

THE DIGITAL DIVIDE ISSUES: IS THE GAP GETTING BIGGER?

Mohd Nizam Osman
Universiti Kebangsaan Malaysia

Abstract

This paper addresses the digital divide issues based on a survey of 150 respondents comprising of governments and respondents from rural and urban sectors of selected areas as well as in-depth interviews. The study explored various government measures to encourage the wider uptake of computers and other forms of ICT applications. The study also looked into steps taken to minimize the digital divide gap between residents residing across the rural and urban parts of the country. From the study, it is obvious that the various measures introduced by the government have not been effective in minimizing the digital divide gap between the residents. Clearly, the findings of the study also revealed that the objectives of some of the measures introduced by the government were largely seen as strategic. However, in terms of the planning and implementation mechanisms, the government will need to put in more effort, especially in terms of coordination between the government and other implementation bodies.

Isu Ketidakseimbangan Digital: Apakah Jurang Semakin Lebar?

Abstrak

Makalah ini menyentuh mengenai isu jurang digital berdasarkan kajian survei ke atas 150 orang responden terdiri daripada pegawai kerajaan dan responden dari bandar dan luar bandar di beberapa kawasan terpilih, dan juga teknik temubual mendalam. Kajian tersebut meninjau pelbagai langkah-langkah kerajaan untuk merangsang penggunaan komputer dan aplikasi ICT lain. Kajian juga meninjau langkah-langkah yang diambil untuk mengurangkan jurang digital di antara penduduk bandar dan luar bandar di negara ini. Hasil kajian menunjukkan langkah-langkah yang diimplementasi oleh kerajaan tidak begitu berkesan mengurangkan jurang digital dalam kalangan penduduk. Kajian juga menunjukkan bahawa langkah-langkah kerajaan adalah sebahagian besarnya bersifat strategik. Bagaimana pun, dari segi perancangan dan implementasi, kerajaan perlu berusaha lebih terutamanya meningkatkan koordinasi antara kerajaan dan pihak yang melaksanakan usaha ini.

Keywords: Digital divide, ICT applications, ICT-enabled environment, information haves and haves-not, ICT policies

Introduction

In Malaysia, the commitment of the government to facilitate the wider and extensive diffusion in the uptake and use of computers can partly be seen through the establishment of various policies to enable the development of physical infrastructure as a means of facilitating the implementation of the government's ICT policies. Part of this can be seen through the implementation of the MSC policy in 1996 that was designed as a test-bed for the development of ICT as a means of providing "a comprehensive world-class ICT-enabled working and living environment to catalyze the development of a knowledge-based economy" (8MP:369).

In this case, the implementation of the MSC policy, has led to the establishment of various initiatives undertaken to encourage a larger percentage of the population to use computers more extensively. Part of this is encompassed within the government's objective of reducing the digital divide gap between the 'information haves' and 'information haves-not' especially among residents across urban and rural parts of the country. Among others, the government initiatives in this case include the implementation of the flagship application projects that are encompassed within the implementation of the MSC policy, the provision of incentives for computerisation and automation, the enhancement of education and training programmes, and the creation of a number of legislation to encourage the use of E-commerce more extensively.

The implementation of the MSC, together with the implementation of the government's general ICT policies are aimed at getting a larger percentage of the general community to use computers more extensively, and thus to minimise and reduce the digital divide gap which is rather apparent especially among residents across the rural parts of the country. This is because the government held a firm belief that the use of computers is vital to the economic development of the country and therefore all sectors of the Malaysian population should be encouraged to utilise the computer and other forms of ICT applications more extensively. This was explicitly stated in the 8MP report, as indicated below:

"As ICT presented the best opportunities to increase productivity and improve competitiveness, several programmes and projects were implemented to encourage a wider diffusion of ICT in the economy" (8MP report :363)

"The ability to create, distribute and exploit knowledge and information is often regarded as the single most important factor underlying economic growth and improvements in the quality of life. Recognizing that ICT is an important enabling tool towards achieving this objective, the Government undertook various initiatives during the Seventh Plan to facilitate the greater adoption and diffusion of ICT to improve capacities in every field of business, industry and life in general". (8MP report:364)

In order to encourage the diffusion of computers across the various sectors of the local economy,

the government has stepped up measures towards the development of its ICT initiatives. These are aimed at encouraging the use of computers not only among the urban sectors of the country, but across the rural parts of the country as well. This is because the government is concern with the low uptake of computers and other forms of ICT applications especially among citizens residing across the rural parts of the country. This has resulted in the implementation of initiatives such as the *Gerakan Desa Wawasan*, *Internet Desa*, and the Mobile Internet Unit. The implementation of these initiatives are primarily aimed at firstly, introducing computers at the rural level, secondly to encourage the use of computing technology as a means of fostering development across the various sectors of the rural communities and thirdly, to minimise the digital divide gap between residents residing across the urban and rural parts of the country. These issues are discussed more extensively in the following sections.

