

EVALUATING THE ROLE OF MOTIVATION AND STUDY STRATEGY TOWARDS THE PERFORMANCE OF CANDIDATES IN THE RIGHT (RURAL ICT GUIDED HOME-BASED TECHNOPRENEUR) PROGRAMME

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ABSTRACT

The objective of this study was to measure the correlation of motivation and study strategy with the performance of the candidates in the RIGHT programme. A modified questionnaire based on the Motivated Strategies for Learning Questionnaire (MSLQ) and students' motivation towards science learning (SMTSL) was used for this study. The questionnaire is made up of four scales each for the motivation and study strategies factor and a total of 19 candidates from the programme took part in the study. The performance of the candidates were grouped into two assessments where assessment 1 consist of office suites software while assessment 2 consist of a broader range of subjects such as designing software, IT theory and practical skills. Learning value is found to have the highest correlation ($r = 0.570$) among the motivation scales and peer learning ($r = 0.504$) among the study strategies scale for assessment 1. However in assessment 2, only self-efficacy ($r = 0.526$) showed high correlation to the performance. The significant correlation of the average score of the assessments with the combination of motivation and study strategy factor ($r = 0.714$), confirms the hypothesis that motivation and study strategy does has an impact on the candidate's performance. External influence, questionnaire issues and future works are also discussed.

JEL Classifications: I210, H750, J240

Keywords: Motivated Strategies for Learning Questionnaire (MSLQ), Correlation, Motivation

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INTRODUCTION

The goal of the RIGHT (Rural ICT Guided Home-based Technopreneur) programme is to bridge the digital divide between the urban and rural area in Sarawak on a sustainable basis. The term digital divide carries a wide range of definition based on the ICT development of the country. The US Department of Commerce (McConnaughey, Everette, Reynolds & Lader 2000) states that digital divide is the difference between one group of individuals who have access to the best computers, fastest internet and telephone service and those who have inferior ones. However, the digital divide in the case of developing countries such as Malaysia would refers to the access to ICT and the ability to operate it (Selwyn 2004). One initiative carried out by the government in the hope to bridging the digital gap is to hand out laptops to the rural community. This method may help to a certain extend but is considered to be mostly short-termed. It is thought to be as such due to the fact that the recipient of the laptops are not being taught to use and maintain the device. This therefore defeats the purpose as without the necessary skills to operate the device provided, the recipient would not be able to get task done with it. Besides, when problems occurred to the laptop, the device becomes unusable due to the lack of repair skill and/or spare parts in the rural areas of Sarawak. This is where the RIGHT programme comes it as its key component is sustainability. The programme focuses on ensuring continuity is made possible by focusing on human development (Tongia 2005) and tackling potential issues such as the ones previously mentioned that might occur along the way. The sustainable approach is made possible by providing a wide range of training, ranging from software skills, web development, and entrepreneurship skills, to simple troubleshooting for both software and hardware issues. This ensures that the candidates are not only equipped with the ability to operate and educate others on the usage of the software, but are able to perform maintenance on the device if something goes wrong. Each year, selected candidates from rural areas of Sarawak are trained for six months with entrepreneurship, theory and practical ICT skills. The candidates are then encouraged to start up a home-based

ICT service centre after graduating, as a technopreneur and serving the rural community in the process. The emphasis of home based ICT centre also helps to ensure that the overhead cost of starting a business would be kept to a minimal but at the same time maintaining the capability to serve the community around them. Some of the common services that the ICT centre could provide would be software application training, bill and ticket payment, e-commerce and design services.

The purpose for this paper is to identify the correlation between candidate's motivation and study strategies with their performance in the programme. The hypothesis is that candidates with good motivation and ideal study strategies are more likely to perform well in the programme as compared to those who do not. In this case, the candidate is classified as successful if they are able to contribute to the ICT development in the rural community after graduating. A set of questionnaires is used to measure the motivation and study strategy of the candidates. The ideal scenario for the candidates to impact their community would be to provide ICT training and services by setting up a home-based ICT centre. It is also assumed that those who performed well for the assessments in the programme would have a better chance of becoming a successful candidate. The findings of this study could be used to enhance the selection process of the candidates, ideally to identify candidates with better prospects of becoming successful. The factors that are highly correlated with candidates' performance would be used as a filtering guideline during the selection process. This would in turn help to improve the chances of candidates setting up an ICT centre that would essentially help improve the ICT development and literacy in that area. By doing so, the ultimate goal would be to use ICT as a tool to help improve the living standards of the villagers in the rural area of Sarawak.

