

# Ict implementation among malaysian schools



This article was written by Habibah lateh and Vasugiammai Muniandy from University Sains Malaysia. It describes and discusses about the obstructions and chances of implementing GIS ( Geographical Information System ) in schools with a deep focal point of GIS in learning and larning geographics. The purpose of the survey is to find the effectivity of GIS in increasing pupils ' involvement towards the topic every bit good as to upgrade the public presentation of Malayan Teachers ' Standard. The hereafter, advantages and disadvantages of GIS to be used in Malayan schoolrooms were discussed.

### In-depth Summary of the Article

#### Geography and GIS in Malaysia

The phases of instruction system in Malaysia can be divided into primary instruction, secondary instruction, pre-university instruction and third instruction.

In the Malayan context, Geography is classified as societal instruction and it is offered to primary and secondary school pupils through the standardised course of study.

Basic Geography is offered to standard four pupils in primary schools through the capable 'local surveies ' while Geography is a mandatory topic among lower signifiers in Malayan secondary schools and it became an elected topic at upper secondary degree.

Geography can be divided into 3 chief Fieldss:

Geography Skills: Longitude, latitude, the use of compass, bearings, graphs and function.

Human and Physical Geography: Climate and conditions, population, transit and communicating.

Local Study: Field work ( Done within few kilometres from their school/housing country ) .

The use of computing machine in this topic is really low as the one and merely computing machine literate that pupils learn is bring forthing Bar and Line graphs utilizing Microsoft excel.

In order to do learning Geography interesting and proactive, GIS were suggested as it:

Captures, shops, manipulates, questions, analyzes and shows all signifiers of geographically referenced information.

A utile technique for forming and recovering spacial information and logical thinking ( location, latitude and longitude coordinates ) that supports higher degree of larning among pupils.

GIS allows pupils to see, understand, inquiry, interpret, and visualise informations in many ways that reveal relationships, forms, and tendencies in the signifier of maps, Earths, studies, and charts.

A GIS helps to reply inquiries and work out jobs by looking at the information in a manner that is rapidly understood and easy shared.

It is a new manner of thought and job resolution that integrates geographic information into how pupils understand and manage the planet. It allows pupils to make geographic cognition by mensurating the Earth, forming this information, and analysing and patterning assorted procedures and their relationships. It besides allows pupils to use this cognition to the manner they design, program, and alter the universe.

### Possibility of Integrating GIS in Malaysia

GIS is executable to be used in schools as most of the secondary schools in Malaysia are equipped with computing machine labs and internet entree.

[ Mohd faris Dziauddin, 2006 ]

Teacher 's enthusiasm or willingness to accommodate the new technological GIS method to learn Geography is high as 94. 1 % out of 219 instructors agreed and give positive commentary sing the execution of GIS in schools.

[ Nordin interest, 2006 ]

UTM, USM, UKM, UPSI, UMS and UiTM are universities in Malaysia that offers GIS as a topic for their pupils. UMS offers GIS and do it as a compulsory topic.

They offer 2 documents:

The Principles of GIS

The Application of GIS

USM offer GIS for Geography majoring pupils at the degree degree at the Engineering Campus. School of Humanities and School of Distance Education

offers GIS for their pupils at different degrees from grade to Masterss and PhD degrees.

Harmonizing to Vasugiammai Muniandy, ( 2005 ) , GIS can be integrated efficaciously into the Geography course of study, particularly 'local are study ' without doing any drastic alterations to the bing course of study. It is GIS allows pupils to see, understand, inquiry, interpret, and visualise informations in many ways that reveal relationships, forms, and tendencies in the signifier of maps, Earths, studies, and charts. A selected subject of local country survey and how GIS can be implemented was carried out in developing country, Kepala Bata. The survey proves that GIS does assist pupils to place the growing and development in that peculiar country within decennaries. In fact, the pupils can analyze the development among the country stage by stage.

Harmonizing to Tarmiji et Al ( 2005 ) , GIS has the hereafter of going the 'data bank ' as it benefits the pupils, future coevalss and the environing society. It can be used at both degree, primary and secondary and yet be extended to all topics.

#### Obstacles in Integrating GIS in Malaysia

The cost of the GIS hardware 's and computing machine labs with complete Personal computer sets are high.

Teacher 's enthusiasm or willingness to accommodate the new technological GIS method to learn Geography low at rural topographic points. Less

computing machine accomplishments and fright for utilizing computing machines or latest engineerings.

Not adequate clip to finish the given undertaking in a given clip frame, could non happen suited clip to fix the labs, non adequate clip to form pupils and learn them how to utilize GIS package as it takes a longer clip to fix labs with perfect computing machine entree and package.

Privacy will go a critical issue for GIS as usage expands to legal applications. Data ownership will go critical to GIS, with a delicate balance between public and private GIS information.