Methodology

To address the main arguments outlined in the study, the method of collecting primary data for the study was largely conducted through two means: i) questionnaire surveys which were distributed to 150 respondents from the following 5 categories: government officers from Ministry of Energy, Telecommunication and Multimedia; 2 categories of respondents from the rural and urban sectors of the country comprising of respondents from Sungai Pusu, Gombak; respondents from Desa Beranang, Selangor; respondents from Cheras, Kuala Lumpur; and respondents from Pandan, Kuala Lumpur. The data obtained from the questionnaire surveys are analysed using the descriptive approach.

Apart from the questionnaire surveys, qualitative data were also generated by means of in-depth interviews held with a number of carefully selected key respondents across the 5 categories of respondents who are believed to be able to provide their expert opinions on the formulation of policies to minimize the digital divide issues across the various sectors of the country.

Initiatives to Enhance Diffusion of ICT Across the Rural Communities

As a step to facilitate the wider and more extensive diffusion in the uptake and use of computers to the wider society, the government has introduced a number of measures which have been implemented not only across the urban sectors of the country, but across the rural parts as well. While the formulation and implementation of these measures are largely meant to benefit the overall wider society, some of these were specifically introduced to promote the use of computers to facilitate economic development across the rural communities. Some of these initiatives include the *Gerakan Desa Wawasan*, *Internet Desa* and the Mobile Internet Unit. These are discussed more extensively in the following sections.

Gerakan Desa Wawasan

The *Gerakan Desa Wawasan* initiative which is being managed under the administration of the Ministry of Rural Development Malaysia (MRDM), was launched in 1996. The formulation and implementation of this initiative, largely seen as part of the government's measure to promote its general ICT policy, was primarily aimed at "increasing the awareness of the rural population to

participate actively in bringing about change and development to their areas” (8MP:366). To facilitate this, measures were introduced for the allocation of computer facilities to be built across the rural communities to “not only assist in the management and administration of the villages but as an initial step to introduce ICT at the village level” (8MP:366).

Although the implementation of this initiative was largely seen as attempts undertaken by the government to help develop rural communities through the use of computing technology, however questions need to be raised as to how the extensive use of computers can indeed facilitate development of the rural communities. Furthermore, are these computers mostly used to facilitate higher-level activities or are these mostly used for administrative activities such as information storage, retrieval and dissemination, especially by means of emails and the Internet. Apart from this, questions should also be raised as to how these forms of computer usage could help enhance the economic development of the rural communities. These issues have not been explicitly addressed by the government when it implemented the *Gerakan Desa Wawasan* initiative.

Furthermore, apart from the difficulty of getting the village communities to be interested in computers – considering computers and other forms of ICT applications are relative new to them, the effectiveness in the implementation of this initiative has also largely been criticised by a number of respondents involved in the study. In this case, most of the interview respondents seemed to be questioning the practicality of introducing computers at the village level since its usage for economic development has not been clearly outlined or justified. This issue was raised by an interview respondent from the industry:

“...compared to people living in the city, I think it would be a lot more difficult to get people living in the villages to even be interested in computers...these, to most of them are alien forms of technology...maybe the younger generation would be interested in computers because they can use computers for playing computer games or for emailing but I don’t quite know how the adults can use computer more effectively, other than browsing through the Internet to get latest information...most of them would still prefer to read newspapers for the latest news ...in this case, I don’t see how setting up computer facilities in the rural areas could help rural folks improve their life style...I think what the villagers would really want is adequate supply of fertilisers, electricity, education facilities...and maybe loans for them to buy tractors...these are some of the things which are more important to the villagers compared to computers”

Respondent from Cheras, Kuala Lumpur

In spite of this, some respondents seemed to indicate that the advantage of using computers for economic development at the rural level can only be achieved through a series of education and training programmes that are introduced at the village level. These training programmes should be aimed at firstly, getting rural communities to be more familiar with computers and secondly and more importantly, getting rural communities to learn to use computers more productively, as can be seen from the following response given by one of the interview respondents involved in the study:

“...maybe, especially through the introduction of more training programmes...bottom line is, the villagers will need to be exposed to computers first, then introduce training before assisting them to use computers more extensively...there are many things that can be done to help improve the lives of the villagers...teach them how to use computers, especially emails to market their produces to retailers, show them how emails and the Internet can be used to communicate with the government...I think there is potential in this project but proper execution is needed in order to achieve the best results...”