Motivation and Study Strategy

Motivation is widely accepted as one of the key factor behind most successful stories. It is the thing that drives an individual forward to archive the intended goal. There are various forms of motivation of which will be discussed later which have different level of impact on an individual which varies from one person to another. Taylor (2012) states that in the context of the learning process, motivation is commonly known to be the internal drive of the learner to do well in academic tasks which is described as achievement motivation. That too applies to the candidates of the RIGHT programme where interest specifically in the area of IT is crucial to doing well. An individual that is motivated naturally would have higher curiosity and self-initiative to learn by being more proactive in class and making constant effort to become better. This in turn would later translates to better academic achievement and mastering the subject taught. It could be shown by being attentive in class, do regular revision or as simple as completing the given assignments well. Lynch(2010) reported that in a college physics course, the semester grade of the students' was found to be positively correlated with their efficacy, task value and intrinsic and extrinsic motivation.

Study Strategy at the same time plays a huge role in students' academic achievement. A study done by Ames & Archer (1988) on high school students showed that learning strategy were correlated to their grades and mastery in the subject. Every students will have their own strategy or approach to study but some factor are universally accepted to be the ideal for studying such a quiet environment without distractions. It could also be the level of self-regulating of the student to ensure they put in the effort needed to do well. It is found that student achievement cannot be improved with the understanding of cognitive and metacognitive strategies alone, as it requires the student to be motivated to apply the strategies and at the same time regulate their effort and cognition. (Paris, Lipson & Wixson,1983; Pintrich, 1989). This clearly means that a student could have the most effective study strategy but not necessarily guarantee good academic achievement as motivation from the candidates has to be present. Hence it is therefore important to evaluate both the motivation and study strategy of the students to fully

METHODOLOGY

A 45-item questionnaire is developed based upon the widely recognised MSLQ (Pintrich et al. 1991) and SMTSL (students' motivation towards science learning) which are modified accordingly to suit the context of the study of the RIGHT programme. MSLQ was chosen due to its positive results of reliability generalization studies that shows MSLQ is effective for different types of samples (Taylor 2012). MSLQ is shown to be suitable as it was tested across different disciplines which consist of foreign language, computer science, natural science, social science and humanities (Pintrich al., 1991, p. 6). The MSLQ scales are also proven to be robust with the completion of two confirmatory factor analyses which indicate reasonable factor validity. This aside, it also shows good internal consistency (Pintrich et al., 1993) and the scale is selected based on their Cronbach

alpha reliability score and relevance towards the study. The first four are the set of motivation items and the next four are the set of study strategies items. Below are the brief explanation for each of the scales used in the questionnaire.

Motivation Scales

Self-Efficacy

Refers to the self-appraisal of an individual's ability to accomplish a task. It also includes the expectancy to succeed in the given task. One example of the item asked was: "I expect myself to master the skills that are taught in class". This scale has an Alpha of .93 and is made up of item 1 to 8.

Learning/task Value

Refers to the perceived usefulness of the task or material by the individual. Hence, higher task value should also mean higher level of involvement in person's learning because a higher level of perceived importance leads to higher interest level. One example of the item asked was: "I think what is taught in the RIGHT programme is important because I can use it in my daily life and help others. This scale has an Alpha of .90 and is made up of item 9 to 15.

Intrinsic Goal Orientation

Talks about an individual's general goal, participation for challenge, curiosity, and mastery with the aim to learn or experience new things. It is more about the individual's desire for self-improvement rather than for the sake of just completing the task or obtaining the desired result. An example of the item asked was: "I prefer materials (exercise and assignments) that makes me interested although it can be difficult to learn." This scale has an Alpha of .74 and is made up of item 16 to 20.

Extrinsic Goal Orientation

Talks about an individual's participation for reasons such as grades, rewards and competition which are the external motivating factors for completing the task. One example item asked was: "Getting good result is more important for me than understanding the topic well." This scale has an Alpha of .62 and is made up of item 21 to 25.

Study Strategies Scales

Learning Environment stimulation

Refers to the class environment stimulation such as the materials, trainers' teaching, pupil interactions, and class condition that may affects the individual's performance. This scale was taken from the SMTSL questionnaire. An example of the item asked was: "I love to participate in class because the content is exciting and helpful." This scale has an Alpha of .69 and is made up of 26 to 30.

