Key Performance Indicators for School Resource Centre (SRC) Improvement

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Abstract

The state-of-art of school resource centre (SRC) in Malaysian schools varies significantly. Some of them are well equipped, with standards that are comparable to the advanced SRC in the developed countries, while others are struggling to provide basic services. Several reasons are liable for the discrepancy, one of which is the inadequate benchmark or yardstick to guide the SRC on their standards. Employing key performance indicators (KPI) can be a starting point for the improvement of the state-of-art of SRC. Not much literature has been found to discuss the KPI in school library in Malaysia. So little is known about whether or not KPI has been employed in the SRC. There are, however, numerous guidelines and manuals available for setting up a school library, such as those from IFLA, and some locally prepared guidelines such as Garis Panduan Pemarkahan dan Penggredan and Fail Kuasa (2006). However, merely having guidelines is still not sufficient to ensure an efficient and capable library operation. The performance of library operation needs to be measured objectively based on the proposed KPI. This paper discusses the idea of introducing KPI in school libraries in such a way which the KPI scheme is used to promote school libraries' improvement, to have informed operation decisions, and thus, to monitor progress towards target. Since the Malaysian education system is experiencing rapid educational reform, the demand of SRC as one of the learning support facilities is increasing. Among the key areas of concern are information resources, information services, learning environments, and administration climate. For a start, the SRC management could choose to adopt the PKPA (2/2005) guidelines to establish KPI and to implement performance measurement. Therefore, KPI could act not only as management tool, but also as strategic driver to the school administration on the functionality of school library.

Keywords: Key Performance Indicators, School Resource Centers, Performance Indicators, Performance Measurement, Library Improvement, Library Effectiveness.

1. Introduction

Educational reform is a continuous process which evolves from time to time, often responding to the needs and challenges of the time. The Malaysian school educational system is of no exception. While there had been numerous educational reforms taking place in the national education system since its independence in 1957, the milestone of the Malaysian educational reform took place in 1982, with the introduction of new curriculum for the primary schools or KBSR. The new curriculum for the secondary schools (KBSM) took place six years later. The new curriculum was anticipated to set a new paradigm shift in the teaching and learning process in classrooms. It envisaged teaching and learning process that are student centred, resourced-based and incorporated various styles of individualistic and group learning activities.

More than a decade later, another milestone was created with the introduction of the smart school in 1997. The Multimedia Super Corridor (MSC) Smart School Flagship Application Conceptual Blueprint was launched in July 1997 by Tun Dr Mahathir Mohamad, the then Prime Minister of Malaysia. The smart school project pursues to reinvent creative teaching and learning through capitalization on ICT. The project is considered to be one of the most forward looking ICT-based learning initiatives in the world. Its proposed implementation is broken down into four parts, referred to as waves.

The first wave of the smart school is known as "The Pilot" which involved 87 schools (1999 – 2002). The second wave is known as "The Post Pilot" (2002-2005) where the post mortem on the smart school implementation was carried out. The third wave (2005-2010) is a stage where the MOE is aiming to make all schools smart by 2010. Wave four (2010 – 2020) is the last stage where The MOE is aiming to consolidate and stabilise the smart school system and aspire to make technology the key enabler in teaching and learning process.

The smart school is not only about incorporating ICT in teaching and learning. It is about paradigm shift in the national curriculum where the pedagogical aspect is given the highest priority. Below is an excerpt from *The Smart School Roadmap 2005-2020: An Educational Odyssey* (2005), describing the Malaysian ambitious education system.

"The strategic Roadmap envisages the expansion of smart schools to about 10,000 schools by the year2010. The roadmap also introduces potential technology direction for the 2020 scenario which includes learning objects, wearable technologies, virtual learning environments, home schooling and radio frequency identification"

2. The Malaysian School Resource Centre (SRC)

(a) The Development of SRCs

The Educational Technology Division also known as Bahagian Teknologi Pendidikan (BTP) is a responsible body in the Ministry of Education (MOE), which administers and supervises the well-beings of all the SRCs in Malaysia. It has indeed taken various continuous actions to ensure that all the SRCs progress and develop along with time and technology. BTP, assisted by all the State Educational Resource Centres in all the 14 states has the responsibility to make certain that the standard of library services in all schools are raised to an acceptable global standard (Malaysia, Kementerian Pendidikan, 2001).