Respondent from Desa Beranang, Selangor

In contrast, the views and comments of respondents from the government sector were more cautious and generally tend to show support towards the implementation of the initiative, as revealed in the quotations below (METM refers to Ministry of Energy, Telecommunication and Multimedia Malaysia):

:

“we need to show them how to use computers, especially the Internet to get latest information, not only locally but internationally...some of the news coverage in the local newspapers are quite restricted, but if they know how to browse the web, they can get a lot more useful and latest information...”

Respondent from METM

“...I think there is nothing wrong in these initiatives....what we need is proper implementation procedures. People living in the rural areas can even use the computers to market their products on a bigger scale...use computers to survey prices...create a network among farmers...exchange ideas and information...”

Respondent from METM

Although the views and comments outlined above seemed to indicate differences in terms of reactions among respondents from the government sector compared to the opinions of respondents from the rural and urban sectors of the country, the overall reactions, on average seemed to indicate more work is needed to effectively implement the *Gerakan Desa Wawasan* initiative. In spite of this, the report highlighted in the 8MP revealed that the implementation of the *Gerakan Desa Wawasan* initiative has benefited a significant percentage of the rural communities. This is partly highlighted in the 8MP report as shown below:

“...by the end of 2000, a total of 995 villages benefited from this programme...” (8MP report :.366)

Although excerpts from the 8MP report highlighted above clearly indicate progressive development of the *Gerakan Desa Wawasan* initiative, however a large percentage of the respondents, especially respondents from the rural and urban categories seemed to indicate otherwise. In this case, most of the respondents felt that the implementation of the *Gerakan Desa*

Wawasan has not been effective in minimising the digital divide gap between the ‘information haves’ and ‘information haves-not’ especially among residents residing across the rural parts of the country. As shown in the figures in Table 1, this is especially apparent among respondents from the urban category where a total of 73 percent of the respondents felt the *Gerakan Desa Wawasan* initiative has not materialised in minimising the digital divide gap between residents of the urban and rural parts of the country. This is followed by respondents from the rural category where 56 percent of them felt the *Gerakan Desa Wawasan* has not been able to minimise the digital divide gap, although it was able to increase the rate of computer uptake among residents across the rural parts of the country. The figures in Table 1 were generated from the Questionnaire Survey and the question was worded as follow: ‘The implementation of the government’s *Gerakan Desa Wawasan* initiative has managed to minimise the digital divide gap between ‘information haves’ and ‘information haves not’ among residents of the rural and urban parts of the country’.

Table 1: Frequency Distribution on Reactions of Respondents: The Implementation of the *Gerakan Desa Wawasan* Initiative Has Managed to Minimise the Digital Divide Gap?

Category of Respondents	S.A	A	U.D.	D.	S.D.	Tot.
Cat. 1 – Government Officers from METM5	-	15	10	4	1	30
Cat. 2 – Respondents from Kg. Sungai Pusu, Gombak	-	5	8	12	5	30
Cat. 3 – Respondents from Desa Beranang, Selangor	3	4	6	10	7	30
Cat. 4 – Respondents from Cheras, KL	-	3	5	22	-	30
Cat. 5 – Respondents from Pandan, Kuala Lumpur	4	1	3	15	7	30

Key: In the above table, the following heading: S.A., A., U.D., D., and S.D., refers to strongly agree, agree, undecided, disagree, strongly disagree, respectively.

Obviously, the aim and objectives of the *Gerakan Desa Wawasan* initiative is largely welcomed by a large percentage of the residents across the rural parts of the country, however the implementation mechanism will need to be reanalysed and re-evaluated. Here, questions should be raised with regards to infrastructural development as well as training and development, especially in getting the rural residents to understand the potential and capacity of ICT applications. These concerns will need to be addressed first before the objectives of the *Gerakan Desa Wawasan* initiatives can be achieved.