Time and study environment

It involves the individual's time management for studying and also their study environment outside the class. Time management would be how the individual set aside time for revision regarding what is taught and how they plan to get their studies done effectively. Study environment involves the place where the individual do their work or revision where a recommended environment would be a place that is quiet and without distractions. An example of one of the item asked was: "I often study at a place where I can concentrate properly without distractions." This scale has an Alpha of .76 and is made up of item 31 to 36

Effort regulation

Involves the self-management of effort and commitment to achieve the desired goal regardless of the difficulties or distractions faced. It can be while dealing with boring task, individuals with good effort regulation are able

complete it which demonstrates discipline. One example of the item asked was: “Even when the materials are uninteresting to me, I still try my best to finish.” This scale has an Alpha of .69 and is made up of item 37 to 41.

Peer learning

Refers to the collaboration between peers to share insight about the material and what is taught. It also shows teamwork and willingness to learn or teach others which helps reinforce the understanding of the topic among the students. An example of the item asked was: “I like to discuss the materials together with my classmates to exchange ideas and opinions because it helps me understand better.” This scale has an Alpha of .76 and is made up of item 42 to 45.

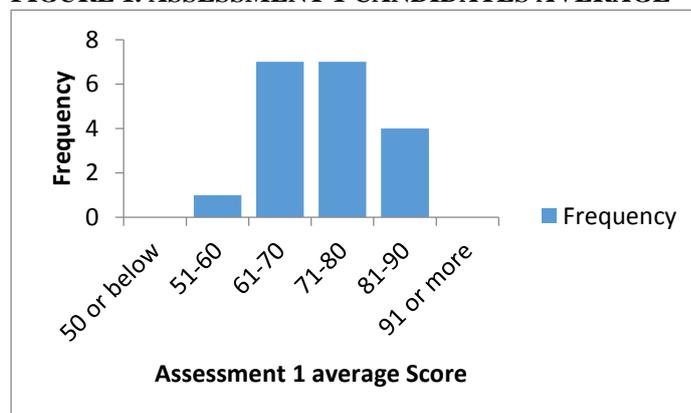
A total of 19 students from the programme took part in the questionnaire but only 17 was considered usable as the rest were clearly bias with the same score selected for every question. The omission of the bias ensure that the correlation result will not be skewed. Items are scored based on a six point Likert scale ranging from 1= strongly disagree to 6 = strongly agree. Some of the questions are negatively phrase hence the scoring would also be reversed. The weight of the score for all the items are the equal and since there are 45 items, the maximum score of the questionnaire would be 270 points. The scores of the each scales are calculated using the mean of the items used to make up the scale. Taking the self-efficacy scale as an example, the scale score of the candidate is calculate by adding up all the seven items followed by obtaining the mean. Pearson correlation analysis is used to determine the correlation between each of the scale and total questionnaire score with the two assessments score of the candidates.

The performance of the candidates is measured based on the results of the regular assessment result for each topic. Assessment 1 is made up of assessing office suite usage skills such as Microsoft Office and OpenOffice. The various programme that are being assessed includes Microsoft Word, Excel, PowerPoint, Access, OpenOffice Writer, Calc, Impress, and Base. Assessment 2 covers a more extensive scope of more complicated software, theory and practical skills. The assessed subjects are namely Adobe Photoshop, Flash, Dreamweaver, Microsoft Office Publisher, HTML, Data Communication, ICT System, Application Development, Troubleshooting & Maintenance, SDLC and e-commerce. The assessment score are taken from mean of the total score of the subjects mentioned earlier to represent the candidate average performance in the two group of assessments. The score of the candidates is classified into three categories whereby 60 and below is considered as poor performance, 61-80 as average performance and 81 and above as good performance. Below 50 is known as the failing score for each of the assessed subject.

In order to show the larger picture, the four motivation scales and study strategy scales are being grouped as motivation factor and study strategy factor respectively. The average score is calculated by taking the mean after the addition of assessment 1 and assessment 2. Pearson Correlation test is used to determine the correlation of the average score with each of the factors namely motivation factor, study strategy factor, and combination of the two factors. This provides a better overall view of how the factors affects the candidate’s performance in the RIGHT programme.

RESULTS AND FINDINGS

FIGURE 1. ASSESSMENT 1 CANDIDATES AVERAGE



Based on Figure 1, it is shown that majority of the average score of the RIGHT candidates are within the 61-70 and 70-80 range both with 8 candidates. 4 candidates are managed to achieve an average score of range 81-90 while only one candidate dipped into the 51-60 range. The range of 50 or below and 91 or above showed no candidate.

