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Research Article

Factors Affecting Library and Media Teachers' Performance Improvement: A Pilot Study

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Abstract. This paper reports findings from the pilot study on Factors Affecting Library and Media Teachers (LMTs) Performance Improvement. Thirty-eight respondents involved were from the Teachers' Activities Centre (TAC) of Kapar and Telok Gadong Zone, Klang. Selangor. Respondents answered all the 151 questions on the Factors Affecting LMTs Performance Improvement (Skills and Knowledge), with motivation as the moderating factors (Commitment, Self-Efficacy, Reward, Task Complexity, Feedback) and LMTs' Perception on two SRCM Courses (Basic and Intermediate) and also LMTs Performance Improvement. The 151 questions included 7 questions on profiles background. The overall Cronbach Alpha reliability on the items is 0.995, indicating that the measurement reflected high reliability. This study is specifically on research about factors (skills, knowledge, LMTs' perception through Basic (35H) and Intermediate (45H) SRCM Courses), motivation as the moderator factors to improve LMTs' performance. A central aim of this research is to explicate the effect's relationships that exist among factors, and LMTs' performance improvement.

Keywords. Performance improvement; Library and media teacher; Skills; Motivation; Knowledge; LMTs perception

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1. Introduction

The importance of skills, knowledge, motivation and training for improving performance has prolonged been discussed. Due to the current changing in education and its effects on the community, the need for performance improvement has become more important than ever [1], [2]. In secondary schools especially, the *School Resource Centre* (SRC) is a centre of accessing information which contains multiple printed, non-printed, digital sources and is managed systematically in order to improve teaching and learning quality [3].

2. Sample Size

Table 1. Formula for Allocation Sample

Number	State	Total LMTs'	Sample Size Calculation	Sample Size
1	PERAK	246	$\frac{246}{2392} \times 332 = 34.14$	34
2	SELANGOR	275	$\frac{275}{2392} \times 332 = 38.11$	38
3	PAHANG	192	$\frac{192}{2392} \times 332 = 26.65$	27
4	KELANTAN	173	$\frac{173}{2392} \times 332 = 24.011$	24
5	SABAH	219	$\frac{219}{2392} \times 332 = 30.59$	30
6	JOHOR	274	$\frac{274}{2392} \times 332 = 38.03$	38
7	KEDAH	200	$\frac{200}{2392} \times 332 = 27.76$	28
8	WP PUTRAJAYA	11	-	5
9	MELAKA	77	$\frac{77}{2392} \times 332 = 10.69$	11
10	NEGERI SEMBILAN	123	$\frac{123}{2392} \times 332 = 17.07$	17
11	PULAU PINANG	127	$\frac{127}{2392} \times 332 = 17.63$	18
12	PERLIS	30	$\frac{30}{2392} \times 332 = 4.16$	4
13	SARAWAK	187	$\frac{187}{2392} \times 332 = 25.95$	26
14	TERENGGANU	147	$\frac{147}{2392} \times 332 = 20.41$	20
15	WP KUALA LUMPUR	101	$\frac{101}{2392} \times 332 = 14.02$	14
16	WP LABUAN	10	-	5
	Total	**2392**	**332**	**339**

In this study, the total population is 2392 LMTs in Malaysian secondary schools, as illustrated in Table 1. The number of respondents, n_h for each stratum is calculated based on the number of schools in each stratum, N_h as well as estimator formula are attached. A simple random sampling technique is then used to select the respondents from each stratum. The random sample is computed using Excel software by assigning each row of data a random number to pick the sample for each stratum.

Determining sample size is a very important issue because samples that are too large may waste time, resources and money, while samples that are too small may lead to inaccurate

results. The aim of the calculation is to determine an adequate sample size to estimate the population prevalence with a good precision [4–6].

The common sample size calculation is:

$$n = \frac{z_{\alpha/2}^2 S^2}{e^2 + \frac{z_{\alpha/2}^2 S^2}{N}}.$$

This study used $\alpha = 0.05$, which is the 95% confidence level and $e = 0.15$, which is the margin of error. Since, the variance of the population is unknown, $p(1-p)$ will be used instead of S^2, where $p = 0.5$. Hence, the sample size for the population is:

$$n = \frac{1.96^2(0.5)(1-0.5)}{0.05^2 + \frac{1.96^2(0.5)(1-0.5)}{2392}} = 331.006 \approx 332.$$

3. Pre-Test

Pre test was done on three LMTs from secondary schools located in Klang, Selangor. On the average, they have more than 10 years of working experience as LMTs. They reviewed the questionnaire designs, wording of the questions and instructions in an informal setting. This was to make sure the group understood the meaning of the questions and provided sufficient variation of answers [7]. They answered and made some constructive comments about the questionnaire. Furthermore, pre-test respondents have ideal as they resembled the survey's target population [8].

Their feedback and comments were taken into consideration. The researchers amended a few question structures, question approaches and changed the answers provided. Considering that three to four individuals, who are thoughtful, critical and similar to the intended participants, would be sufficient to help identify the problems [9]. Their reviews are effective in identifying questionnaire errors including typographical errors, complex layout and instructions, the flow and coherency of questions [10].

4. Validity

In the process of producing a sound and quality research, the designed instrument has gone through a handful of processes to ensure that conclusions and implications based on the data collected are valid, reliable and that validity refers to which evidence is supported by any inferences made by the researcher based on the collected data using the instrument. These inferences should be appropriate, meaningful, correct, and useful as they validated the research and not the instrument itself [11].