Internet Desa

The *Internet Desa* initiative, launched in March 2000, is one of the pilot projects introduced under the *Gerakan Desa Wawasan* initiative. It involves the provision of ICT infrastructure and facilities at post offices and community centres across the rural parts of the country. The implementation of this initiative enables the provision of Internet facilities, including the provision of free email accounts to enable greater percentage of the rural communities to use computers as a means of accessing information on government services, local events and other forms of information. Similar to some of the objectives introduced under the *Gerakan Desa Wawasan* initiative, the main aim of the *Internet Desa* is to firstly, introduce computers at the village level, secondly, promote a wider uptake and use of computers especially among the village communities and thirdly, promote the use of computers as a means of enhancing economic development of the rural communities.

Here, a number of questions will need to be raised, especially in terms of the significance of establishing the *Internet Desa* initiative since the objectives in the implementation of this initiative are similar to those of the *Gerakan Desa Wawasan*. Obviously, it would be a lot more effective to introduce only one initiative that is aimed at enhancing the development and application of computer technology at the rural level and outline various policies and action plans to ensure the effective implementation of the initiative. This way, the attention of the government can then be focused on the development of proper facilities such as developing computer centres in order to realistically implement the government's ICT policies at the rural level. Part of this was raised by a number of interview respondents, as reflected in the quotations below:

"...set up more Internet facilities...the government also needs to ensure that the constant disruption of electricity power supply, especially in the village communities are minimised...in terms of management of these facilities, I think constant monitoring is a must to prevent these places to be turned into a coffee shop or conference centres..."

Respondent from Desa Beranang, Selangor

Apart from this, the government also will need to take into account the strategies to ensure the effective usage of these places. In this case, these centres will need to introduce classes which provide lessons on the basics usage of computers, as indicated by an interview respondent from Gombak:

"...have more training centres developed and conduct more computer classes to educate the village folks on the basics of using computers...no point of introducing this initiative when the basic facilities are not even there..."

Respondent from Kampung Sungai Pusu, Gombak

Although the implementation of the *Internet Desa* initiative, together with the *Gerakan Desa Wawasan* are primarily aimed at promoting computer usage as one of the means of enhancing ICT uptake across the rural communities, arguably given the lack of significant development undertaken at the village level, including lack of facilities to support the implementation of the government ICT policies, it would be rather difficult to justify government's actions to get the

village communities to use computers as a means of enhancing social and economic development across the rural regions.

In spite of this, the government is optimistic that the implementation of its ICT policies at the rural level will eventually be appreciated by the rural communities. Part of this is highlighted in the following 8MP report which highlights the government’s confidence that the number of computer users at the rural level would increase significantly in accordance to the stage of development:

“...its effectiveness is measured in terms of the number of users. Initial evaluation revealed that there were 55 to 70 users per week, many of whom were students. By the end of the Plan period, 12 such centres were implemented throughout the country, and the number of users would certainly rise...”(8MP report :366)

In order to analyse the effectiveness of the *Internet Desa* initiative, the reactions of the respondents regarding this issue were also probed. The respondents largely gave contrasting reactions regarding this issue, with a significantly larger group of respondents from the rural and urban categories clearly indicated their disagreement regarding the effectiveness of the *Internet Desa* initiative implementation in minimizing the digital divide gap between residents from the rural and urban parts of the country. Here again it is clear that the objectives of the *Internet Desa* initiative were largely seen as strategic, however the planning and implementation mechanisms has to be reanalysed.

Table 2: Frequency Distribution on Reactions of Respondents: The Implementation of the *Internet Desa* Initiative Has Managed to Minimise the Digital Divide Gap?

Category of Respondents	S.A	A	U.D.	D.	S.D.	Tot.
Cat. 1 – Government Officers from METM	3	13	12	1	1	30
Cat. 2 – Respondents from Kg. Sungai Pusu, Gombak	2	1	10	17	-	30
Cat. 3 – Respondents from Desa Beranang, Selangor	1	6	4	12	7	30
Cat. 4 – Respondents from Cheras, Kuala Lumpur	-	2	12	11	5	30
Cat. 5 – Respondents from Pandan, Kuala Lumpur	-	5	9	13	3	30

Key: In the above table, the following heading: S.A., A., U.D., D., and S.D., refers to strongly agree, agree, undecided, disagree, strongly disagree, respectively. The figures in Table 2 were generated from the Questionnaire Survey and the question was worded as follow: ‘The implementation of the government’s Internet Desa initiative has managed to minimise the digital divide gap between ‘information haves’ and ‘information haves not’ among residents of

the rural and urban parts of the country'.