According to a paper entitled *Kertas Konsep Hala Tuju Pusat Sumber Sekolah* (BTP, 2001) *a* concept paper by prepared by BTP in 2001, the progress of the SRC in Malaysia are as follow:

- After the National Independence in the 1960s, school libraries started to get considerable attention from the Library Association of Malaya or *Perpustakaan Persekutuan Tanah Melayu (1962)*. The *School* Library Manual was published in 1962.
- In 1970s and 1980s the MOE has started to give serious attention towards the development and the utilization of SRC. The ministry has implemented several actions, as well as given several directives, some of which are:
  i) Every school constructed after 1976 should be equipped with a special room for SRC.
  ii) SRC should be furnished with appropriate furniture
  iii) Provide assistance from Educational Resource Centre
  iv) Organize in service trainings to SRC teachers on managing and utilization of SRC from time to time.
  v) Include components of SRC and media in education in pre-service teacher training plans.
  vi) In the early 1980s, the School Division, MOE has implemented a SRC utilization program pilot project on 26 schools throughout Malaysia. From here, the MOE has directed that all school libraries should be called

as SRC starting 1 Mac 1983. This indicates the incorporation of library services and audio visual services in all SRC.

vii) Four State Educational Resource Centers (PSPN) in Kedah, Pahang, Terengganu, and Kelantan were built between 1981 and 1983. Simultaneously, 350 Teacher Activities Centers (PKG) were built by the end of 1980s. At present, all states already have their own PSPN and PKG. The main objectives of the PSPN are to monitor and to supervise the SRC in the respective states, as well as to provide educational resources and technical expertise on the media and resources.

(b) SRCs Current State of affairs

As far as the authors are concerned, there are probably not many studies done in Malaysia to find out how well the SRC comply with the standards and guidelines. From a few references that we managed to get, the authors are of the opinion that the current state of affairs of the SRC is somewhat diverse. There is a noticeable gap in terms of the quality of the SRC throughout Malaysia. Some schools have exceptionally good SRC, while others range between average and less than average quality.

A survey on primary and secondary schools was carried out by the Educational Technology Division (BTP) in 2004, involving a total number of 290 schools. The survey also covered some areas under the SRC. According to the survey, as of January 2005, almost all schools in Malaysia have SRC. There are however, two (0.5%) rural primary schools and 1 (3.4%) urban secondary school do not have an SRC.

The survey also covered some areas under the SRCs which are of interest to the authors, they are (Malaysia, Kementerian Pendidikan, 2001):

i) The student's book ratio in the SRC
The findings of the survey show that most schools still have not achieved the national standard of 1:15 (students: books) for primary schools and 1:20 for secondary schools. It continues to show that 104 schools (35.7%) have a student book ratio of 1:5 while 23 other schools (28.65%) have a student book ratio of 1:10. On the other hand, 26 schools (9.8%) have 1: 25 and 1:>25 student book ratio, which is above the national standard. The figures show that even though the schools can be considered to be in the same category, the size of the book collection to varies from school to school

ii) Hardware in the SRC
The findings of the survey also show that most SRC (80%-93.1%) are equipped with television sets, overhead projectors (58%-80.5%), VCD/DVD players (75.8%-82.7%), and audio tape players (44.4%-75.5%). The latest hardware, LCD projector, is available in 33.2%- 57.7%. From the figures we can conclude that most of the SRC are quite well equipped with the AV materials. Nonetheless, some schools are likely to have the whole set of hardware while others have only some.

iii) Full time SRC Coordinators
The SRC Coordinators can be classified into three categories according to their level of expertise, i.e., professionals, partial professional and untrained. There is a conflicting difference in the data collected from the School Heads and the SRC Coordinators regarding the level of expertise of the full time SRC coordinators. The data on the SRC qualification is collected from two groups; the school heads and SRC coordinators. Overall, the SRC coordinators give higher percentage for professional and partial professional SRC Coordinators compared to the school heads. According to the School Headmasters, there are only 4(1.8%) professional, 10(4.4%) partial professional and 211 (93.8%) untrained SRC Coordinators. The SRC Coordinators come up with another figures; according to Primary SRC Coordinators, there are 8 (12.4%) professional, 62

(27%) partial professionals, and 155 (68.9%) untrained coordinators. The SRC Secondary Coordinators claim that 8(12.4%) of them are professional, 1(1.5%) partial professional and 56(86.2%) are untrained.

