regulatory mechanism can act as a safety measurement tool for the industry to move forward
vi. The existing regulatory mechanism can help promotes stability for the current media industry
vii. The existing regulatory mechanism have to state more control on the industry
viii. The existing regulatory mechanism can help educate the society to become more matured

Disadvantages:

i. The current regulatory mechanism have too many Western influence
ii. The current regulatory mechanism can restrict the creativity
iii. The existing regulatory mechanism is very strict and heavily regulated

Key Theme 8: Suggestions to Improve the Existing Regulatory Mechanism

To Regulator:

i. The regulators need to draw up laws that cover and relates to all aspects of the media industry
ii. The regulators have to really understands the laws and regulations that they have enforced
iii. The regulators need to understand how the media works and be close to them so as to help strengthen the existing affiliation
iv. There is a need for balance between regulations and the self-regulation

To Government:

i. The government and related agencies need to involve the public and bring them as a volunteer in the media industry
ii. The government and related agencies need to train the broadcasting stations
iii. The government need to educate the public and help them understands the laws, guidelines and regulations
iv. The government and related agencies of the media need to conduct more awareness campaign for the media users or the public regarding the laws and regulations
v. The industry only need very minimum government interference

To Government and Regulator:

i. The government and related agencies need to involve the public and bring them as a volunteer in the media industry
ii. The government and related agencies need to train the broadcasting stations
iii. There is a need for the government as well as the regulators to recognize the code of ethics those the media practitioners has put forward since 70s (i.e. Journalism code of ethics)
iv. The government and the regulators need to constantly update the related laws, guidelines and regulations
v. Every laws and regulations have to be in line and suited according to the present situation
vi. The interpretation of each laws and regulations have to be clear as well as precise
vii. There is a need for balance between regulations and the self-regulation
viii. There is a need of formal, suitable and related qualifications for the media practitioners especially radio announcer. The qualifications will justify how well-informed and understanding they are about the industry
ix. There is a need to apply the “open internet” concept to help broaden the media as well as the public’s viewpoint

x. There is a need of balance reporting in every type of media especially the conventional media
xi. A lot of readers' feedback are needed to help improve the existing regulatory mechanism
xii. The stories/articles/programs and report pertaining politics and government need to be a lot more transparent, free and truthful

Discussion

Importance and awareness

Most of the respondents understand and aware with self-regulatory framework and implementation in their organization. This framework is necessary in designing their policy that in line with national agenda. However, the respondents believe that it is moderately accepted and some agreed that it just a strict guidelines and codes set by the authority.

As for clear understanding, the information conveyed to the staff in an organization through training, briefing, seminar and workshop. In order to improve implementation and understanding, some believes that close collaboration with Malaysian Communication and Multimedia Commission as well as Censorship board (LPF) will strengthen the necessity in adopting content code.

Effectiveness

The question about effectiveness always associated with a regulation. Respondents in this study agreed that content code is the most effective in ensuring suitable media content for children and family. Besides, the media can serve as the change agent by promoting moral values and ethics. However from the content production view, content code has become a hinderance for creativity, innovation and flexibility in producing a programme. As for the general public, the information about content code and complaint bureau should be widely spread in order to promote public involvement.

Strength and weakness

Almost all the members of content forum had an evaluation about content code.It has been concluded that content code is strict, quite detail and too much to follow. However it does not comprehensively cover every aspect that relates to the industry. Furthermore, because of the rigidity, the media practitioner agreed that content code blocking their creativity as well as difficult to understand and implement. Despite all the negativity, the content code giving acts as a guideline for the media to produce and choose the suitable content before broadcast and avoiding sensitive issues like racism, conflicts and violence.