Similar to the findings of the *Gerakan Desa Wawasan* initiative, the data presented in Table 2 clearly revealed that a large percentage of the respondents felt that the implementation of the *Internet Desa* initiative has yet to achieve its objectives in minimizing the digital divide gap between 'information haves' and 'information haves-not' among residents across the rural and urban parts of the country. This is evident from that fact that 60 percent of the respondents from the rural sector felt that the implementation of the *Internet Desa* has not materialised in minimising the digital divide, compared to 53 percent of respondents from the government sector who felt otherwise. Part of this could be attributed to the infancy of the *Internet Desa* program, especially since it was only introduced only in 2000. It would take a significantly longer period of time before the objectives of the program could fully be achieved.

Furthermore, it should be argued here that the effectiveness in the implementation of any government policies and initiatives cannot be simply measured in terms of statistical figures alone. These should also be measured from other perspectives as well, especially in terms of the realistic and practicality of these initiatives to the existing economic and technological stage of development undertaken in the country. In this case, it would require more extensive and in-depth study on all aspects in the implementation of government policies before the effectiveness of these implementations can be accurately measured and analysed.

Mobile Internet Unit

The Mobile Internet Unit (MIU) was launched in August 1999 and is comprised of a 44-seater bus renovated into a cyber learning station to provide ICT training and an electronic classroom experience to school communities, primarily across the rural parts of Malaysia. It consists of 20 Internet-ready networked computers, a server, a big screen television, DVD player, ICT training modules and computer reference books, most of which are centred on basic computer usage skills. The project is managed by MIMOS, funded partly by the United Nations Global Development Network (UNDP) and the Asia-Pacific Development Information Program (APDIP).

The implementation of the MIU initiative, again part of the initiative to promote the government's general ICT policy, is seen largely as strategies undertaken by the government to firstly, encourage a greater percentage of its population to use computers and secondly and more importantly, to increase the percentage of computer users across the rural communities. In this case, although the implementation of the MIU is largely seen as part of the government's general ICT policy initiatives, however the implementation of this initiative is also partly seen to support the formulation and implementation of the smart school initiative – one of the seven flagship application projects encompassed within the MSC policy implementation. Here, the government is taking the initiative to introduce computers at the rural level with the intention of eventually transforming all schools across the country, including those across the rural regions, into the 'smart school' concept by the year 2010.

In spite of this, the effectiveness and more importantly, the practicality in the implementation of this initiative needs to be questioned. This is because given the lack of proper infrastructural development at the rural level which includes poor road system, it would be rather difficult to

send a 44-seater coach that is equipped with computers and other forms of information and communication technologies to the rural areas. Besides, there will also be problems in terms of getting connected to the Internet since the availability of Internet connections which includes telephone cords are rather low across the rural areas. Part of this is highlighted in a report published in the *New York Times* (2001) as highlighted below:

“Mobile Internet Unit is something of a misnomer, however. The bus can establish Internet access only by stringing a telephone cord to a telephone jack nearby. If one is not available, pupils on the bus surf Web sites stored on the bus’s computer server which can be frustrating at times due to slow rate of connectivity

Furthermore, there is also the tendency that the Mobile Internet Unit may be misused by the village communities as indicated by an interview respondent:

“I don’t know, but I thought the support given to the MIU was rather low, wasn’t it? Some may even misuse this and instead, use the bus as a form of transport...problems about parking, there should be adequate parking facilities to accommodate these busses, this problem is rather obvious in the villages...would resort to parking alongside the busy main road and this would cause massive traffic jams” Respondent from METM

In spite of the negative views and comments generated by the interview respondents, the government seemed to be defending the MIU project, seen here largely through the extensive recognition and achievement given to the MIU initiative, as indicated in the following quotation (<http://www.miu.nitc.org.my/miu.htm>):

“The Mobile Internet Unit (MIU) was chosen as one of the finalists, out of 612 ICT projects contested worldwide in the Stockholm Challenge Award 2000, Sweden. The MIU, a National ICT Council (NITC) initiative project has moved a step higher befitting the NITC motto of creating webs locally and making waves globally”