GIS research needs tons of support and clip to finish it.

#### Suggestions to Implement GIS in Malaysia

Appoint computing machine lab helper to fix the lab with perfect computing machine entree and package and Teach pupils how to utilize the GIS package.

Equip all the pre-service and in-service instructors that big leagues in Geography particularly with the GIS cognition and accomplishments. Other instructors are encouraged every bit good.

Ministry of Education should centralise the informations that should be provided in order to construct a homogeneous instruction throughout Malaysia.

Use of GIS can be expanded to learn other capable like ICT, Science, Mathematics, Business Studies, History, and many more.

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## **Decisions**

The hereafter of GIS is in our custodies and we have the capableness to utilize the power that GIS brings to work out the universe 's jobs as it produce a great assortment of larning environments and learning stuffs.

## **Point of view**

I wholly agree that we should see utilizing the GIS package to learn geographics for our pupils. This is because:

Acquiring informations for a new GIS is no longer a major job. It is because GPS has become a major beginning of new GIS information and comes progressively from the GPS system. GIS engineering allows us to make things in proceedings that took hours with a pen and paper.

GIS package is now easier to put in and keep as many GIS databases are now distributed over local or broad country webs.

We can look at it as a tool that provides employment for newly minted geographics alumnuss. I agree that some with accomplishments in GIS are non geographically knowing. However, that does non do the tool a plaything, and hence worthless. If we use it right, GIS can be a really powerful clip salvaging tool that allows for accurate function.

GIS is an inordinately utile tool in a clip when so many people are in demand of spacial information rapidly. While the mean individual accessing Google Earth or Virtual Earth may non be good versed in Geography, GIS may really good be a tool to bridge that spread by promoting a new coevals of geospatial involvements. Anyone can really utilize GIS every bit long as they

have a really good apprehension of geographics, projections and spacial informations.

### **Links:**

hypertext transfer protocol: //www. teachers. tv/videos/ks3-ks4-geography-using-gis

hypertext transfer protocol: //www. teachers. tv/videos/hard-to-teach-secondary-geography-using-ict

### **Article 2: Retrieved from Science Direct [ 28th July 2010 ]**

#### **Design and Development of a Collaborative mLearning Module for Secondary School Science in Malaysia: Addressing Learners ' Needs of the Use and Perceptions of Technology.**

#### **Brief Summary of the Article**

This article was written by Dorothy DeWitt and Saedah Siraj from University of Malaya. It discusses about the acquisition of scientific discipline that does non show the nature of the topic in Malayan schools. ICT has the map so called Computer-Mediated Communications ( CMC ) to larn the procedures of scientific discipline outside the schoolroom. This CMC provides on-line treatments, enables reliable mLearning ( nomadic acquisition ) coaction and knowledge-building similar to scientists either in category or at place through CMC activities on the cyberspace and with text messaging.

#### **Summary of the Article**

This article was written by Dorothy DeWitt and Saedah Siraj from University of Malaya. It describes and discusses about the acquisition of scientific

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discipline that does not show the nature of the topic in Malayan schools in footings of utilizing scientific logical thinking procedures, behavior in coaction with other scientists ; stress the scientific procedure of doing finds with equals, sufficient activities for treatments with equals and usage of the linguistic communication of scientific discipline. In order to work out the job, Information Communications Technology ( ICT ) will be used as it enable treatment forums, electronic mails and wikis as it allows undertaking in advancement to be shared and improved. ICT has the map so called Computer-Mediated Communications ( CMC ) to learn the procedures of scientific discipline outside the schoolroom. This CMC provides on-line treatments, enables reliable mLearning ( nomadic acquisition ) coaction and knowledge-building similar to scientists either in category or at place through CMC activities on the cyberspace and with text messaging. An instructional faculty for collaborative mLearning that will go to to the job ( communications and treatments in scientific discipline ) will be developed for Form 2 scholars on the usage and perceptual experience of engineering. One subject from the scientific discipline topic has been chosen for this intent, faculty were developed and assessed by the experts.

### **Aim of the Research**

To find the usage and the perceptual experience of engineering of the pupils in communications and treatments in scientific discipline.

To plan a faculty based on the findings in the perceptual experience surveies.

To develop a mLearning faculty to be used for scientific discipline direction.

To measure the mLearning faculty that is being used for scientific discipline direction.

## **Research inquiry**

What is the state of affairs of the usage and perceptual experience of engineering among Malayan schools pupils in the context of the study/

What are the experts sentiments on the design of the collaborative mLearning faculty for Form 2 Nutrition?

## **Methodology**

The survey adapts a developmental research attack and has 3 phases:

### **Analysis:**

Sample and Population: Two groups were used for this intent. The samples for all three stages differ.

Learners group: Form 2 pupils were selected from an urban school in Petaling Jaya ( 158 multi-racial pupil population ) participated in a study to find the usage and perceptual experience of engineering.