Conclusion

All in all, content code is very helpful as a guideline for media practitioner to choose and produce suitable content for public consumption. However, some disadvantages like blocking creativity, difficult to understand and outdated with current media development

must be taken into consideration. From the research findings the following key recommendations are proposed:

1. The awareness of the Content Code should be inculcated not only for media practitioners but also among the public through campaigns and promotions. The Content Forum is to provide a platform to encourage the public to participate in contributing ideas and critiques.
2. The content code should be revised along with the media development
3. The language use should be simplified for easy understanding and implementation
4. The knowledge of Content Code is to be included in the curriculum for formal education as well as for staff curriculum.
5. It is a mandatory requirement for media organizations in planning, implementing and evaluating a sound mechanism of media self-regulation in their organizations.
6. In implementing media self-regulation there should be minimum government interference in handling complaints.
7. Since the Content Code is well-accepted by media organizations, it is recommended that the Content Forum should expand its memberships and networking.
8. The Content Code should be made mandatory for all media whether government or private

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KOMPETENSI DAN PERANAN PEGAWAI PENGEMBANGAN PERTANIAN SEBAGAI AGEN PERUBAHAN

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Abstrak

Kompetensi Pegawai Pengembangan Pertanian amatlah penting dalam pendidikan pengembangan kepada petani dan institusi petanian. Kajian ini bertujuan untuk mengenal pasti tahap kompetensi Pegawai Pengembangan Pertanian dalam perkhidmatan pengembangan peranan pegawai pengembangan pertanian sebagai agen perubahan. Ia memfokuskan kepada tahap kompetensi pemindahan teknologi dan kompetensi teknikal. Selain itu juga, ia melihat kepada peranan yang perlu dimainkan oleh pegawai pengembangan pertanian yang mencakupi peranan sebagai pemangkin, penghubung sumber, pemberi penyelesaian masalah, dan pembantu proses. Instrumen kajian yang digunakan adalah borang soal selidik untuk mengukur tahap kompetensi pegawai pengembangan. Populasi kajian ini ialah seramai 300 orang terdiri daripada Pegawai Pengembangan Pertanian. Manakala 117 orang responden kajian yang menjawab borang soal selidik dan data yang dikumpulkan di analisis. Hasil kajian mendapati bahawa tahap kompetensi pemindahan teknologi dan kompetensi teknikal Pegawai Pengembangan berada di tahap tinggi dalam perkhidmatan pengembangan. Kesimpulannya Pegawai Pengembangan Pertanian mempunyai kompetensi pemindahan teknologi dan kompetensi teknikal yang tinggi tetapi dari aspek tahap kefahaman terhadap peranan sebagai agen perubahan masih berada pada tahap sederhana.

Kata kunci*: Pegawai Pengembangan Pertanian, Kompetensi , Agen perubahan*

Pendahuluan

Pertumbuhan positif sektor pertanian dalam tempoh Rancangan Malaysia Kelapan (RMK-8; 2001-2005) telah mendorong kerajaan memperkasakan lagi sektor ini dalam tempoh Rancangan Malaysia Kesembilan (RMK-9; 2006-2010) untuk menjadi jentera pertumbuhan ekonomi negara yang ketiga melalui kegiatan pertanian berskala besar, penggunaan teknologi moden, pengeluaran berkualiti dan sebagainya. Dalam RMK-9 (2006-2010) telah memberi tumpuan kepada transformasi pertanian tradisional kepada perladangan moden dan komersial selaras dengan matlamat menjadikan 'Pertanian sebagai Perniagaan'. Manakala, dalam RMK-10 (2011-2015) pula mengandungi aspirasi Program Transformasi Kerajaan dan Model Baru Ekonomi yang berteraskan kepada pendapatan tinggi, keterangkuman dan kemampanan. Fokus utama dalam RMKe-10 pula digubal berdasarkan kepada Dasar Agro Makanan dengan

objektif iaitu (i) menjamin bekalan makanan mencukupi untuk negara dan (ii) meningkatkan pendapatan kumpulan sasar.