(c) The Expanding Role of SRC

(i) The role of SRC in KBSR and KBSM

The development and enhancement of teaching and learning process through SRC is more evident with the initiation of KBSR in 1983 and KBSM in 1989. During the period, all school libraries were instructed to restructure to adapt to the curriculum changes. One of the earliest changes was rebranding the school library. The school libraries should be referred to as school resource centre (SRC). The new SRC was made up of three units; the school library where the printed materials are kept, the audio visual (AV) room, where all the audio visual materials are kept, and the teaching aid or *Alat Bantu Mengajar* (ABM) room where all the teaching assisting materials such as wall charts and maps are kept.

The new system stresses on basic information literacy skills. It aspires to equip the students with the skills to use SRC, and learning and thinking skills. The SRC is seen as an important supporting agent that could provide significant contribution towards educational excellence through its resources and services. As such, under the new curriculum, teachers and students were encouraged to be involved in planned learning activities that incorporated the resources and the collections from the SRC.

(ii) The Role of SRC in Smart Schools

School resource centre has been recognized as having a key role in supporting information and communication technology (ICT) applications and the development of required skills to extract and to use information effectively. The contemporary methods of learning in smart schools which are largely student centred and activities based are demanding the need for SRC services more than ever. The students need rich information from various sources to enable them to learn independently, both in the school environment and beyond.

The *Smart School Roadmap 2005-2020: An Educational Odyssey* (2005) has indeed given a comprehensive overview of the nation's most hopeful educational achievement. One crucial area however, has been left out in the discussion. That is the important role of the SRC in realizing the smart school vision. While the paper elaborately discusses the various ways of ICT utilization in smart schools, the roles and functions of SRC as one of the support agents is not mentioned at all. It is important to note here that in most schools, the computer labs are managed under the umbrella of the SRC. The SRC in smart school does more than providing information from the Internet. It still carries on its traditional services, providing printed and non printed materials. The students need more than print out materials from the Internet. They need other stimulators as well such as pictures, teaching aids, and audio materials to invigorate their learning process

An important development of a smart school resource centre is library automation. In fact, a fairly big number of non smart schools in Malaysia have also ventured into the automation. Most of them are using one of six major systems. Most of the systems are able to:

- Manage the database of materials in the SRC for searching, circulation, and Online Public Access Catalogue (OPAC)
- Print bar codes for materials
- Incorporate the list of materials borrowed with the data required for the NILAM Reading Program to reduce the teacher's burden of having to keep a record manually.

(d) SRC Constraints

It is quite disappointing that despite all the efforts and planning done by the BTP and PSPN for more than two decades, the development and the progress of each of the SRC tend to be quite slow. There are several factors that could be responsible in impeding a speedy SRC development. Most of them are internal problems, explaining the discrepancies in the SRC achievements and developments. Here are several factors identified from a research done by BTP:

(i) Staffing constraints

- 86% of teacher librarians get heavy teaching load of more than 18 periods a week.
- Only 9% of SRC have full time or part time library assistants.
- Some of the SRC teachers do not get adequate library management training.
- High turnover in the SRC post among the teachers, resulting in change of management too often.

(ii) Space constraints

- 73% of SRC need additional space for listening and viewing, group activities, self-learning, working room, and information skill classes.
- Some schools use SRC as temporary classes, or to conduct meetings to solve inadequate classroom problem.

(iii) Financial constraints

- Inadequate SRC allocation from the MOE to support acquisition and library management costs.

(e) SRC Standards, Guidelines, Manuals, and Authority Files *(Fail Kuasa)*

Even though there are SRC standards or guidelines to guide the schools for compliance, data from researches or data from school inspectorate continue to show differences in the qualities and achievements of the various SRC. The administration of the SRC in Malaysia is decentralized to some extent in which each PSPN for every state develop its own SRC guidelines based on the mutually agreed decisions during the PSPN and BTP meetings.

