6. CONCLUSION, RECOMMENDATIONS & FUTURE RESEARCH

6.1. INTRODUCTION

The following discussion will be based on the objectives of the research and key findings and limitations identified during the process. Also last section will suggest directions for future research to gain further information regarding the Sri Lankan LLC field and SME sector.

The main objectives of the research study was to,

1. Analyze the current status of local langue supported ICT product and service providers/vendors in the market (products, vendors, Service Providers etc.)

2. SWOT analysis for the current local language supported software and identify the future trend in the market for those product.

3. Analyze the obstacles in the industry preventing the penetration of ICT and finding ways to over come those obstacles

4. Find out ways to increase the ICT penetration level in the market using current local language supported software. (Propose a mechanism)

As stated in section 5.2.1 achieving the first objective that the current status of LLC supporting ICT products/service was in a positive state. Therefore it can be concluded that the trend in the current market towards LLC is really good and the ICTA and the government backing through e-Sri Lanka project has affected the field of LLC positively. This was clearly in contradicts to the preliminary finding from interviews and opinion surveyed from some individuals in the industry implying that, LLC has very little or no influence at all in increasing ICT penetration in the country. Although the research doesn't represent the population itself, using the assumption that technology diffusion to less English literal society and industrial sector will not be possible without the SME sector which can be considered as a key source for the country's' economic development accepting it. English literal society was reflecting the same opinion as the SME sector or will be introducing LLC in the near future.

From the general findings it was observed that the sample was aware that the computing was possible in Local Languages. Although a definite conclusion cannot be arrived from this fact, it can be speculated that, the sample was interested in the happening in the current development of the ICT industry in Sri Lanka. With the Sri Lankan high literacy level which is as female 89.7%, male 92.4%, implies clearly the larger portion of the population is well literal and there is high potential market where LLC can be promoted. Promoting technology by introduction of LLC and its adoption by organizations and general public is to be analyzed in detail. Sales statistics of recently introduced and widespread popular Sinhala language enabled Nokia Mobile phone could be used as one good input for above analysis.

The comparative analysis of the factors influence ICT usage at SME sectors' (ICT Literacy, English Knowledge, Social/Economical Factors, Necessity) have shown that the availability and awareness of LLC has a higher influence than all the other factors. Even though the perception about LLC as a de-motivation factor which block the English learning opportunities (even to the extent of comments stating that they were willing to use LLC product/services, but they doubt it will prevent their staff leaning English), LLC influence on the adaptation of ICT, considered high when comparing the feed back received through the questionnaire. *This signifies that the influence of LLC for increasing ICT penetration is really high and the perception on LLC as a de-motivation factor slowly diminishing as stated in the literature survey on other countries like Japan, China, Korea etc,. LLC implementation.* But current adaptation of LLC in Sri Lanka is low. Main reason for this is that the LLC supported products and services were not uniformly distributed throughout Sri Lanka other than Colombo and the less effort players in LLC field put for the sales and marketing of their products and service. Comparison of the current statues of 'availability of Local Langue supported ICT product and Service providers/Vendors in the market' and 'willingness of ICT usage at SME sector selected', if more Local Language supported ICT is introduced and increase the awareness, LLC will be a significant finding.

Most of the LLC vendors/service providers were currently devoting to research and development work is justified as Sri Lankan LLC field is still is in its initial and growing stage. Even within the select SME samples users not really aware of the true

meaning of LLC and product and services available in the current market. With the maturation of the market, LLC can be used as a major trend to increase the ICT penetration level in Sri Lanka.

Considering the LLC usage factors, it was observed that social factors play a significant role for the participants who were influenced by computing in English. As some individuals stated they will not get the recognition if they do their ICT education in Local Languages. The economical factors were such that, participants who will get more benefits by adopting the LLC, were expecting cheaper solutions. Individual users quiet reluctant to pay the top price of LLC solutions on market while alternative cheap pirate copies in English freely available.

'Economical' influence and 'Necessity' on the usage of ICT is high, especially the primary analysis of the data collected has shown that all participants agreed the major drawback in adaptation of ICT and having internet facility are, "Cost of equipments/services" is considered highly as much as the "Cost of recruiting English knowledgably ICT Staff". This may be attributed to the fact that majority of the participants were located out of Colombo, where they have got few hardware dealers and technicians. If they order equipments from Colombo they have to pay for the transport. Also as stated in the first chapter most of the educated staff of SME sector companies located out of Colombo, is educated in Local languages.