For further validation, the content validity is taken into consideration to ensure that the contents of the questionnaire matched intended contents. Several scholars highlighted that the experts' judgment helps to scrutinize the instrument to ascertain its validity for measuring the characteristics in question [11–16]. There is no formula or statistic that can be computed or any other way to express it quantitatively [9]. Thus, expert judgment is the only practicable way to assess content validity with numerous revisions and improvements [17].

The researchers handed over the instrument to two of Englishand Malay Linguistic Teachers and also LMTs experts from Selangor State Education Technology Department (SETD) for reviews and validations. They are the Director and Deputy Director of Selangor State Education Technology Department and Selangor Senior School Resource Centre (SRC) Trainers. They assessed, reviewed, and determined its content and validity. The researcher noted their feedbacks and comment, amended and improves the instrument as suggested. Once pre-tested and validated, the researchers did a final amendment and proceed with the pilot test.

5. Pilot Test

The respondents of the pilot test were the LMTs in secondary schools as they are the intended samples in the definite research. Thirty-eight LMTs answered the pilot test. They were from theKlang district of Selangor. The instruments were distributed through two Teachers' Activities Centre (TAC) of Kapar and TelokGadong Zone. Piloting the instrument with the targeted samples is to solicit LMTs opinions on the instrument as well as the research as a whole [18, 19]. Therefore, piloting the instrument may minimize unforeseen problems. Several LMTs are unclear about the understanding of SRC management when it comes to the reward questions. The researchers explained to them in the pilot study process. Based on the recommendations, the researchers will include SRC top management to differ from SRC management in the actual questionnaire to avoid misunderstandings among respondents. Their perceptions on two SRCM courses seem differ based on their qualifications and experience.

6. Pilot Test Results

In the process of developing a consistent and dependable research instrument, it was tested so that the measurements between the respondents were not too varied across time periods and that a measurement taken at any point in time was reliable [4, 13, 20]. The pilot test data were analyzed using the IBM SPSS Statistics 20. Thirty-eight respondents answered all the 151 questions on the Factors Affecting LMTs Performance Improvement (Skills and Knowledge), with motivation as the moderating factors (Commitment, Self Efficacy, Reward, Task Complexity, Feedback) and LMTs' Perception on two SRCM Courses (Basic and Intermediate) and also LMTs Performance Improvement. The 151 questions included 7 questions on profiles background.

Personal Profile of Respondents

Out of 38 respondents, 44.7% of respondents were from urban area, while the rest were from rural area.38 of the schools had good infrastructure facilities. There were 100% schools with 24 hours electricity supply.

Table 2 shows the background information of the research sites. A total of 94.7% schools had computer facilities and another 89.5% schools have internet facilities. The numbers of LMTs attending courses such as In-service SRCM 14 weeks was lower and as for courses of one year, only 15.80% have attended. Most LMTs hold minimum Library and Information Science (LIS) qualifications. Overall, the LMTs' qualifications can be summedup into 5 levels (see Table 2).

Table 2. Descriptive Statistics of Profiles Background

Constructs	**Operational**	**Frequency**	**Percentage (%)**
Location	Urban Area Rural Area	17 21	44.7 55.3
Facilities	24 H Electricity Computer Internet	38 36 34	100 94.7 89.5
Qualifications in Library and Information Science/ Educational Technology	-One Year SRCM Course -14 Weeks SRCM Course -Diploma -Degree -Master	5 1 3 5 1	13.2 2.6 7.9 13.2 2.6

Cronbach Alpha Results

The overall Cronbach Alpha results on LMTs perception is 0.979. Followed byLMTs Performance Improvement is 0.970, Motivation factors 0.940, Knowledge factors 0.938 and Skills factors 0.886. The overall Cronbach Alpha reliability on the items is 0.995, indicating that the measurement reflected high reliability [9, 17, 21, 22].

Table 3. Cronbach Alpha of Each Section of the Questionnaire

Constructs	**Operational**	**Items (N)**	**Cronbach Alpha**
Skills	ICT Teamwork Communication Leadership	7 6 7 13	.814 .866 .915 .951
Knowledge	Information Literacy SRC Resources SRC Management	11 8 7	.974 .910 .931
Motivation (Moderators)	Commitment Self Efficacy Task Complexity Reward Feedback	7 7 4 7 5	.982 .980 .867 .941 .931
LMTs Perception	Basic SRCM Intermediate SRCM Content Basic SRCM Content Intermediate SRCM	12 13 10 10	.961 .984 .987 .984
LMTs Performance Improvement	Performance Improvement	10	.970

7. Conclusions

Finally, once the instrument is ready, the researcher has applied for approval from the Education Planning and Research Development Division (EPRD), MoE to carry out the research in the targeted schools. With the approval letter, the researcher again wrote and applied for consent letter to carry out the survey in schools at all sixteen State Education Departments. This took more than one month. In the meantime, the researcher prepared online survey using surveymonkey.com. With the endorsement, the researcher emailed to all target respondents and attached approval letter from EPRD and all sixteen State Educational Department (SED) to invite them to participate in this survey.

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Competing Interests

The authors declare that they have no competing interests.

Authors' Contributions

All the authors contributed significantly in writing this article. The authors read and approved the final manuscript.

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