Each school also has its own authority files to assist the teacher librarians managing the SRC. The authors are of the opinion that this problem could arise from inadequate supervision and enforcement from the higher authorities. Officially, the SRC are only monitored or assessed for grading purposes in SRC competition once a year. Each PSPN prepares its own SRC grading guidelines for the competition purpose. The SRC competition is a contest that is held annually to encourage schools to improve and raise the standard of their resource centers. Besides the SRC competition assessment, the resource centers are also assessed on a random basis by the school inspectorate officials. It can be said that there is still no strict measures taken to compel the schools to comply strictly with the standards or guidelines.

3. Key Performance Indicators

Key Performance Indicators (KPI) are also known as *Key Performance Index, Key Process Indicators, Balanced Scorecards, Business Dashboards, Scoreboard, Key Result Areas, Key Success Indicators* or a number of other identifications depending on the consultant and management experts you are talking with.

KPI for service-oriented organization like library should be viewed as measuring tool for continuous improvement, not for productivity count. In the service organization, customer satisfaction is a classic measure. The organization has to find out which activities are making the customers happy. These activities should become the basis for KPIs.

(a) Definition of Term

According to *Pekeliling Kemajuan Pentadbiran Awam* (PKPA) (2/2005), Key Performance Indicators refer to as a basic performance measurement. The implementation of performance measurement in Malaysian government agencies are based on the principles such as quality service-delivery, core businesses, customer satisfaction, core process, the use of KPI as a measuring method, SMART (i.e. *specific, measurable, achievable, realistic, time* bound) performance target, evaluation and monitoring process, and continuous improvement.

Another definition comes from a business measurement expert, David Parmenter (2002). He defines KPI as "quantifiable measurements, agreed to beforehand, that reflect the Critical Success Factors of the company or (departments or projects)". He looks at a KPI as something that you can measure continuously. Another aspect is that KPI must be few in number, probably less than ten. He also believes that in order to do well in performance measurement, the company needs to understand its critical success factors so that it may increase repeat business with key customers. Furthermore, he said, "one of the main distinguishing characteristics of a true KPI is that it is monitored on a daily basis… by the senior management team…"

Masilamani (2005) presented her definition of KPI as "a relative measure of the performance of an organization". KPI can also be used to indicate the performance of specific and focused activities in the organization which could directly affect the value of that organization.

The employment of KPI in any organization can help them define their quality performance and productivity, and thus, measure their progress towards organizational goals. This can be realized through setting up the target with measurable figure, in line with the mission and vision of the organization.

(b) Why Employ KPI?

By definition, KPIs are quantifiable metrics that reflect the performance of an organization in achieving its goals and objectives. It is a performance management tool and it should not just act as visual metaphors. The developer should understand what constitute KPIs that could deliver a long term value-added tool to the organization. A good KPI possesses the following characteristics:

(i) KPIs reflect strategic value drivers (Eckerson, 2004) to achieve organizational goals.

Value drivers mean activities that, when executed properly guarantee future success. Value drivers could help an organization to move in the right direction to achieve its organizational goals, for examples, high customer satisfaction or excellent service quality. KPIs, in most cases, are non-financial. It can never be a monetary measure (Parmenter, 2007). KPIs are "leading" and not lagging performance indicators.

(ii) KPIs are quantifiable based on valid data and standards.

Most organizations have their own set of metrics and standards for performance measurement. But it can take organizations months and may be years to come up with the

end results. Therefore, with the use of KPIs, the existing sets of indicators could always be quantified as relevant to the organization's need. However, it is important to accurately define the KPIs and maintain with the same definition in the consecutive years. As for SRC, it may focus its KPIs on information literacy of its users. Further, the school needs to set its own targets for each KPI. A clear target for such KPI would be "Reduce the turnover of teacher librarian by 5 five percent per year". It is important that the KPI is understood by those who are concern and have the supremacy to take specific action to accomplish their targets.

(iii) KPIs lead to positive actions and key to organizational success.

KPIs should generate the intended action and, thus improve performance. Only those factors that are essential and critical to the organization reaching its goals are selected. It is important to keep everyone's attention focused on achieving the same KPIs. How to motivate people to reach the KPIs targets? The top management could use KPIs as a carrot. Post and show the progress of KPIs everywhere in the organization such as the main entrance, pantry room, on the walls of hall ways, meeting rooms, staff areas, or even on the organization's website. The future success could be realized if the top executives give their full commitment. When KPIs cascade throughout the organization, it would enable everyone to march together in the right path.