Consequently, it is necessary that the ICT literacy of the staff should be improved in order to create influence on ICT usage and thereby to increase LLC in the Sri Lanka. "Lack of IT/English knowledge" is severely affected introduction and adoption of ICT when compared with other factors. Hence, *to increase the ICT penetration level, the ICT literacy influence can be considered the most affecting factor.* For example, there were organizations in the selected sample consist of well educated employees with lesser ICT knowledge. *Another key finding is that if the awareness of LLC products/service among the participants is high they would have motivated to use more ICT base products/service for their day to day operation and job functions.* It was expected that selected SME sectors participants should be more conversant with technology. Even though the above case was expected, the awareness level for true

LLC was low. Response got for the question "Are you using Sinhala/Tamil in Computing in your organization?" was "yes". For most of them the LLC mean typing their day to day business related letters in Sinhala/Tamil using freely available fonts. This may be due to poor awareness campaigns and advertising, or the fact that the LLC vendors/service providers themselves do not promote their products/service. In either case, unavailability of information about products/service will be a concern for the awareness campaigns in near future according to the LLC vendors/service providers. In relation to the finding "Do you aware that computing is available in Local Languages ((Sinhala /Tamil)?"; the low level of awareness about true LLC will hinder the growth LLC is necessary actions not taken immediately. Thus, information about LLC supported products and service needs to be laid out clearly in an understandable way to the general public in general to derive the future potential as well as the present usage of LLC, thereby creating a positive relationship between "High Availability of Local Langue supported ICT product and Service providers/Vendors in the market" and "Willingness of ICT usage at SME sector selected if more Local Language supported ICT is introduced and increase the awareness".

The expectations of the sample group mostly towards learning packages. The reasons for this maybe that,

- Currently they must be investing much on tutors for the employee development programs. If learning packages were introduced in LLC it would have saved that money by allowing staff to self learning using those packages.
- The awareness about other operations using ICT in LLC is low
- More LLC supported products/service is needed than the existing products/service to cater their requirements.

To over come the most of the barriers exists in the LLC filed in Sri Lanka while increasing the ICT penetration level the researcher was proposing following strategies as primary strategies which can be implement immediately and secondary strategies which can be implemented though well plan series of actions.

<u>Primary Strategies</u>

1. Increasing the awareness among public and SME sector industries on LLC.
2. Carry out market surveys/research to identify most suitable market segment to introduce LLC supported ICTs.
3. With help of the government backing up encourage other software development organization to move into LLC.
4. Introduce low cost software with Low cost computers and make it available widely and Make use of not purchasing software mentality to promote FOSS base products.

<u>Secondary Strategies</u>

5. Establish partnerships and alliances among LLC vendors/service providers in awareness campaigns and R & D work.
6. Adopt latest technological advances in the market to make the public aware on LLC (Ex. Nokia Sinhala mobiles).
7. Form a union comprises of all LLC players in Sri Lanka to fight against the common problems arising from the external environment.
8. Decrease the cost of products.
9. Arrange training and after sales service on LLC product/services.
10. Introduce innovation award scheme to schools to encourage and educate students to move into LLC.
11. Enhance existing software components to meet the complex requirements of the business entities.

In concluding the LLC field in Sri Lanka is reaching to its growing stage, and LLC supported ICT products/service will play an important and significant role in the future.

6.2. FUTURE RESEARCH

The same research can be used in the future to determine the level of significance LLC has on ICT penetration in Sri Lanka. The above approach can be used in evaluating the LLC influence in SME sector which contain more broader sample which will cover all the SME's can be benefited with ICT and compare the results to this reports to resolve if there is a significant change. Even introduction of recommended options can be evaluated to have any effect on the ICT usage. For

example, after an awareness campaign to increase awareness of LLC, the concept and the questionnaires can be applied again to evaluate the new state of the sample and the SME population. This research study was a preliminary attempt in order to understand LLC supporting ICT products/service and willingness of ICT usage in Sri Lanka. The researcher attempted to cover two areas as LLC field and SME sector.

This research is restricted due to natural constraints associated with this kind of student research project and other constraints such as confidentiality of business information etc. Further comprehensive analysis could be performed in all identified areas in order to derive a more comprehensive and complete model for increasing ICT penetration level in Sri Lanka through LLC. Also the model presented by the researcher is a general model and the model could be varied depending on the target group. Hence more focused research could be performed in the identified target groups in order to derive a more complete and focused theoretical model. For example personal computer users and students were not considered in the research, which have to be investigated in order to measure the real impact of LLC in ICT usage in whole of Sri Lankan.

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8. ANNEXTURE

8.1. ANNEXTURE I:

Questions for the Local Language Supported Software.

1. What are types of software/Hardware you have developed in Local Languages (Sinhala/Tamil)?

2. Who are your main customers (Government /private sector or personnel users)

3. As you feel what are the

   Strengths

   Weaknesses

   Opportunities

   Threats

For your Local Language products/Services in the market?

