Malaysian Defence and E-Learning*

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Abstract: This paper begins with an analysis of the changing security scenario in the Asian region, with special focus on Malaysian defence strategies and foreign policies. Beginning in the mid 1990s, the Malaysian government shifted its attention away from the counter insurgency strategies of the early decades of independence to focus on wider questions of Malaysian security in the regional and global context. The growing awareness of the shifting paradigms in Asia also gave rise to the need for new approaches to military education/training. The second half of the paper analyses the extent to which Malaysia is about to take advantage of e-learning in academic and military training and the kind of education and training approaches that are needed in the future to ensure that Malaysia's defence needs are met. The empirical basis of the second half of this paper is based on a pilot survey of 267 Malaysian Undergraduate Cadets attending the Military Academy of Malaysia (MAM) in October 2004. This academy is scheduled to become National Defence University (NDU) in 2007. The paper addresses the question of what kind of academic and military curriculum and delivery technology could best prepare these students to face the emerging challenges regionally and globally.

Key words: military education military training e-learning Malaysian defence strategies

1. Introduction

Military institutions are considered to be the oldest organization in the world. Since Plato, military organizations have often been called the “guardians” and the public respects them as this (Stiehm 2002: 1). Given their special role and prestige, most governments need to ensure that their military institutions are ready to defend the country. Such readiness depends critically on comprehensive education and training. Continuously improving the education and training programmes for the military has, therefore, become one of the most important agendas of governments. This is reflected in the large military budgets that have emerged in the post WW2 world. In Plato’s original conceptualization, military education and training demanded physical, intellectual, strategic, military, moral and practical programmes (Plato 1998: 70-114). In the modern era, the capacity to meet these educational challenges has been improved by new technologies that were not available before the ICT (Information Communication Technology) revolution of the last two decades. In particular, the international debate about the role and nature of e-learning in the civilian sector has relevance for military training too. This paper addresses the current state of and future prospects for e-learning in the Military Academy of Malaysia (MAM).

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Since the inception of Vision 2020 and Multimedia Super Corridor (MSC) in 1991 and 1996 respectively, new technologies have been regarded as a critical factor in ensuring that Malaysian economic development will continue at the high level that was achieved before 1991. Both these policies placed a priority on Malaysia creating a new generation of knowledge workers. Ironically, Vicziany and Puteh (2004: 19) have argued that despite this, Malaysian government strategies have not placed much emphasis on education and the use of ICT. Instead, with few exceptions the burden has been placed on the private educational sector. Whatever the policy failures until now, the emphasis on creating knowledge workers in Malaysia has created a general awareness of the potential of e-learning. The leading Malaysian universities have, therefore, started to establish nascent IT policies, infrastructure and e-learning curriculum (Puteh Chapter 1 & 2, MS, 2004). The question is whether the military sector has kept up with these trends?

This paper begins with an analysis of the changing security scenario in the Asian region, with special focus on Malaysian defence strategies. The second half of the paper analyses how Malaysia may take advantage of e-learning strategies in producing a military training system that has greater capacity to meet Malaysia's defence needs in the future. The empirical basis of the second half of this paper is based on a pilot survey of 267 Undergraduate Cadets attending the MAM. MAM has not yet introduced a single subject or course that uses an e-learning approach. However, in 2006 MAM will be upgraded into a university and at this point MAM will come under increasing pressure to replicate the innovative teaching strategies being trialed in other universities. The current study provides a benchmark which future developments may need to consider.

