To my parents, Joginder Singh and Surjit Kaur,
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#### ABSTRACT

Current research on the extent of integration of the Internet in teacher education has shown that few teacher educators have kept pace with advances in this innovation despite its inherent benefits in the teaching and learning process. Furthermore, teacher trainers differ in their confidence levels and ability to integrate the Internet into the teacher-training curriculum.

As such, a combination of quantititative and qualitative methodologies was used to investigate the extent of integration of the Internet in the teacher training colleges in the Klang Valley and the factors that are influencing the instructional integration of the Internet in these colleges.

Early and late adopters among the teacher trainers were also identified based on their levels of integration of the Internet in the instructional process. In addition, this study investigated the types of Internet applications that were being used by the early and late adopters and the ways in which these applications were being used for lesson preparations, personal and professional communications as well as in instruction.

The findings of the study showed that Internet innovation has been diffused partially into the teacher-education curriculum as about a quarter of the teacher trainers had managed to implement changes in the educational process from traditional-driven pedagogies to Internet-driven pedagogies.

Secondly, the early and late adopters differed significantly in the variables that contribute to the integration of the Internet in the teacher-education sector with the early adopters having significantly more computer experience, Internet experience, home access to the Internet, refocusing concerns in attitudes towards Internet innovation, self-perceived Internet competencies, professional gratifications derived from the use of the Internet and instructional gratifications derived from the use of the Internet.

Thirdly, Internet innovation has been diffused more in terms of usage and intensity among the early adopters for professional and instructional use as compared to the late adopters.

Fourthly, the early adopters perceive Internet innovation to be more important for the teaching of the education syllabus whereby more of them are using it for the preparation of their lessons. In teacher-directed student use, early adopters are directing their students to use more Internet applications on a frequent basis than the late adopters. More of the early adopters are also directing their students to use the WWW application for research and designing instructional e-mail based activities for their students. Fifthly, only the early adopters had extended the use of Internet innovation in extra-curricular activities and e-practicum.

Finally, the barriers to higher levels of instructional integration of the Internet as expressed by more of the early adopters are inaccessible Internet links at the workplace and lack of adequate computer hardware. On the other hand, more of the late adopters are concerned about acquiring basic Internet training.

The study draws several implications for the incorporation of the Internet in the teacher education sector. It has highlighted the need for structured Internet training programs that cater specifically to the needs of early and late adopters. It also recommends measures for the Teacher Training Division to narrow the existing technology gap between the early and late adopters.

#### Integrasi Internet di Maktab-Maktab Perguruan di Lembah Klang

#### ABSTRAK

Penyelidikan semasa dalam tahap penggunaan Internet sebagai alat pengajaran dalam sektor perguruan menunjukkan hanya segelintir daripada pensyarah-pensyarah maktab perguruan yang sedang menggunakannya dalam pengajaran mereka walaupun terdapat bukti-bukti kukuh mengenai menfaat penggunaan inovasi ini dalam proses pengajaran dan pembelalajaran. Dalam pada itu, pensyarah-pensyarah maktab perguruan mempunyai tanggapan berbeza dalam tahap keyakinan dan kebolehan mereka untuk mengintegrasikan Internet dan aplikasinya dalam kurikulum maktab perguruan.

Justeru, satu kombinasi metolodogi-metolodogi kuantitatif dan kualitatif telah digunakan untuk meneliti sejauh mana Internet telah diintegrasikan dalam maktab-maktab perguruan di seluruh Lembah Kelang dan faktor-faktor yang mempengaruhi integrasi Internet dalam proses pengajaran dan pembelajaran dalam maktab-maktab tersebut.