FIGURE 2. ASSESSMENT 2 OF CANDIDATES AVERAGE

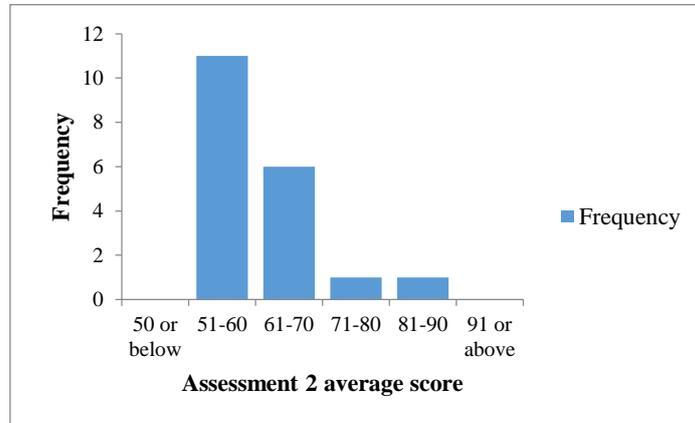


Figure 2 shows majority of the candidates' achieving mean scores in the range of 51-60 with 11 candidates. It is followed by 6 candidates in the next range of 61-70. The range of 71-80 and 81-90 were both only achieved by one candidate each. The range of 50 or below and 91 or above yet again showed identical pattern as Figure 1 with no candidate.

TABLE 1. PEARSON CORREALTION ANALYSIS OF THE QUESTIONNAIRE SCORE AND SCALE WITH ASSESSMENT 1 & 2

		Assessment 1	Assessment 2	Questionnaire Score	Self efficacy	Learning value	Intrinsic	Extrinsic	Time & study	Effort Regulation	Peer learning	Learning eniroment
Assessment 1	Pearson Correlation	1	.558 [*]	.755 ^{**}	.198	.570 [*]	.498 [*]	.496 [*]	.496 [*]	.380	.504 [*]	.316
	Sig. (2-tailed)		.020	.000	.447	.017	.042	.043	.043	.132	.039	.217
Assessment 2	Pearson Correlation	.558 [*]	1	.689 ^{**}	.526 [*]	.088	.347	.447	.447	.294	.186	.419
	Sig. (2-tailed)	.020		.002	.030	.736	.172	.072	.072	.252	.475	.094

The results in table 2 shows the correlation between the questionnaire score and scale score with the candidate's performance represented by assignment 1 and 2. The questionnaire score shows a significant correlation with both assignment 1 ($r = 0.755$, $P < 0.01$) and assignment 2 ($r = 0.689$, $P < 0.01$). Not all scales however have good correlation to the assessments. For assessment 1, learning value ($r = 0.570$) has the best correlation while self-efficacy ($r = 0.198$) has the least correlation. The rest of the scales that shows good correlation includes peer-learning ($r = 0.504$), intrinsic goal orientation ($r = 0.498$), extrinsic goal orientation ($r = 0.496$) and time and study environment ($r = 0.496$). However, the only scale that is strongly correlated to assessment 2 is self-efficacy ($r = 0.526$) which makes it the highest among all the scales while the scale with the weakest correlation is learning value ($r = 0.088$). It can be seen that none of the study strategy scale show significant correlation to either assessment 1 or 2. Both assessment 1 and 2 also possess good correlation ($r = 0.558$).

TABLE 2.1. CORRELATION FO MOTIVATION FACTOR WITH COMBINED

		Combined score	Motivation
Combined Score	Pearson Correlation	1	.812**
	Sig. (2-tailed)		.000
Motivation	Pearson Correlation	.812**	1
	Sig. (2-tailed)	.000	

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Table 2.1 shows significant correlation between the motivation factor with Average score with a Pearson correlation of $r = 0.812$. It proves that the motivation scales generally has a large impact on the overall performance of the candidate.

TABLE 2.2. CORRELATION OF STUDY STRATEGY FACTOR WITH COMBINED SCORE

		Combined score	Study strategy
Combined Score	Pearson Correlation	1	.565*
	Sig. (2-tailed)		.018
Study strategy	Pearson Correlation	.565*	1
	Sig. (2-tailed)	.018	

Note: *. Correlation is significant at the 0.05 level (2-tailed).

Table 2.2 shows the correlation of study strategy factor and Average score at a reasonable level of $r = 0.565$, despite showing weaker correlation as compared to the motivation factor.

TABLE 2.3. CORRELATION OF MOTIVATION AND STUDY STRATEGY FACTOR WITH COMBINE SCORE

		Combined score	Motivation + Study
Combined Score	Pearson Correlation	1	.714**
	Sig. (2-tailed)		.001
Motivation + Study	Pearson Correlation	.714**	1
	Sig. (2-tailed)	.001	

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Table 2.3 shows the correlation of the whole picture of the MSLQ questionnaire which is the combination of motivation factors and study strategy factors with the average score. The table shows good correlation with a value of $r = 0.714$.