2. Malaysia's Defence Strategies

Since the mid 1990s the Malaysian government has shifted its focus from the counter-insurgency strategies of the early decades of independence to wider questions of Malaysian security in the regional and global context. These changes recognize the momentous shifts in the overall security architecture of the Asia Pacific region. After gaining Independence in 1957, the government started to develop relations with neighbouring countries. A series of talks ultimately led, in 1963, to the first Malaysian Prime Minister's proposal to establish Malaysia. This Malaysian state was to include Peninsular Malaya, Sabah, Sarawak, Singapore and Brunei. However, consensus could not be reached. This then led to a period of confrontation in 1963. In the end, the modern Malaysia state was established with those who agreed to come together. Brunei and Singapore withdrew and became separate political entities. These early encounters made Malaysia aware of the importance of regional security. Malaysia's sensitivity to regional security was further heightened towards the end of the Vietnam War when Saigon collapsed and British and U.S. troops were withdrawn. Malaysia had a strong anti-communist history, based on the communist uprisings of 1940-1960. More recently, Malaysia has had to again reconsider the evolving regional security scenarios with the rise of India and China and the threat of international terrorism. Today, Malaysia is engaged in a continuous reassessment of the kind of military system it needs and the appropriate educational and training infrastructure that this requires.

Malaysia's National Defence Strategy identifies three key areas of interest. Firstly, there are national strategic interests that involve the immediate territory surrounding Malaysia, the region and the international arena. Secondly, the policy speaks of Malaysia's defence principles which include (1) preventing and obstructing threats to national security and (2) total defence. Lastly, the strategy revolves around three main principles which are defined as a) self reliance, b) regional cooperation and c) foreign assistance. The principle of self reliance is

further supported by two notions. The first is having the capacity to act alone without any outside assistance in all matters pertaining to internal security. The second assumption is that Malaysia will have the capacity to act alone in defending its sovereignty and security interests within its immediate neighbourhood from low and medium level external threats (National Defence Strategy 2003: 1).

Malaysia has repeatedly stressed the importance of adhering to the principle of non-interference in internal affairs of its neighbours. At the same time, good neighbourhood policy has led Malaysia to develop close bilateral relations with its border states. In the event of disputes about land and maritime boundaries Malaysia has involved the International Court of Justice (ICJ). The manner in which Malaysia resolved overlapping territorial claims with the Philippines (over Sipadan Island) and Singapore (over Batu Putih Island) provide examples of Malaysia's commitment to reconciliation. Perhaps the most significant example of Malaysia's engagement with regional cooperation has been her involvement in the ASEAN Regional Forum (ARF) which has proven to be a major confidence building initiative in Southeast Asia.

Clearly Malaysia does not envisage playing an independent role in policing the region or becoming a major global player in security matters. However, even the relatively modest domestic and border concerns expressed by the defence strategy require a modern and competent military. What role might e-learning play in the development of such a military force?

3. E-Learning and the Military

Military institutions have emerged as global leaders in the application of ICT strategies to learning and training programmes. In particular the U.S. military is the world's biggest spender on e-learning strategies and technologies. Under pressure to reduce the cost of face-to-face (FTF) teaching, in 1998 the U.S. military converted 525 courses into e-learning options that could be delivered on demand (TRADOC 1999: 12). Perhaps the most dramatic example of U.S. military commitment to e-learning is eARMYU.com, which is an e-learning initiative of the U.S. army. This commenced in 1997 with two objectives: first to ensure that American recruits did not drop out of the army once they had decided to become soldiers. The best way of achieving this was to give them the same professional opportunities that their civilian counterparts had – in particular educational opportunities to "earn credits, degrees and certificates while on active duty". The U.S. army provides this professional training at little or no cost to the individual soldier as a further incentive for recruits. By attracting and retaining the brightest and the best, the U.S. army met the second objective of the eArmyU programme: to have on call "educated, technology-savvy soldiers who will succeed in the missions and on the battlefields of the 21st century" ("Mission Statement" eARMYU.com 2000).

In the Fiscal Year 2002/2003, the U.S. Military spent more than $2.2 billion (Wilson 2004: 1) to develop viable e-learning technologies. This is not the place to assess whether this investment by the U.S. military has paid off. Rather the rest of the paper proceeds on the assumption that the returns have been justified by the expenditure[1]. Certainly the U.S. military has acted as something of a model for military systems in other parts of the world. The large volume of expenditure on e-learning by the U.S. military has been widely seen as part of the reasons for the continued power of the U.S. globally. This assumption encourages other countries to follow America's lead. The Malaysian Armed Forces (MAF) might be one of the few in the world to whom this has not applied until now.