(c) How to Develop KPIs?

Initially, an organization has to determine its vision and mission, identify its stakeholders, and define its goals. Then, it needs to have a method to measure the progress towards those goals. According to Lee (2005), vision and goals are the starting points for developing KPIs. The vision, mission and goals have to be analyzed via strategic planning, and then select the most appropriate Key Performance Indicators, accompanied with targets. He has mapped the development as presented in Figure 1.
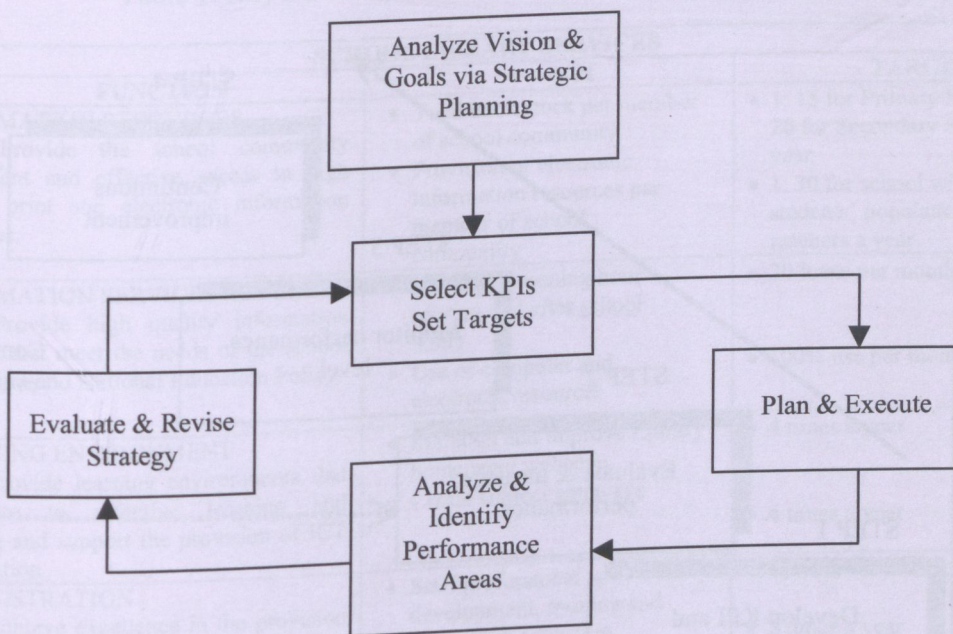

Figure 1: The Initial Stage of Developing Key Performance Indicators

Lee (2005) then explained, what makes a performance indicator "key" are:

- "Be coherent through visible consistency and by measuring both causes (enablers) and effects (results);
- Create focus, informing the need regularly or frequently to make judgments and take decisions; and
- Be presented clearly to the people who need them, thereby forming the basis of targets and incentives that influence behaviors."

Parmenter, as interviewed by Creelman (2007), however believed a critical success factor might increase "repeat business" with the key clients. Just take one step back, and understand the critical success factors of the organization. After having a list of critical success factors, start thinking of actions taken by specific individuals who might have an impact on the factors.

TracDat Manual Online (2007) has laid tips developing KPI and performance standards. It suggests to consider the length of time for data development (such as 1 semester or 1 fiscal year), and select both long-term and short-term indicators whenever possible because both are important. Once the executers have identified an objective or strategic direction, then they have to decide what will be the key performance indicator for that objective or strategic direction.