4. What do you currently charge for your products? What do you think about this pricing in the current market?

5. What are the obstacles faced by you?

6. What future improvements and products you intend to introduce? What are your target audiences?

7. How are you reaching to the customers? (sales and marketing plans) News paper and Electronic media

8. What type of response are you getting from customers?

9. What you feel about the future of the Local Language Products/Services market in Sri Lanka?

10. What type of support would you like to have from the authorities?

8.2. ANNEXTURE II:

Questions for the Small and Medium Enterprises (SME) – Sinhala Version

1. දැනට ඔබ සතු ඇති දේශීය භාෂා පරිඝණක කරණය කරණාලද මෘදුකාංග/දෘඩුකකාංග වංගානවාද(සිංහල/දෙමළ)?

2. දැනට ඔබට සිටින පාරිභෝගිකයන් ගණන වංකාපමණද % වංලස (රාජ්‍යය අායතන/ පෞද්ගලික අායතන/තනි පුද්ගලයන්)

3. ඔබට දැනෙනන විදියට දේශීය භාෂා පරිඝණක කරණය සදහා ලංකාවේ වෙළඳ වංපාවංළ් ඇති

   1 අභිවංයාංග

   2 අවස්ථා

   3 බාධක

   4 දුර්වලතා

4. ඔබ සතු ඇති දේශීය භාෂා පරිඝණක කරණය කරණාලද මෘදුකාංග/දෘඩුකකාංග සදහා ඔබ අයකරන මිල ගැන ඔබවේ අදහස්ල. වෙළඳ වංපාවංළ් වංමෙම මිල කරණය පිළිබඳ ඇති ප්‍රතිචාර.

5. ඔබ මුහුණවංදන ප්‍රධාන බාධක/ප්‍රශ්න වංමොනවාද?

6. ඔබවේ target audience කවුරුන්ද? ඔබ අනාගවතය ඉදිරිප කිරීමට සිටින දේශීය භාෂා පරිඝණක කරණය කරණාලද මෘදුකාංග/දෘඩුකකාංග වංමානවාද?

7. දැනට ඔබට සිටින පාරිභෝගිකයන්වංගන් ලැවංබන ප්‍රතිචාර වංකෙස්ද?

8. ඔබ පාරිභෝගිකයන් වංවත ලගාවංවන්වංන් වංකෙස්ද? (ංකැර ංඩා ඒරනැඒ්සබට)

9. ලංකාවේ දේශීය භාෂා පරිඝණක කරණෙය් අනාගතය ගැන ඔබවේ අදහස්?

10. ලංකාවේ වගකිවයුතු අායතන වලිනි ඔබ කුමන සහයක් අවංේක්ෂා කරන්වංන්ද?
    (පරිවර්ථනෙස්දී යම් වැරදීමක් සිදුවී ඇතිනම් සමාවන්න)

8.3. ANNEXTURE III:

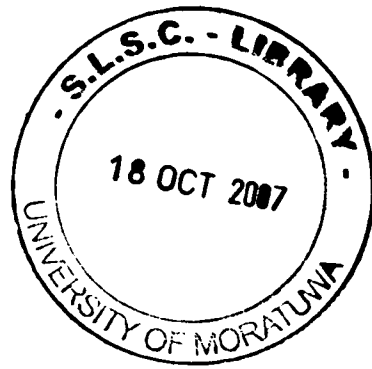### Questions for the Small and Medium Enterprises (SME)

1. Name of the organization and what is the type of business?

2. Producing for the Local / International market or both

3. How many employees? How many computers are in use?

4. Have you got internet facilities? if not why?

       IV. Expensive

       V. Not necessary

       VI. Any other reason

5. What are the draw back/difficulties in using IT in the organization?

       I. Cost of equipments

       II. ICT Knowledgably Staff

       III. Infrastructure Problem

       IV. Any other reason

6. What is the average number of people using computers in the company?

       I. 1 to 5

       II. 5 to 10

       III. More than 10 state ....

7. What is the reason for those who do not use computers at office?

       I. The job they are doing cannot be done using computers

       II. Lack of IT knowledge

       III. Lack of IT facilities provided by the Organization

8. Do you aware that computing is available in Local Languages ((Sinhala /Tamil)?

       I. Yes

       II. No

9. Are you using Sinhala/Tamil in Computing in your organization?

       I. Yes

       II. No

If you are using for that purpose? If no what are the reasons you don't use them?

10. Do you think you will be able to benefit your business if the Local Language (Sinhala /Tamil) supported computing (Hardware/software) introduced?

       I. Yes

       II. No

11. What are the possibilities of using Local Language supported software in the organization / what are the types of computers software required to have in Local Languages (Sinhala /Tamil)?