[1] My PhD thesis at the Monash Asia Institute, Monash University, will engage in this debate at length.

The Military Academy of Malaysia (MAM) is a little known military institution for all the reasons that reflect the middle ranking status of Malaysia on the global scene. Yet given the shifting security scenarios in Asia, a better understanding of MAM is needed if the long term defence capacity of Malaysia is to figure as part of a regional security equation. MAM simultaneously awards students with professional degrees and military ranks. This requires a balance to be achieved between their academic and military performances. Statistics show that MAM's undergraduates, called SISKA, do not have strong academic records. Most SISKA receive lower second class and third class degrees. This has been so since the first batch graduated in 1999. Only about 15.9% (104 out of 656 graduates) have graduated with upper second class degrees during the last five years (1999 to 2004) and only one SISKA has graduated with first class honours during the same period (MAM Year Book 2004: 12).

There are many reasons that can be postulated for this poor academic performance. First, many SISKA are unable to manage their time and balance their academic and military tasks. They easily lose concentration during academic classes due to a state of physical exhaustion. Some SISKA fail to come to academic classes simply because they are too tired. One reason for this is the structure of the daily routine that starts at 5am with physical training (PT). Academic sessions are compulsory from 8am to 4pm. Another PT takes place from 5pm to 7pm. Quiet Study Time runs from 8pm to 11pm; it is compulsory and students must do this work in their classrooms. In addition to this full, daily calendar, time is also set aside for roll calls and military exercises between 11pm to 2am. SISKA go to bed late and rise early and by the first academic class at 8am, they are often exhausted. Reform here requires no new technology, only the introduction of a more realistic timetable.

Another possible explanation for poor academic results is that the academic training provided to SISKA is under-resourced. A third possibility is perhaps the daily routines are too inflexible and give recruits little discretionary time for proper study. Certainly, the poor academic results suggest that improvements to the teaching and learning programmes are urgently needed.

The question is what can e-learning offer MAM? Could e-learning options improve classroom attendance, student interest and long term academic results? Might e-learning in MAM also provide a platform for further e-learning approaches during the professional career of SISKA? This latter question is very important given the increasingly important role assigned by the U.S. military to battlefield simulations as a way of developing good leadership in critical military situations. At face value, the flexibility ("any time" and "any where") of e-learning holds much potential.

Before any of these questions can be answered, a pilot study was needed to ascertain what perceptions the current SISKA had of e-learning. As noted at the start of this paper MAM currently has no e-learning courses. This meant that the pilot study provided a unique opportunity to ascertain what the situation in MAM was prior to the introduction of any e-learning options.

267 first year students participated in a survey in October 2004. This cohort was chosen for two reasons: firstly, as first year students, it provides an opportunity for their progress to be monitored in the coming two years; secondly, they are the first intake of SISKA who have been taught in English in all subjects. The switch to English language teaching now provides MAM with an invaluable opportunity, namely access to the vast array of English language materials on the internet and in CD-ROMs. In total, 267 completed questionnaires were returned – an unusual 100% response rate which is perhaps not surprising given the military environment. The questionnaire sought to ascertain what SISKA knew about e-learning, what values they attributed to it and what perceptions they had of the potential of e-learning within MAM.

4. Findings and Analysis[2]

The survey found that access to computers is limited at MAM with only 37% of students reporting easy access to desktops. The frequency of using a computer also varied. Most students had used a computer at least once since they had enrolled. The highest percentage reported that they used a computer once a week – but this applied to only 31% of the respondents. This represents low usage. Moreover, the purposes for which SISKA used a computer were limited. The majority of the students, 61%, used computers because of the software applications they offered.[3] Another 28% used computers mainly for email. Only 5% reported using a computer to collect information and another 6% for research purposes.