FIGURE 3. AVERAGE SCORE VS MOTIVATION AND STUDY STRATEGY

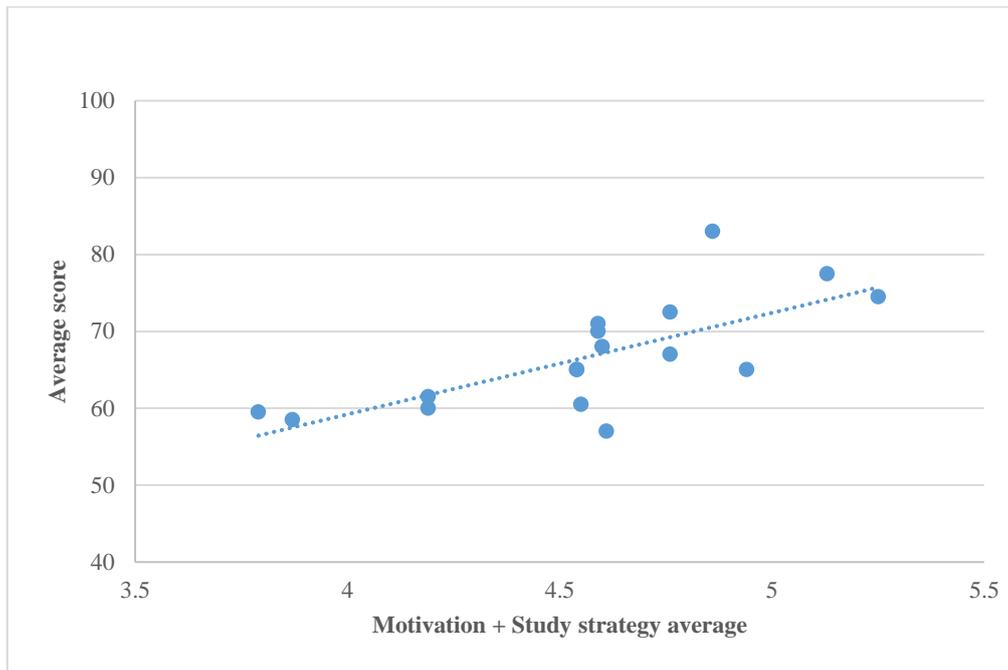


Figure 3 shows the correlation between the average score with motivation and study strategy average of every candidate. With a scale of 1 (lowest) to 6 (highest) for the motivation and study strategy average, the linear upward trend depicts positive correlation and is the visual representation of Table 2.3. There are however about two candidates that deviate from the trend by having good motivation and study strategy average but poor average score and vice versa. It is also worth to note that no candidates failed with average score of below 50.

DISCUSSION

According to the histogram 1, it is seen that majority of the candidates obtained an average performance with the score within the range of 60-80. Most of the candidates are able to attain high scores in subjects such as Microsoft Word and OpenOffice Writer. This can be due to the subjects being fairly simple and straightforward to master. The weakest subject of the candidates in general is the Microsoft Access with as many as 5 candidates failing to pass the assessment. Only one candidate performed poorly and with a mean score of 72.35 in the first assessment shows that the candidates have generally performed fairly well. Histogram 2 however depicts a stark contrast as compared to the previous histogram as most of the candidates have performed poorly with majority of the scores within the 51-60 range. Only a handful of 6 candidates performed better than the rest within the 51-60 range which is poor. Due to the nature of assessment 2 comprising of various skills and more complicated software usage, it is understandable in the drop of score as compared to assessment 1. Only one candidate managed to obtain the same score for both assessments while the rest shown a decline in performance confirms the difficulty difference in comparison of the two assessments.

The results in table 1 shows that the questionnaire score has significant correlation to both assessment 1 ($r = 0.755, P < 0.01$) and 2 ($r = 0.689, P < 0.01$). This is not surprising as it confirms the hypothesis that candidates with better motivation and ideal study strategies will have better performance in their assessment. For assessment 1, it is shown that learning value has the highest correlation ($r = 0.570$) among the motivation scales and peer learning ($r = 0.504$) among the study strategies scale. Based on this result, the study reveals that the perception of usefulness regarding the task and peer learning is crucial in being the driving force for the candidate to do well and achieving better result in subjects for Assessment 1. The subjects in assessment 1 as mentioned earlier are related to office suites software which are the less complicated and more commonly use as compared to the subjects in Assessment 2. Hence, it is much easier for candidates to help each other in the understanding of the subject which explains the high correlation with performance. The high correlation of learning value can be explained that due to the category of subjects in Assessment 1, candidates who for example perceived Microsoft word to be more important than Microsoft Access would no doubt put in more

