

COMPARISON OF ADOPTION OF INFORMATION AND COMMUNICATION
TECHNOLOGY (ICT) BETWEEN ARCHITECTURAL, ENGINEERING AND QUANTITY
SURVEYING CONSULTING FIRMS.

ANDRINA TIAN LEE NA

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Faculty of Built Environment
Universiti Teknologi Malaysia

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ABSTRACT

Construction industry is one of the productive sectors that constantly contribute to the economy. It is complicated in nature and depends mostly on timely transfer of data and information among the construction parties. The problem arised is that the current scenario in Malaysia shows that traditional paper-intensive method of processing and transferring data and information is still being practiced. Paper remained as the lowest common denominator between disciplines and the key players in construction industry has not fully utilise the power of ICT and optimize the performance in the daily operation which include not only in Malaysia but also globally. Thus, the objective of this study is to compare the extent of ICT usage between architectural firm, civil and structural firm and quantity surveying firm in order to understand the problem that causes the low extent of ICT usage in the construction industry. Information and communication technology or also known as ICT is defined as technology that enables the users to produce, gather, communicate, manage and process the data and information for different usages. This study is conducted by using the method of questionnaires whereby it consists of six sections to determine the extent of ICT usage in different firms. Analysis and findings is performed using Microsoft Excel 2007, whereby the findings are all represented in tables, figures and bars. The overall findings for entire study shows the result of type of ICT adoptions in each types of firm and they have reached a satisfying and positive result whereby it does not falls under a poor adoption of ICT as expected in the statement of problem. However, ICT investment and extent of network and communication usage have lower adoption of ICT compared to other types of ICT adoption. After taking account the five sections of the variables of ICT adoption, it shows that architectural firm has the highest adoption of ICT compared to civil and structural firm and quantity surveying firm.

ABSTRAK

Industri pembinaan merupakan salah satu sektor yang menyumbang kepada ekonomi. Industri ini amatlah rumit dan bergantung kepada ketepatan penyebaran data dan informasi di antara pasukan pembinaan. Masalah yang timbul dalam senario di Malaysia kini ialah masih terdapat penggunaan kaedah tradisional kertas-intensif yang dipraktikkan dalam pemindahan data maklumat. Kertas masih menjadi alat atau objek yang sering digunakan oleh profesional dalam industri pembinaan. Mereka tidak menggunakan sepenuhnya kebolehan ICT untuk meningkatkan prestasi kerja dan ini berlaku bukan sahaja di Malaysia, tetapi juga seluruh global. Justeru, objektif untuk penyelidikan ini adalah perbandingan penggunaan tahap ICT di antara syarikat arkitek, syarikat kejuruteraan awam dan struktur dan syarikat juruukur bahan untuk mengkaji punca penggunaan ICT yang agak rendah di kalangan profesional dalam industri pembinaan. Definisi ICT ialah teknologi yang membolehkan pengguna menghasil, mengumpul, berkomunikasi, mengurus, dan memproses data dan maklumat untuk kegunaan yang berbeza. Penyelidikan ini dijalankan dengan menggunakan kaedah borang soal selidik di mana ia telah dibahagikan kepada enam bahagian untuk menentukan tahap penggunaan ICT di syarikat tersebut. Analisis akan dijalankan menggunakan Microsoft Excel 2007, di mana semua hasil penemuan akan dibentangkan dalam bentuk jadual, gambar dan graf. Penemuan bagi keseluruhan penyelidikan menunjukkan bahawa tahap penggunaan ICT adalah positif dan tidak tergolong dalam tahap yang tidak memuaskan seperti yang dijangkakan dalam kenyataan masalah. Sesungguhnya, pelaburan ICT dan tahap penggunaan rangkaian dan komunikasi masih dalam tahap yang lemah jika dibandingkan dengan penggunaan ICT yang lain. Kesimpulannya, syarikat arkitek menunjukkan penerapan ICT yang tertinggi berbanding dengan syarikat kejuruteraan awam dan struktur dan syarikat juruukur bahan.