SISKA were also asked about their preferred ways of learning should they be given the options. 75% of SISKA opted for written or printed materials and 58% chose FTF interaction. Only 18% and 12% preferred on-line materials and on-line lectures or tutorials respectively (should MAM decide to offer these).

In the final section of the questionnaire students were invited to make any comment they saw fit on the subject of e-learning. 77% said that there was a need to upgrade and improve the facilities for e-learning options. This is vital because those who do not have their own PC need to access and use computers in the computer lab which only has a total of 32 computers to share amongst a total student population of 789 students (first year to third year SISKA). Only 16% of first year SISKA has their own PCs, so the lab is indispensable. 82% also recommended that the internet line must have the capacity to support an intensive and comprehensive usage of the net by the students. At the moment, this was not possible because the network only has the capacity of 512 kilobytes. The other recommendation made by the students was for more exposure to the meaning and potential of e-learning. 91% reported that because there was little information about e-learning and its significance, they did not appreciate how e-learning could help them.

5. Conclusions

The potential of e-learning at MAM is considerable. In particular, e-learning could be used to improve the English language skills of SISKA. This is one of the areas in which the new recruits are very weak. Given that the Internet is dominated by English language sources, this aspect of e-learning alone holds out many possibilities. It should also be noted that in 2006 MAM is going to be elevated to the status of a university. This provides a special opportunity to experiment with more flexible learning options. Given the low academic performance of the graduates, it is reasonable to investigate all avenues for improving grades. There is nothing automatic about e-learning and achieving better academic performance, but the great diversity of backgrounds from which the students come, suggests that e-learning options have the potential to provide for individual needs in a manner not possible in more rigid classroom situations. The growing emphasis on e-learning in the civilian academic institutions also raises the question of educational equity – it is reasonable for students in MAM to be provided with the same opportunities as students in civilian universities. And finally, there is the model of e-learning approaches in the U.S. military. Despite Malaysia's more modest defence needs, public expectations of the "guardians" will compel MAM to develop innovative e-learning approaches.

[2] For full details of the questionnaire findings, refer to the Appendix.
[3] Application software refers to word processing, computer games, etc.

References:

1. *Military Academy of Malaysia (MAM) Year Book.* (2004). Kuala Lumpur: Percetakan Nasional Berhad

2. *Mission Statement eARMYU.* (2005). http://www.earmyu.com. Retrieved 27 April

3. *National Defence Strategy.* (2003). Malaysian Government Publication. Kuala Lumpur: Penerbitan Negara Berhad

4. Plato. (1998). *the Republic*. Oxford: Oxford University Press

5. Puteh, M (2004), *Electronic Learning in Malaysian Universities: Past, Present and Future Needs.* Chapter 1 and 2, MS for Ph.D. thesis, Monash Asia Institute, Monash University Melbourne, Australia

6. Stiehm, J.H. (2002). *U.S. Army War College: Military Education in a Democracy*. Philadelphia: Temple University Press

7. TRADOC. (1999). *The Army Distance Learning Plan*. U.S. Army Training and Doctrine Command, Fort Monroe, VA. http://www.tradoc.army.mil. Retrieved 13 January 2005

8. Vicziany, M & Puteh, M. (2004). *Vision 2020, Multimedia Super Corridor and Malaysian Universities*. 15th Biennial Conference of the Asian Studies Association of Australia. Canberra 29 June-2 July

9. http:// coombs.anu.edu.au/ASAA/conference/proceedings.html. Retrieved 20 April 2005

10. Wilson, C. (2004). *How the Public Sector Benefits from E-Learning.* http://www.careerjournal.com/hrcenter/ipma/20040107 ipma.html. *Retrieved 10 December*

Appendix Questionnaire Adapted from Open University Malaysia *http://www.oum.edu.my*