Experts: Educators with 10 old ages of learning experience were chosen, 3 capable affairs that had experience learning scientific discipline with computing machines and proficient experts that had both cognition and 5 old ages experience in CMC.

Instrument: 2 different attack were used for informations aggregation.

The Technology Skills and Usage Questionnaire ( TSUQ ) - to find scholar 's perceptual experience in the engineering use, and usage of the computing

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machine and the nomadic phone for learning. ( Questionnaires ' were adapted with Cronbach Alpha coefficient of 0. 882 )

Evaluation by experts after the faculty design is completed.

Data 's was analyzed and presented harmonizing to the usage of engineering and the perceptual experience of the usage of computing machines and nomadic phones. Means and per centums were used for describing. In the rating stage, the interviews with the experts were transcribed and validated by the experts. The emergent subjects were reported.

Findings: Internet is a often used tools for pupils and instructors. Most respondents feels that computing machine is of import for learning. All pupils should be given the chance to utilize them for learning activities in school and place, meanwhile they feel that nomadic phones text messaging should be provided in the faculty.

Design of the Collaborative mLearning Faculty: The mLearning faculty was created based on First rules of direction ( Merrill, 2002 ) . Altogether 3 types of engineering tools were used for that intent ; wiki for an on-line collaborative group job undertaking, treatment forum for shorter jobs, and text-messaging quizzes.

### **Evaluation of the Collaborative mLearning Faculty:**

The experts feel that the sum informations that will be collected during the learning Sessionss will be a whole batch and they may hold jobs for pull offing them. Besides that, the activities will necessitate tonss of clip and

instructors may not hold that much of clip as they have to complete their course of study on clip.

English will be the medium of instruction in scientific discipline in this faculty and it was considered hard. The suggestion was to utilize simpler sentences for the pupils to understand. Inaccuracies in the content should be corrected and that includes shortened signifiers in text messaging. Experts besides requested a separate instructional faculty to be provided for mention and that picture, sound and in writing be included in the activities to provide to the multiple intelligences theory.

The determination concludes that the use of cyberspace is really broad among the Form 2 pupils but electronic mails are not popular among them.

The on-line treatment forums, phone treatments and text messaging were more popular among pupils as it could promote collaborative mLearning in Science.

## **Decisions**

Mobile learning can take topographic point in any location, at any clip and is for everyone as we have been active in nomadic authorization and acquisition since 2001, working to widen chances for learning through the usage of nomadic engineering.

## **Point of view and Suggestions:**

I think if we are utilizing cyberspace and computing machines to learn our pupils, it is really encourage able but I wholly do not hold that we should see utilizing the nomadic phones to learn our pupils. This is because:

Each one of us wants a richly synergistic content for our phone, does n't count if it 's Blackberry, iPhone or Nokia. The world about doing mLearning content is that there is no individual solution to force amply synergistic nomadic content into every possible phone. This is something impossible to be done. On one side, traveling for the richest possible interactivities and on the other side traveling for the widest possible phone coverage.

If I 'm an pedagogue, I decidedly want all my pupils have the same entree to larning no affair they are from rural or urban country, rich or hapless and slow scholar or fast scholar.

Another of import facet is the screen contemplation. This is something people frequently do non believe of but regret non look intoing when they are shopping for a phone. For illustration, my current device, the Motorola works great in bright visible radiation state of affairss where one would hold problem seeing the screen on an iPhone. It is a really of import facet as the context of our mLearners is merely every bit of import as the content. If our scholars could non read what is on the phone, what can we anticipate from the mLearning text scheme?

The cost involved to acquire the same device as your schoolmates. If I 'm traveling to take part in nomadic acquisition, I decidedly need a device that enables me to take part in most types of larning environment as my friend does. As a pupil, I might non hold that much of money neither my parents can afford to acquire me one. For me, a good Mobile larning scheme can take advantage of even simple devices that cost small to nil from most wireless webs.

Size of the device truly affects. The falsely plans nomadic learning content will merely take to a compressed e-learning/mLearning. A good Mobile learning scheme takes into history what the scholars have and need and designs consequently.

Battery life for an mean nomadic device is 8 to 10 hours of uninterrupted use. If our scholar needs a uninterrupted learning experience that is nomadic and lasts more than several hours, we should likely re-evaluate our Mobile learning scheme.

The restriction in storage capacity as pupils learn far beyond the course of study and they need ample of storage for their activities. If we are having away large files like films, sound, podcasts, it is of import that we have a memory slot.

The camera quality as how many mega pixels do the camera has as the more mega pixels the better the quality of the image taken with it.

Wi-Fi is a must as it will enable us to link to free cyberspace and expression for the information 's needed.

Bluetooth is of import for case radio interaction between schoolmates.