Pengenalan

Kesempurnaan pekerjaan seseorang anggota dalam sesebuah organisasi adalah terutamanya dipengaruhi oleh kepakaran atau kompetensi yang ada padanya dalam bidang kerja yang dilakukan. Tahap kepakaran yang dimilikinya pula adalah ditentukan oleh kompetensi mereka dalam bidang kerja tersebut. Kepakaran seseorang tenaga kerja professional dalam sesebuah organisasi adalah berkait rapat dengan tahap kompetensi di dalam sesuatu bidang yang diceburinya di samping lain-lain faktor seperti pengetahuan, pengalaman, sikap dan persekitaran kerja (Rahim, 2005). Kompetensi boleh dilihat sebagai suatu ciri yang mempengaruhi individu (bukan organisasi) ke arah perlakuan dan kemahiran tertentu bagi mencapai prestasi yang boleh dicontohi (Rothwell, 2002). McDonald & Ackerman (1998) pula melihat kepakaran seseorang sebagai gabungan pengetahuan dan kemahiran yang ada pada seseorang individu (*embodiment)*. Dari sudut pengurusan kompetensi dan pengurusan pengetahuan, Tobia Ley dan Dietrich Albert (2003) menyatakan "kemahiran" atau "kompetensi" telah digunakan dalam organisasi bagi mengungkap ciri-ciri seseorang individu pekerja untuk mempergunakan kepakaran mereka dengan lebih baik atau untuk membangunkannya dengan lebih lanjut.

Dewasa ini konsep kompetensi telah lazim diterima sebagai satu corak pengukuran terhadap pengetahuan, kemahiran, keupayaan, perlakuan dan lain-lain ciri yang membezakan ketinggian dari purata prestasi seseorang (Mirable 1997, Athley 1999 dan Rodriguez 2002 dalam Wei Wen We et al. (2005). Namun begitu penentuan tahap kompetensi dalam sesebuah organisasi terhadap individu pekerja masih lagi menjadi isu utama.

Kejayaan program pengembangan bergantung kepada kemampuan pekerja pengembangan yang berkualiti, berkelulusan dan kompeten kerana semua proses pengembangan bergantung pada mereka untuk memindahkan idea-idea baru dan nasihat secara teknikal kepada klien. Kejayaan sesuatu program perubahan yang dilakukan ditentukan oleh banyak faktor iaitu teknologi, sumber, individu atau pihak yang ingin berubah dan agen perubahan. Kejayaan agen perubahan bergantung kepada kemampuannya untuk menjalankan kerja, cara menjalankan kerja dan peranan yang dimainkan yang membawa kepada perubahan. Perkara penting yang menentukan hasil kerja seseorang Pegawai Pengembangan adalah bergantung kepada kompetensinya terutama sekali dalam bidang teknikal serta berkait rapat dengan perubahan yang dilakukan.

Penyataan Masalah

Sehingga kini telah banyak kajian yang dilakukan berkaitan kompetensi. Bagi agen pengembangan yang profesional komponen kompetensi utama yang telah dikenalpasti memahami tingkah laku manusia, merancang program, memahami proses pengajaran, memilih strategi dan alatan pengajaran dan menilai program. Berdasarkan kajian lepas, kemahiran ini perlu dimiliki oleh agen pengembangan profesional bagi menjalankan peranan dan tanggungjawab mereka secara efektif sebagai agen perubahan (Davis, 1963; Gonzalez, 1982; Keregero, 1981; Teh, 1980). Walau bagaimanapun bagi agen pengembangan di Malaysia, aspek-aspek khususnya mengenai tahap kompetensi mereka masih lagi banyak yang belum diperjelaskan dengan tepat. Misalnya, sejauh manakah kompetensi yang diperlukan untuk meningkatkan lagi tahap kompetensi mereka terutama sekali dalam konteks penekanan baru terhadap pertanian sebagai perniagaan dan juga cabaran globalisasi yang bertambah rancak.

Kelemahan dalam prestasi kerja pengembangan selalunya adalah disebabkan masalah yang dihadapi oleh agen pengembangan (Blanckenberg, 1984; Owens & Simpson, 2002). William (2008) menekankan bahawa kelayakan pendidikan kakitangan pengembangan di negara membangun mempunyai kecenderungan yang rendah berkaitan dengan tanggungjawab yang telah di tetapkan dan ditugaskan. Dalam kajian pengembangan pertanian yang dilakukan oleh Swanson, Farner & Bahal (1990) melaporkan 39% kakitangan pengembangan hanya memiliki kelulusan sehingga sekolah menengah atau lebih rendah; 33% lagi pada tahap diploma atau sijil; 23% pada peringkat ijazah sarjana muda; dan lebih kurang 5% adalah peringkat ijazah sarjana (master).