In Malaysian Civil Service, the implementation of KPI has been effective since 7 April 2005 until present. The aim is to achieve world class performance. Thus, to create one performance measurement system in a more systematic, complete and comprehensive way, a guideline were issued and enclosed inside PKPA (2/2005) and needs to be implemented fully by the front-line government agencies, as shown in the chart of KPIs implementation (Malaysia, Jabatan Perdana Menteri, 2005) (Figure 2).
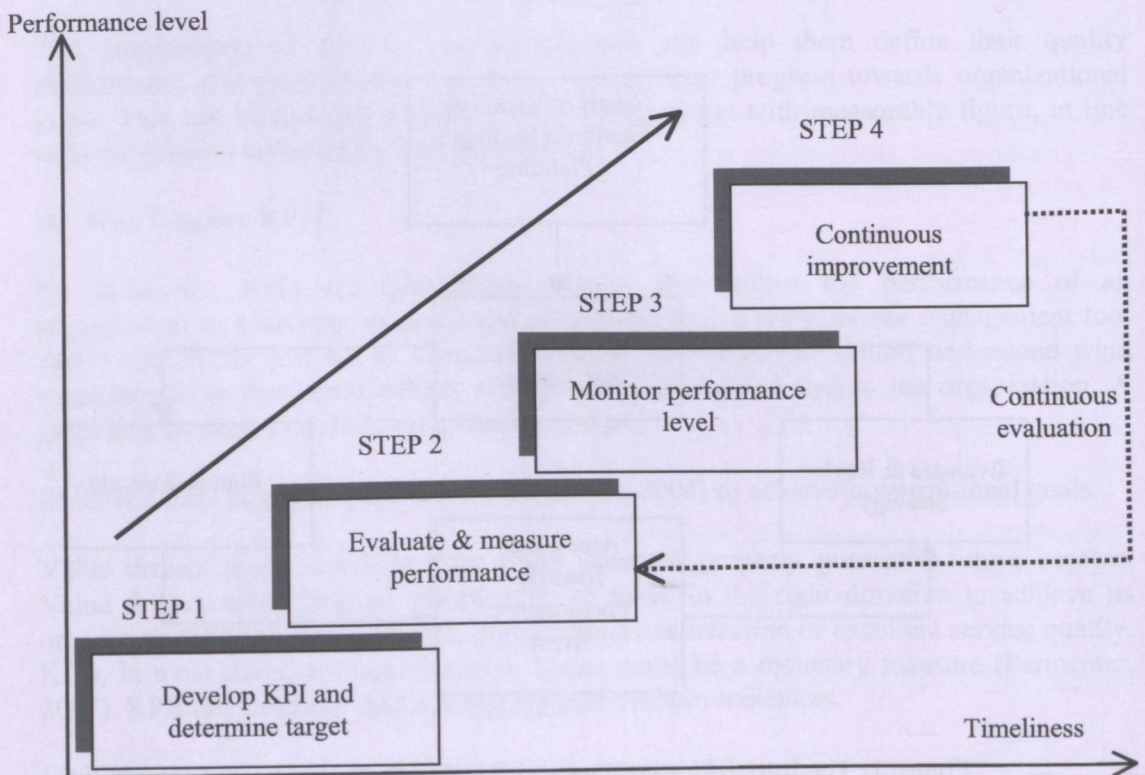

Figure 2: Steps to Develop KPI and Implement Performance Measurement

Step 1: Develop KPI and fix target

KPI must take into account the effectiveness and efficiency aspects of core processes within, in order to produce and deliver the kind of core businesses that the customers are contented with. The basis for measurement is the KPI and its target. Performance target should take into consideration matters such as process capability which covered work flow, human resources requirement, finance, equipments, proper infrastructures and facilities, and customer satisfaction and needs. The KPI and its prescribed target must fulfill the SMART features (i.e. Specific, Measurable, Achievable, Realistic, and Time-bound).

Another way of developing KPI and performance target is through literature survey on previous researches on SRC effectiveness and efficiency, even on SRC improvement. Some core services and functions can be taken from these research findings. IFLA/UNESCO School Library Guidelines (2002) has provided a list of useful key performance indicators for monitoring and evaluating the achievement of the library goals. The indicators are as follows:

- Usage indicators
- Resource indicators
- Human resource indicators
- Qualitative indicators
- Cost indicators
- Comparative indicators

Table 1 presents examples of school library services and functions that can be measured by KPI and its target. The information presented is not based on any specific research data of any specific library but based on general findings of libraries in Malaysia. It is used as an example to illustrate the use of KPIs in monitoring the performance of SRC towards betterment.