effort in mastering the former. The Pearson correlation analysis data of assessment 2 however provided unexpected results with only the Self efficacy scale showing strong correlation ($r = 0.526$) with the assessment score despite having the weakest correlation ($r = 0.198$) to assessment 1. The learning value scale shows the direct opposite by having the weakest correlation for assessment 2 (0.088). The study shows that since assessment 2 is more diversify and complicated due to various types of skills are being assessed, self-efficacy which is the self-belief of their abilities in completing the task regardless of difficulty has the most impact towards the performance of the candidate. Pintrich et al (1991) concluded that self-efficacy among the motivational scales, has the strongest correlation with student's achievement ($r = 0.41$). This proves that self-efficacy has a large impact on candidates that are learning practical skills, IT theories and designing software as compared to the office suites subjects in Assessment 1. It also means that the type of subjects in both assessments are contrastingly different and requires a different motivation type and study approach to do well in the respective subject. Assessment 2 also do not have any strong correlation between any of the study strategy scale with the highest correlated scale being time and study environment ($r = 0.447$). This can be due to study strategy being less of an influence towards the skills being assessed due to the diversity. The good correlation shown between assessment 1 and 2 shows the consistency of the candidate's performance despite the difference in difficulty and skills. It is worth noting that effort regulation and learning environment shows no significant correlation with both assessments. This finding was surprising especially as the effort regulation scale was expected to have some impact on the performance as it deals with the candidate's self-initiate effort to do well.

Both motivation factor and study strategy factor have shown to have an impact on the candidate's overall performance in the RIGHT programme. By comparing table 2.1 and table 2.2, it can be concluded the motivation factor ($r= 0.812$) has a better correlation to the candidate's overall performance as compared to the study strategy factor ($r=0.565$). This means that despite both the factors have impact on the performance, motivation have a larger impact comperatively. This is expected as study strategies can differ greatly from one candidate to another and there is no perfect strategy that suits everyone for doing well. Besides, one particular study strategy such as doing revision daily might not be equally effective for everyone. Table 2.3 sums up the outcome of the questionnaire by measuring the correlation of the candidate's overall performance with the combination of motivation and study strategy factor which resulted in a high correlation level of $r = 0.714$ and $p < 0.01$. This data also validates the usage of the MSLQ questionnaire that has been often found to be successful in obtaining good correlation from both motivation and study strategy with the candidate's performance. Figure 3 futher illustrates the full picture of this study by mapping out every candidate's overall average score against their motivation and study strategy average score. Majority of the candidates are found to be between the 60-70 average marks for the whole programme. The figure depicts an upward linear trend which confirms the alternative hypothesis that students with good motivation and ideal study strategy will generally do better as seen in the overall average score. It is visible from the figure that they are some candidates that are far from the linear line which proves that the questionnaire cannot be totally accurate in predicting the candidates's performance. This is mainly due to the presence of biasness and other various factors that could impact the candidate's performance which will be discussed later.

Questionnaire issues

Despite the various steps taken to improve the questionnaire, there will still be some potential weakness regarding the data accuracy due to biasness. The first and most common issue would be the central tendency bias where candidates would refrain from providing extreme response hence tend to select the middle option (Allen 2007). This fence-sitting mentality is commonly found as participant of the questionnaire might be afraid to offend or being out of the norm by playing it safe to choose a neutral answer. The action taken regarding this issue would be to remove the "middle ground" option by using an even number range of answer choice. The other issue would be the acquiescence bias where participant would agree with statement hence only selecting the agree option. To solve this, some negative statements were introduced which would make the bias obvious if contradicting answers were found (Cronbach 1946). The next issue would be the social desirability bias whereby they choose the options that are generally more acceptable as society beliefs to portray themselves as an ideal student (Hebert 1997). This bias was clearly found to be present as one of the questionnaire was found to have a 6 (strongly agree) on a positively worded item and 1 (strongly disagree) on a negatively worded item. That bias would be hard to solve, and it is suggested that further observation from trainers, confirmation from assignments and test result, and further interview to validate the choices selected. A limited sample size is also an issue in this study as inaccuracy of data might affect the result of the analysis. Biasness would cause a large

skewed on the analysis which is the main concern due to the small sample size. This issue unfortunately could not be solve as the programme accepts limited number of participants each batch.