Kompetensi agen pengembangan adalah penting dalam menentukan peningkatan produktiviti bagi mengelakkan berlakunya krisis dan masalah makanan di Malaysia (fatimah arshad). Selain daripada itu, telah menjadi pengetahuan umum penggunaan teknologi juga mempengaruhi pengeluaran makanan. Oleh yang demikian, keberkesanan penggunaan teknologi baru adalah sangat penting. Ini memerlukan kompetensi yang tinggi pada agen pengembangan terutama sekali dalam aspek kompetensi teknikal dan kompetensi pemindahan teknologi. Persoalan yang timbul adalah sejauh manakah agen pengembangan sebagai penghubung antara penjana teknologi dengan petani dapat memainkan peranan memindahkan teknologi baru dengan lebih mudah, cepat dan berkesan kepada petani untuk meningkatkan kuantiti dan kualiti hasil pertanian? Sejauh mana pulakah kompetensi teknikal dan kompetensi pemindahan teknologi ada pada Pegawai Pengembangan? Persoalan lain yang berkaitan dengan kompetensi ialah mengapakah kompetensi itu perlu ada dalam diri seorang agen pengembangan dan bagaimana pula kompetensi digunakan oleh mereka dalam menjalankan tugas dan melaksanakan tanggungjawab?

Kajian mengenai kompetensi Pegawai Pengembangan memang telah banyak dikaitkan dengan prestasi kerja samada di Malaysia mahu pun di luar negara (Liles & Mustian, 2004; Cooper & Graham, 2001; Leeuwis, C. and van den Ban, 2004; Azimi, 2007; Ali Hassan, Maimunah, Turiman, Abu Daud, 2008). Menurut kajian yang dilakukan oleh Ali, et al., (2008), terdapat empat faktor penting yang mempengaruhi prestasi pekerja di sektor

pengembangan pertanian iaitu kompetensi dalam implementasi kerja, kompetensi dalam penilaian kerja, kompetensi dalam perancangan kerja dan komitmen organisasi dalam menyempurnakan kerja yang dipertanggungjawabkan. Menurut Khan, et al., (2006), Pegawai Pengembangan perlu dilatih dalam persekitaran di mana terdapat kawasan pertanian mapan bagi memastikan proses pembelajaran berjalan secara berterusan dan untuk meningkatkan tahap kompetensi mereka. Kebanyakan kajian ini memberikan penekanan terhadap mengenalpasti kompetensi yang diperlukan untuk menjalankan tugas dengan berkesan melalui peningkatan prestasi terutamanya dari aspek teknikal, sosial, kepimpinan dan budaya.

Model bergantungan *(interdependence)* bagi pengembangan, menyatakan bahawa pemindahan teknologi baru dan bagi membangunkan keupayaan serta potensi klien telah dikenalpasti dalam memastikan keberkesanan sebarang perkhidmatan pengembangan (Bennett, 1989 ; Benet, 1993 and Foster, 1995 dalam Neda Tiraieyarie, 2008). Keberkesanan perkhidmatan pengembangan juga sangat bergantung pada kebolehan agen pengembangan yang kompeten dan secara keseluruhannya proses pengembangan adalah bergantung pada mereka sendiri untuk memindahkan maklumat kepada klien (FAO, 2006 dalam Neda Tiraieyarie, 2008).

Kejayaan perkhidmatan pengembangan amat bergantung kepada peranan pegawai pengembangan untuk memindahkan teknologi (PT) dan kompetensi teknikal dalam usaha membangunkan petani untuk meningkatkan produktiviti mereka (Rahim, 2008). Setakat ini, perkhidmatan pengembangan pertanian di Malaysia boleh dianggap sebagai belum cukup berkesan dalam memajukan pertanian. Menurut ( ) salah satu masalah utama ialah peranan dan kompetensi pegawai yang belum cukup memuaskan untuk menyampaikan perkhidmatan yang baik.