Table 1: Key Performance Indicators for a School Library

SCHOOL LIBRARY SERVICES		
FUNCTION	KPI	TARGET
INFORMATION RESOURCES Goal: Provide the school community convenient and effective access to high quality print and electronic information resources.	• Total book stock per member of school community • Provision of electronic information resources per member of school community	• 1: 15 for Primary School; 1: 20 for Secondary School a year • 1: 30 for school with 1000 students' population and 80 teachers a year.
INFORMATION SERVICES Goal: Provide high quality information services that meet the needs of the school curriculum and National Education Policy.	• Loans per opening hour (during and after school hour) • Use of computer and electronic resources	• 30 loans per month • 100% use per month
LEARNING ENVIRONMENT Goal: Provide learning environments that contribute to effective learning and teaching and support the provision of ICT in education.	• Maintain and improve Library homepage/ webpage • Create subject gateways	• 4 times a year • 4 times a year
ADMINISTRATION Goal: Achieve excellence in the provision of library services through the application of best management practices.	• Staff professional development, training and continuing education. • Benchmark statistical data at other schools of similar size & area.	• 46 hours or 4 times a year. • 2 times a year

Step 2: Evaluate and measure performance

Evaluation and measurement of performance can be done by developing simple systems to capture the data. As Lee (2005) claimed, KPIs can be measured both statically and dynamically. It could indicate the position of a particular factor and rates of change. Both measures are important to give a complete picture of the organizational performance. In library operation, dynamic measures could be the rate of collection growth, staff and resources turnover rates. While static measures could include number of users, number of online access computers and library programs held.

Performance is measured by comparing the present results with the prescribed targets. Once it is measured, identify the gaps or loopholes, analyze the cause-and-effect factors and thus, suggest actions for improvement to the top management (PKPA, 2/2005).

Step 3: Monitor performance level

Performance should be monitored by the top management and reported frequently. The KPI reporting should demonstrate the trend and the performance level to the management. Monitoring feedback must be used as a main agenda in KPI team meeting in order to reduce "red tape" in bureaucracy. The KPI team should then review the needs of human resource, finance, equipment and infrastructures towards work efficiency (PKPA, 2/2005). A regular KPI reporting can act as a proof to the operational or process level of organization.

Step 4: Continuous improvement

Once the results of performance are reported, the top management should take action for further improvement. *Step 2 to 4* could always be repeated in order to achieve better improvement, and increase customer satisfaction. For example, if the total number of SRC visits this week has reduced to more than 30% than that of the last two weeks, then the SRC management has to take action by reviewing or innovating new strategy to attract more potential users to the library.

3. Recommendations

Every initial proposal for KPI is not expected to be perfect. However, it is important for the organization to understand and apply the appropriate KPIs so that it can acquire experience in using them, from which it can improve its performance level.

This paper offers the following recommendations to help school administrators develop KPI and thus, to improve the work of school library or resource centre:

- Get ready with a clear cut vision, mission, and objectives that reflect the National policies and objectives.
- Prepare a well-designed strategic plan so that the SRC management is capable of managing change in a proper and well-planned manner, internally and externally.
- Set up a cross-functional team to develop and implement KPI measurement. The team must consist of high-level employees, from different sections who have a clear view of organizational goals and priorities. They should be given a short course on performance measurement, particularly KPI.
- Establish KPIs, measure, report and review the process (see Figure 2 1). The SRC management should focus on the mechanisms by which improvements in outcome performance indicators can be achieved via a process of target setting, including the specification of success criteria and sources of evidence.
- In any management strategy, leadership plays a critical and vital role. According to Lance, Rodney and Hamilton-Pennell (2000), principals should visibly support library media specialists.

- Improves accountability of the position of school library media specialists. In order to demonstrate their relevance to organizational goals, the library media specialists should strategize "efficient and effective control systems" (Zaiton & Sharifah Hanon, 2004). They should be made accountable for their resource centers' performance.

4. Conclusion

The employment of KPI should be a compulsory practice in a work culture that is performance-based at all levels of Malaysian Civil Service. Agencies at all levels should stride out to establish KPI, to determine performance targets for each KPI, and to implement performance measurement to note the agencies performance level. Employing KPI in school resource centers can be a starting point towards SRC improvement. The KPI exercise in the resource centers is vital to ensure high level of performance achievement. The school administrators can choose to adopt the PKPA (2/2005) guidelines on establishing KPI and implementing performance measurement. Through the KPI application in school generally and school resource centre in particular, we can implement continuous improvement to ensure continuous school resource centre effectiveness in satisfying the library users.

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