Other factors Influences

Besides the two factors discussed in the paper, it is fully known that many other various factors could contribute to some level of impact directly or indirectly towards the candidates’ performance in the programme. Yvonne and Kola (1998) states that the socio-economic background (SEB) of the student has a large influence upon their performance. This means that factors such as the gender, age and financial background, parental support of the candidate could possibly play a role in the outcome of their performance. Besides that, the emotional and social factor of the candidate also could also have an impact on their performance. A study done by Pritchard & Wilson (2003) found that social health and emotional factor have an impact upon students’ performance and is further proven as Leafgran (1989) concluded that students who are healthy socially and emotionally have more chance to do well in college. External factors that also would influence the candidates result could be the environment of programme itself such as the trainer’s competency and teaching methods, material quality and facilities provided. For example, something as simple as a hot environment would make it difficult for the candidates to concentrate in class and would possibly affect their learning capabilities and performance. Hence it is also important to evaluate the environment of learning to ensure consistent improve is done to provide the best possible support in assisting the candidates in their learning.

Future plans

In line with the goal of the RIGHT programme to bridge the digital divide, it requires more successful candidates that are able to impact the communities in the rural area. One proposed usage of the result found in this study as mentioned earlier is to be used as a guideline for the selection process of the RIGHT candidates, with the hope of selecting candidates that are highly motivated with a better potential to succeed after the training. The selection process is highly crucial as it is identified as one of the key factors in determining if the programme successfully achieve its goal. It is based on the assumption that candidates with high motivation and interest would do well in the programme whereby after the programme, they would be able to spearhead the ICT development in their respective village. Besides, the results gives us a better idea about the type of motivation and study strategy that influence the various subjects in the RIGHT programme. This insight enables the fine tune of the subjects especially regarding the ones with the low performing scores. It could be due to many reasons such as the high difficulty of the subject, incompetent trainer, period of training too short, or even poorly designed materials. Follow up of the RIGHT candidates is also crucial to monitor their progress after completing their training. Some would put their skills acquired to good use by setting up an ICT centre to provide ICT trainings and services. Others might be able to find a better job with their additional skillsets which is still considered a success, albeit a lesser one as the impact is considered to be localized as the impact is towards improving their own family as the impact to the community is minimal. One possible follow up paper could be done regarding the impact of the programme on the living standard of the rural community in the participant’s home town. It will be a qualitative study at the grassroots level by measuring the level of impact the villagers have received before and after the RIGHT candidate start an ICT centre or something equivalent that contributes to the ICT development in the area. The data obtain can be used to further enhance the RIGHT programme to ensure the candidates are well equipped to benefit their community in the future.

APPENDIX

Candidate Questionnaire

This questionnaire asks you about your motivation for the programme, study habits and learning skills. **There is no “right” or “wrong” answers to this questionnaire. This is also not a test.** We would like you to answer it as accurately as possible, as it would be used for research purposes to help improve the RIGHT programme and the candidates. Please select the answer by circling the answer that best represents you. Thank you for your time.

Strongly disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly agree
1	2	3	4	5	6

1. Whether the teaching content is difficult or easy, I am sure that I can understand it.
1. I am not confident about understanding difficult concepts that are taught
2. When the assignments or work are too difficult, I give up or only do the easy parts.
3. I am sure that I can do well in the tests.
4. When I find the topic content difficult, I do not try to learn it
5. While doing homework or exercise, I prefer to ask other people for the answer rather than think for myself.
6. I expect myself to master the skills that are taught in class.
7. I'm confident in doing well for the homework, tasks and assignments.
9. I think what is taught in the RIGHT programme is important because I can use it in my daily life and help others.
10. It is important to me to understand what is taught in class
11. I pay less attention to the topic I feel that is not important to me.
12. I think that learning IT is important because it stimulates my thinking.
13. I like the topics that are taught in this programme.
14. I believe the topics can help me achieve my future goal.
15. I will try to do better in the topics I prefer more.
16. I prefer materials (exercise and assignments) that are challenging so I can learn new things.
17. Getting good result is more important for me than understanding the topic well.
18. I prefer materials (exercise and assignments) that makes me interested although it can be difficult to learn.
19. It is satisfying for me to understand the topics well.
20. I will work harder if the topic is challenging or interesting for me.
21. Getting good grades in class is the most important thing for me.
22. I want to do well so I can prove my ability to my family and friends.
23. It is very important for me to get better grades than most of my classmates
24. I do not feel disappointed if my results are bad.
25. Awards for top candidate would motivate me to do better.
26. I love to participate in class because the content is exciting and helpful.
27. I like the programme because the trainer uses interesting teaching methods in class.
28. I like the programme because the trainer gives sufficient attention to me.
29. I love to participate in class because I can be involved in discussions.
30. I feel the classroom is comfortable for my learning.
31. I have a regular place set aside for studying.
32. I find myself not spending enough time for certain topics because of other activities.
33. I make sure I do regular revision weekly outside the class time
34. I find it hard to stick to a study schedule.
35. It is hard to find time to do revisions for an exam.
36. I often study at a place where I can concentrate properly without distractions.
37. If the topic is difficult, I give up or only study the easier parts
37. Even when the materials are uninteresting to me, I still try my best to finish.
38. I get easily distracted while learning in class or doing my revision.
39. I try my best to score good grades although I may not like some of the topics.
40. I would often ask the trainer for help to clarify the teachings that I do not understand.
41. I often help to explain the material to my classmate if they do not understand the material or what is being taught.
42. I try to work together with my classmates to finish the assignments.
43. I like to discuss the materials together with my classmates to exchange ideas and opinions because it helps me understand better.
44. I feel that group studying helps me better than studying myself.