Bermula dengan teori dan konsep kompetensi yang menumpukan kepada ( ), kini teori dan konsep serta pemakaian konsep itu telah banyak berubah dan telah lebih meluas. Ini sejajar dengan konsep Weiss dan Hartle, 1997 menyatakan kompetensi adalah merupakan alat yang digunakan oleh individu untuk mencapai prestasi yang cemerlang dan ciri peribadi yang terbukti dapat menggerakkan prestasi kerja yang tinggi. Dalam konteks kajian ini, kompetensi yang hendak diteliti merangkumi kompetensi teknikal dan kompetensi pemindahan teknologi (PT) dalam bidang pertanian.

Selain daripada tahap kompetensi, faktor utama yang turut menjamin kejayaan kerja pengembangan ialah kemampuan pegawai pengembangan memainkan peranan sebagai agen perubahan. Kajian ini memberi tumpuan kepada menilai tahap kompetensi dari aspek pemindahan teknologi dan teknikal yang diperolehi termasuklah peranan yang perlu dimainkan oleh Pegawai Pengembangan sebagai agen perubahan dalam perkhidmatan pengembangan. Justeru, kajian ini perlu bagi mengkaji apakah tahap kompetensi yang sedia ada dan peranan yang diperlukan oleh Pegawai Pengembangan sebagai agen perubahan di Malaysia.

Dalam konteks senario yang digambarkan ini, persoalan timbul tentang beberapa perkara mengenai kompetensi dan peranan pegawai pengembangan sebagai agen perubahan. Sejauh manakah peranan sebenar agen pengembangan telah dimainkan oleh pegawai-pegawai pengembangan yang sedang berkhidmat pada masa ini? Apakah peranan yang perlu dimainkan? Sejauh manakah peranan yang dimainkan berkesan? Sejauh manakah keseimbangan dan kewajaran peranan-peranan itu telah dicapai. Dalam kebanyakan hal, persoalan-persoalan ini belum mendapat jawapan yang jelas dan pasti dan perlu dirungkaikan. Begitu juga dengan kompetensi pegawai. Setinggi manakah tahap kompetensi pegawai pengembangan dalam bidang kompetensi teknikal dan kompetensi pemindahan teknologi? Sejauh manakah pula tahap kompetensi ini mempengaruhi peranan mereka sebagai agen perubahan.

Objektif Kajian

1. Mengenalpasti tahap kompetensi pegawai pengembangan pertanian
2. Menentukan tahap kefahaman peranan sebagai agen perubahan oleh pegawai pengembangan pertanian

Metodologi Kajian

Kaedah Pengumpulan data bagi kajian ini adalah menggunakan kaedah survey melalui pengedaran Borang soalselidek kepada Pegawai Pengembangan Pertanian.. Populasi bagi kajian ini adalah meliputi 300 orang Pegawai Pengembangan Pertanian. Manakala responden bagi kajian ini adalah seramai 117 orang Pegawai Pengembangan Pertanian.

Hasil Kajian

Jadual 1 : Demografi Responden (n=117)

Profile	Frekuensi	Peratus (%)
Jantina		
Lelaki	53	45.3
Perempuan	64	54.7
Bangsa		
Melayu	112	95.7
Cina	3	2.6
India	1	0.9

Lain-lain	1	0.9
Umur (Tahun)		
20-30	59	50.4
31-40	34	29.1
41-50	18	15.4
51-60	6	5.1
Status perkahwinan		
Berkahwin	77	65.8
Bujang	40	34.2

Profile	Frekuensi	Peratus (%)
Tahap pendidikan		
Master	2	1.7
Ijazah	48	41.0
Diploma	29	24.8
Sijil	38	32.5
Jawatan		
Pegawai Pertanian	46	39.3
Pen. Pegawai Pertanian	39	33.3
Pembantu Pegawai	32	27.4
Pengalaman Bekerja		

tiada	4	3.4
<10 tahun	84	71.8
11-20 tahun	11	9.4
21-30 tahun	17	14.5
>30 tahun	1	0.9
Pengalaman Dalam Pengembangan		
tiada	8	6.8
<10 tahun	86	73.5
11-20 tahun	10	8.5
21-30 tahun	13	11.1