Kajian ini juga telah mengenalpasti pengamal-pengamal awal dan lewat di kalangan pensyarah maktab perguruan berdasarkan tahap integrasi Internet mereka dalam proses pengajaran dan pembelajaran. Tambahan pula, kajian ini meneliti jenis-jenis aplikasi Internet yang sedang digunakan oleh pengamal-pengamal awal dan lewat dan cara-cara bagaimana aplikasi-aplikasi ini sedang digunakan dalam penyediaan mata pelajaran, perhubungan peribadi dan iktisas dan juga dalam pengajaran dengan guruguru pelatih.

Hasil kajian menunjukkan inovasi Internet yang telah disebarkan dalam proses pengajaran dan pembelajaran melalui sektor perguruan adalah satu perempat daripada pensyarah maktab perguruan yang telah berjaya melaksanakan perubahan dalam proses pendididikan yang beranjak daripada pedagogi tradisional kepada pedagogi berasaskan Internet.

Hasil kedua kajian ini adalah pengamal-pengamal awal dan pengamal-pengamal lewat berbeza secara signifikan dalam pembolehubah-pembolehubah yang menyumbang kepada integrasi Internet dalam sektor pendidikan guru di mana pengamal-pengamal awal secara signifikan mempunyai lebih banyak pengalaman komputer, pengalaman Internet, akses Internet daripada rumah, kebimbangan pemfokusan dalam sikap terhadap inovasi Internet, tanggapan kebolehan Internet kendiri, gratifikasi profesional yang diperolehi daripada penggunaan Internet dan gratifikasi pengajaran dan pembelajaran yang diperolehi daripada penggunaan Internet.

Dapatan ketiga kajian ini adalah yang inovasi Internet telah disebarkan secara lebih meluas daripada sudut penggunaan dan kekerapannya di kalangan pengamal-pengamal awal untuk tujuan-tujuan profesional serta pengajaran dan pembelajaran jika dibandingkan dengan pengamal-pengamal lewat.

Hasil keempat ialah pengamal awal berbanding dengan pengamal lewat bertanggapan bahawa innovasi Internet adalah lebih penting untuk pengajaran sukatan pendidikan. Justru, lebih ramai pengamal awal sedang menggunakan inovasi ini untuk menyediakan mata pelajaran yang diajar.

Dalam penggunaan Internet yang diarahkan oleh guru, pengamal-pengamal awal sedang mengarah guru-guru pelatih untuk menggunakan lebih banyak aplikasi Internet jika dibandingkan dengan pengamal-pengamal lewat dan ini juga dicerminkan dengan kekerapan yang lebih tinggi apabila mereka mengarah pelajar mereka untuk menggunakan aplikasi-aplikasi ini. Lebih ramai pengamal awal berbanding dengan pengamal lewat juga sedang mengarah guru pelatih mereka untuk menggunakan

aplikasi Jaringan Web Sedunia untuk menjalankan penyelidikan dan aktiviti pengumpulan maklumat serta merekacipta aktiviti pendidikan berasaskan e-mel untuk pelajar-pelajar mereka. Kelima, hanya pengamal-pengamal awal telah memperkembangkan penggunaan inovasi Internet dalam aktiviti ko-kurikulum dan e-praktikum.

Akhir sekali, kekangan-kekangan kepada tahap integrasi Internet yang lebih tinggi seperti yang dinyatakan oleh lebih ramai pengamal awal adalah kemudahan Internet yang sukar untuk diakses di tempat kerja dan perkakasan komputer yang tidak mencukupi. Sebaliknya, lebih ramai pengamal lewat mempunyai kekhuatiran mengenai bagaimana memperolehi kemahiran asas Internet.

Kajian ini mempunyai beberapa implikasi bagi penerapan Internet dalam sektor pendidikan guru. Ia mengesyorkan keperluan untuk latihan Internet yang berstruktur untuk memenuhi keperluan tekonologi kedua-dua pengamal-pengamal awal dan lewat. Ia juga mengemukakan langkah-langkah bagi Bahagian Pendidikan Guru (BPG) untuk merapatkan jurang teknologi yang kini wujud antara pengamal-pengamal awal dan pengamal-pengamal lewat.

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