Apart from this, the establishment of the MIU project is also seen as a strategic step towards reducing the digital divide in the country. In this context, the MIU project is believed to be able to increase computer literacy among the rural community. Part of this can be seen from the quotations presented below:

“The Global Digital Divide Initiative of the World Resources Institute has selected the MIU as exemplifying “best practice” in bridging the global digital divide. The MIU is featured in The Digital Dividend Clearinghouse online knowledge base designed to track digitally-enabled projects in the developing world. NITC 2004

In terms of the reactions provided by the respondents pertaining to the effectiveness of the Mobile Internet Unit, especially in minimising the digital divide gap between residents across the rural and urban parts of the country, the findings of the study were largely unconvincing as revealed in Table 3.

Table 3: Frequency Distribution on Reactions of Respondents: The Implementation of the Mobile Internet Unit Initiative Has Managed to Minimise the Digital Divide Gap?

Category of Respondents	S.A	A	U.D.	D.	S.D.	Tot.
Cat. 1 – Government Officers from METM	3	12	12	2	1	30
Cat. 2 – Respondents from Kg. Sungai Pusu, Gombak	4	2	8	16	-	30
Cat. 3 – Respondents from Desa Beranang, Selangor	-	5	10	15	-	30
Cat. 4 – Respondents from Cheras, Kuala Lumpur	3	4	16	7	-	30
Cat. 5 – Respondents from Pandan, Kuala Lumpur	2	6	13	6	3	30

Key: In the above table, the following heading: S.A., A., U.D., D., and S.D., refers to strongly agree, agree, undecided, disagree, strongly disagree, respectively. The figures in Table 3 were generated from the Questionnaire Survey and the question was worded as follow: ‘The implementation of the government’s Mobile Internet Unit initiative has managed to minimise the digital divide gap between ‘information haves’ and ‘information haves-not’ among residents of the rural and urban parts of the country’.

From the data presented in Table 3, it is obvious that on the average, a significantly large percentage of the respondents in the 5 categories were unfamiliar with the Mobile Internet Unit. In this case, it would be safe to assume that a large percentage of these respondents may not have heard of the Mobile Internet Unit initiative and as such, may not be aware of its implementation objectives. This is not surprising, considering the Mobile Internet Unit was only introduced for a short while before the government decided to stop its operation because as revealed before, its implementation has largely been ineffective.

Furthermore, a significantly larger percentage of the respondents who knew about the existence of the Mobile Internet Unit felt the initiative has not been effective in minimising the digital divide gap between residents across the rural and urban parts of the country. This is evident from the fact that over half of the respondents from the rural category felt that the Mobile Internet Unit has not been effective in its objectives to minimise the digital divide gap, compared to only 18

percent of the respondents from the same category who felt otherwise.

As discussed earlier, again, the effectiveness of the MIU cannot be simply measured in terms of the number of awards and achievements achieved, but more importantly, it should be measured and analysed according to its capacity and role to partly facilitate the government's ICT policy across the wider society, and more importantly in this case, across the rural communities. In this case, the reactions and views generated by the interview respondents seemed to indicate that the MIU has yet to achieve this objective.

Conclusion

The study has explored various government measures to firstly encourage the wider uptake of computers and other forms of ICT applications among all sectors of the Malaysian population and secondly – and more importantly, to minimise the digital divide gap between residents residing across the rural and urban parts of the country. From the study, it is obvious that the various measures introduced by the government have not been effective in minimising the digital divide gap between the residents. Clearly, the findings of the study also revealed that the objectives of some of the measures introduced by the government were largely seen as strategic, however in terms of the planning and implementation mechanisms, the government will need to put in more effort, especially in terms of coordination between the government and other various implementation bodies before these measures can be implemented effectively. Otherwise, the digital divide gap will obviously continue to become wider.

Apart from this, the participation and involvement as well as support from all sectors of the population are also vital before the objectives of these measures can be achieved. In this case, residents residing in the rural parts of the country will need to be given more exposure on the importance of having the knowledge and skills in using computers and other forms of ICT applications more strategically. This is important not only for the development of the self, but for the economic development of the rural sectors of the country as well.

About the author

Dr. Mohd Nizam Osman is a lecturer at the School of Media and Communication Studies, Faculty of Social Sciences and Humanities, UKM.

For further enquiries please e-mail: mno@ukm.my, nizamosman@hotmail.com

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