Tahap Kompetensi Pegawai Pengembangan Pertanian

Jadual 2: Tahap Kemahiran Kepimpinan Pegawai Pengembangan (n = 117)

Tahap	Frekuensi	Peratus (%)
Sederhana	15	12.8
Tinggi	102	87.2
Jumlah	117	100.0

Jadual 3: Tahap Budaya, Nilai, dan Tradisi (klien) Pegawai Pengembangan (n = 117)

Tahap	Frekuensi	Peratus (%)
Sederhana	9	7.7
Tinggi	108	92.3
Jumlah	117	100.0

Jadual 3: Tahap Kaedah Pengajaran dan Pembelajaran Pegawai Pengembangan (n = 117)

Tahap	Frekuensi	Peratus (%)
Sederhana	7	6.0
Tinggi	110	94.0
Jumlah	117	100.0

Jadual 4: Tahap Perancangan, Perlaksanaan dan Penilaian Program Pegawai Pengembangan (n = 117)

Tahap	Frekuensi	Peratus (%)
Sederhana	12	10.3
Tinggi	105	89.7
Jumlah	117	100.0

Jadual 5: Tahap Penyelesaian Masalah dan Membuat Keputusan Pegawai Pengembangan (n = 117)

Tahap	Frekuensi	Peratus (%)
Sederhana	13	11.1
Tinggi	104	88.9
Jumlah	117	100.0

Tahap Kefahaman Peranan sebagai Agen Perubahan oleh Pegawai Pengembangan Pertanian

Jadual 6: Pegawai Pengembangan sebagai Penghubung Sumber (n = 117)

Tahap	Frekuensi	Peratus (%)
Sederhana	76	65.0
Tinggi	41	35.0
Jumlah	117	100.0

Jadual 7: Pegawai Pengembangan sebagai Pemangkin (n = 117)

Tahap	Frekuensi	Peratus (%)
Sederhana	78	66.7
Tinggi	39	33.3
Jumlah	117	100.0

Jadual 8: Pegawai Pengembangan sebagai Pembantu Proses dan Pemberi Penyelesaian Masalah (n = 117)

Tahap	Frekuensi	Peratus (%)
Sederhana	79	67.5
Tinggi	38	32.5
Jumlah	117	100.0

Penutup

Untuk menjadi seorang Pegawai Pengembangan yang berwibawa dan berkompetensi tinggi memerlukan individu tersebut menguasai aspek 'knowing how (prosedur kerja)', 'knowing why (makna sesuatu kerja' dan 'knowing whom' (hubungan)' dalam mengendalikan kerja-kerja pengembangan. Kompetensi ini mampu dikuasai melalui pendedahan yang berterusan (continuous exposure) daripada pelbagai cabaran dan pengalaman pembelajaran dalam aktiviti pengembangan.

Kejayaan sesuatu proses pengembangan bergantung kepada Pegawai Pengembangan sebagai agen perubahan dan secara meluas bukan sahaja bertumpu kepada pemindahan teknologi sahaja tetapi seperti pemusatan (decentralization), pluralism, orentasi klien, penekanan pada lokasi, metodologi yang efektif, aplikasi maklumat teknologi elektronik, penglibatan pengembangan, kerjasama walaupun bukan dalam bidang pertanian, intergrasi dan menghormati budaya, kewangan dan secara teknikal keadaan masyarakat petani. Kompetensi Pegawai Pengembangan di Malaysia adalah diperlukan sebagai agen perubahan dan merupakan salah satu penentu kejayaaan bagi industri pertanian. Kompetensi dari aspek pengetahuan, kemahiran teknikal dan ciri-ciri peribadi seseorang Pegawai Pengembangan akan membawa kepada prestasi yang cemerlang ke arah kesinambungan usaha untuk merealisasikan Wawasan 2020 bersandarkan teras utama Misi Nasional dan konsep 1Malaysia.

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