ENDNOTES

*Acknowledgement

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REFERENCE

- Allen, I.E. & Seaman, C.A. 2007, "Likert scales and data analyses", *Quality Progress*, vol. 40, no. 7, pp. 64-65.
- Ames, C. & Archer, J. 1988, "Achievement goals in the classroom: Students' learning strategies and motivation processes.", *Journal of educational psychology*, vol. 80, no. 3, pp. 260.
- Artino Jr, A.R. 2005, "Review of the Motivated Strategies for Learning Questionnaire.", *Online Submission*, .
- Beaumont-Walters, Y. & Soyibo, K. 2001, "An analysis of high school students' performance on five integrated science process skills", *Research in Science & Technological Education*, vol. 19, no. 2, pp. 133-145.
- Cronbach, L.J. 1946, "Response sets and test validity", *Educational and psychological measurement*, vol. 6, no. 4, pp. 475-494.
- Funk, K. 2003, "Sustainability and performance", *MIT Sloan Management Review*, vol. 44, no. 2, pp. 65-70.
- Hebert, J.R., Ma, Y., Clemow, L., Ockene, I.S., Saperia, G., Stanek, E.J.,3rd, Merriam, P.A. & Ockene, J.K. 1997, "Gender differences in social desirability and social approval bias in dietary self-report", *American Journal of Epidemiology*, vol. 146, no. 12, pp. 1046-1055.
- Leafgran, F. 1989, "Health and wellness programs", *The freshman year experience*, , pp. 156-167.
- Lynch, D.J. 2010, "Motivational beliefs and learning strategies as predictors of academic performance in college physics", *College Student Journal*, vol. 44, no. 4, pp. 920.
- McConnaughey, J., Everette, D., Reynolds, T. & Lader, W. 1999, "Falling through the net: Defining the digital divide", *Washington: US Department of Commerce*, .
- Paris, S.G., Lipson, M.Y. & Wixson, K.K. 1983, "Becoming a strategic reader", *Contemporary educational psychology*, vol. 8, no. 3, pp. 293-316.
- Pintrich, P.R. 1989, "The dynamic interplay of student motivation and cognition in the college classroom", *Advances in motivation and achievement*, vol. 6, pp. 117-160.
- Pintrich, P.R., Smith, D.A., García, T. & McKeachie, W.J. 1993, "Reliability and predictive validity of the Motivated Strategies for Learning Questionnaire (MSLQ)", *Educational and psychological measurement*, vol. 53, no. 3, pp. 801-813.
- Pritchard, M.E. & Wilson, G.S. 2003, "Using emotional and social factors to predict student success", *Journal of college student development*, vol. 44, no. 1, pp. 18-28.
- Selwyn, N. 2004, "Reconsidering political and popular understandings of the digital divide", *New Media & Society*, vol. 6, no. 3, pp. 341-362.
- Taylor, R.T. 2012, *Review of the motivated strategies for learning questionnaire (MSLQ) using reliability generalization techniques to assess scale reliability*, .
- Tongia, R., Subrahmanian, E. & Arunachalam, V. 2005, *Information and Communications Technology for Sustainable Development: Defining a Global Research Agenda*, Allied Publishers.
- Tuan*, H., Chin, C. & Shieh, S. 2005, "The development of a questionnaire to measure students' motivation towards science learning", *International Journal of Science Education*, vol. 27, no. 6, pp. 639-654.