Item	Detail(s)	Frequency	Percentage
Section A	1. Do you have easy access to a computer		
	● Yes	99	37%
	● No	168	63%
	2. Do you use computer		
	● Never	0	0%
	● Once a week	82	31%
	● Once a month	67	25%
	● A few times a year	59	22%
	● Daily/Almost Daily	59	22%
	3. I use computer for;		
	● Application software (word processing, computer games, presentations etc)	163	61%
	● E-mails	75	28%
	● Chatting/Instant Message	0	0%
	● E-discussions	0	0%
	● File sharing	0	0%
	● E-library	0	0%
	● Information	13	5%
	● Research	16	6%
	4. Choose up to 4 of the following mode/media for learning that you most prefer		
	● Written (printed materials)	200	75%
	● On-line materials	48	18%
	● CD-ROM, DVD or other multimedia materials	56	21%
	● Face-to-face	155	58%
	● On-line conferences	16	6%
	On-line lectures/tutorials	32	12%
Section B	I. Learner Readiness/Awareness		
	1. One day training for every job will be available on the Internet	Y-51; N-216	Y-11%; N-81%
	2. I am interested to upgrade my academic/professional qualification through e-learning	Y-8; N-259	Y-3%; N-97%
	3. I have used the opportunity to engage in e-learning	Y-19; N-248	Y-7%; N-93%
	4. I am capable of managing my time for e-learning	Y-59; N-208	Y-22%; N-78%
	5. I am committed to e-learning	Y-32; N-235	Y-12%; N-88%
	6. To be a successful learner, I must have good		

	interpersonal or social skills	Y-67; N-200	Y-25%; N-75%
	7. I am worried that qualifications obtained through e-learning are not the same standard as qualifications obtained through on-campus courses	Y-232; N-35	Y-87%; N-13%
	8. I am worried that qualifications obtained through e-learning will not be recognised	Y-243; N-24	Y-91%; N-9%
	II. Management Readiness/Awareness		
	1. My institution has a vision/mission on e-learning	Y-35; N-232	Y-13%; N-87%
	2. My institution has formulated policies related to the provision of e-learning	Y-11; N-256	Y-4%; N-96%
	3. My institution recognises qualifications obtained through e-learning	Y-19; N-248	Y-7%; N-93%
	4. My institution is ready for e-learning	Y-3; N-264	Y-1%; N-99%
	III. Technical Readiness/Awareness		
	1. The institution provides the necessary infrastructure for e-learning	Y-19; N-248	Y-7%; N-93%
	2. I am able to overcome technical problem myself	Y-72; N-195	Y-27%; N-73%
	3. The speed of e-learning content is going to be satisfactory	Y-40; N-227	Y-15%; N-85%
	4. My institution is using Intranet technology to run its daily operations	Y-8; N-259	Y-3%; N-97%
	5. My institution is using Internet technology to run its daily operations	Y-136; N-131	Y-51%; N-49%

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(continued from Page 34)

3. Conclusions

A new algorithm of generation and evaluation has been presented for test type exams in e-learning systems; this algorithm allows to the students their auto evaluation. It is necessary to emphasize the importance of the teacher's task; the previous work is enormous due to the high number of questions he/she must think, but once the repository of questions is built, ALEVIN will work on very well and the teacher only has to survey the student's evaluation.

It would be very interesting that in the future new evaluation algorithms will be created to process open questions, where the student can answer in several lines of text; even it would be more interesting to build systems with the goal of aid to the professor for the generation of questions for the repository.

References:

1. Wiley, D. (2002). *A Connecting Learning Objects to Instructional Design Theory: A definition, a metaphor and a taxonomy*, Utah State University

2. *CEN, Learning Technology Standards Observatory.* European Project. (2005). http://www.cen-ltso.net/Users/book/CEN-LTSO-eng.pdf

3. IMS Global Learning Consortium. *IMS Question and Test Interoperability: Item Overview.* Public Draft Version 2.0 (2005). http://www.imsproject.org/

4. *XML – Extensible Markup Language.* Main Page for World Wide Web Consortium – W3C. (2005) http://www.w3.org/XML/

5. *ASI Outcomes Processing.* Final Specification Version 1.2. IMS Question and Test Interoperability. (2002). http://www.imsproject.org/

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