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Country Case Study - MAURITIUS

Pre-Vocational Education: An Impact Evaluation

Ministry of Education & Scientific Research

S. Dhunookchand

Working Document
DRAFT

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The support and dedication of the Monitoring Team and the Senior Education Officer, in terms of their flinching efforts and collaboration in the entire implementation program, has been instrumental to the achievements of the new Pre Vocational Education Scheme.

It has to be recognized that the

(i) Free-hand given to the then Directorate (Pre-Vocational Education) for conceptualizing / mapping / sharing of the vision and implementing its own devised strategies has been the major source of empowerment and inspiration provided by the authority.

(ii) The support of the administrative cadre has been instrumental in providing parallel support for provision and appropriate policy decisions to facilitate the implementation.

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IMPACT EVALUATION

Introduction

The Pre Vocational Education (PVE) project at remedying the drop outs after the primary school cycle and out of school children by making provision of continued education the within the same institutions as their counterparts who have been successful at the end of primary school examinations. Hence, access to all facilities offered in terms of specialist rooms, sports facilities, needs based curriculum and skilled teachers along with a support mechanism have been the major focus of this segment of the Reforms Project in the education sector.

Moreover, the PVE project is geared towards developing in students those essential learning competencies, in terms of knowledge, skills and attitudes, which could not be achieved during their primary schooling. Also, with a paradigm shift from the traditional and academic pedagogy to a child-centered and activity-based philosophy, with ample opportunities for the student to become functionally literate and numerate, the PVE project advocates for a holistic approach through self learning, peer learning and group learning to the general development of the individual self in a pleasant learning environment.

This new challenge in curriculum design, training strategy with new approach in teaching-learning transaction focused on activities, and the efforts in terms of manpower and materials invested therein, presupposes an impact evaluation.

Since this project constitutes one of the measures related to government policy geared towards compulsory education till the age of sixteen, it forms an important link for continued education between the primary and secondary sector. Therefore its conceptualization for institutionalization in the schooling system is of crucial importance

Why an Impact Evaluation?

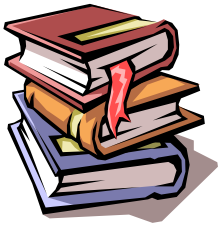
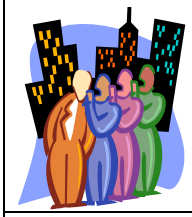
Improvement in educational services implies improving educational provision, practices, support mechanisms and evaluation processes within its system.

This impact evaluation is an analysis of all components and efforts regarding curriculum development, action regarding monitoring curriculum implementation, training services offered, needs and demands of stakeholders, resource and manpower input and achievement of targets of the provider.

The impact evaluation in short, aims at providing information on the effectiveness of the PVE project so as to optimize the outcomes, boost efficiency and quality, minimize shortcomings and boost the best practices.

The concept of the impact evaluation focus around the aspects highlighted in the chart below.

Impact Evaluation: the Concept and areas to be analysed.

Elements of the New Pre-voc Scheme	Expected Impact
Access	**Have all eligible requests been entertained?**
Curriculum 	**Does it meet national targets?** **Does it respond to the needs of the learner?** **Does it cater for learning levels & ensure smooth linkages?** **Is it aligned to career pathways?** **Does it make provision for a mode of evaluation?** **Does it advocate for the appropriate pedagogy?** **Does it provide for a trial period, review & improvement?** **Does it have an implementation support system?** **Dos it respond to / make provision for certification?**
Training 	**Is it structured?** **Have training needs been identified?** **Is there any pattern for training methodology?** **Is it aligned to career pathways?** **Does it make provision for accreditation / certification?** **Does it have an inbuilt evaluation device & improvement strategy?** **Does it have a mechanism for follow-up, feedback and retargeting?**
Pedagogy	**Is the pedagogy appropriate to vehicle the curriculum towards its goals?**
Support mechanism 	**Is there a structured support mechanism?** **Does the support mechanism cover required aspects of the new scheme?** **Is it sustained?** **Is there a survey about the type of support required?** **Is there any strategy for inventory control to monitor effective and judicious use of materials supplied?**
Communication	**Is there an efficient structure / system for information dissemination and feedback?**

Procedures adopted

Questionnaires were devised and administered in the best appropriate conditions so as to record as accurately as possible data regarding thethe project and strategies devised for its implementation.

The procedures adopted were: -

- administering questionnaires (open & closed type)
- interviews (individual)
- group feed back
- working sessions with teachers
- school visits and observation of classroom activities

Workshops were held with teachers to study the curriculum implementation status. A set of tools (attached) was used to collect data.

A curriculum implementation status exercise was carried out as follows: -

Group Activity 1 (For class & subject Teachers on a **school-wise** basis**)** 	**Objectives:** 1. To consolidate concept of working sessions among teachers. 2. To take stock of each school's coverage of curriculum objectives on a competency basis from the SLC. 3. To assess curriculum implementation status on an A***rea of Learning*** basis for each school.
Group Activity 2 (For **class Teachers** of all schools on an ***Area Of Learning*** basis)	**Objectives:** 1. To assess **national curriculum implementation status** on a subject-wise basis for each A*rea of Learning*. 2. To take stock of uncovered

	objectives. 3. To assess how much time is required to complete remaining objectives. 4. To brainstorm to facilitate finding a formula for Teaching staff for Year 3.
Parallel to Group Activity 2 (For **Subject Teachers** of all schools) 	**Objectives:** 1. To study difficulties encountered by Subject Teachers. 2. To consolidate concept of activity based Learning. 3. To consolidate benefits of student focus in new curriculum 4. To discuss learning situations which enlist student participation in learning activities.
Group Activity 3 (For class & subject Teachers on a **school-wise** basis**)** 	**Objectives:** 1. To study how many remaining objectives can be covered in the 3rd Term on a school-wise basis. 2. To plan completion of syllabus on an objective-wise basis. 3. Assignment of responsibilities on a school-wise basis.
Group Activity 4 (For class & subject Teachers on a **school-wise** basis**)**	**Objectives:** 1. To plan mass sensitization campaign.

This exercises was carried out with a view to analyse the quantum of load of work planned for a year and sensitize parents about the amount of learning organized for students.

Interview/conversations with students/parents

Since reading and understanding of questionnaires formulated in English posed a major problem. They were contacted individually, items of the questionnaires were interpreted in the local dialect (Creole) so as to obtain the right information required. The officers involved in this exercise then recorded the data.

Accuracy of information

In order to ensure honest and accurate feedback, no identity involvements have been included during the exercise and only factual information collected.

Sampling

The primary objective of the impact evaluation was to collect the students', the teachers', and the parents' perceptions of the PVE project. Because of the constraints and lack of resources, the questionnaire was the only means to collect the data; and a sampling had been carried out, as it was practically impossible to have the perception of all students, teachers and parents. Selected sampling covering urban and rural schools was as follows:

Teachers:

Parents:

Students:

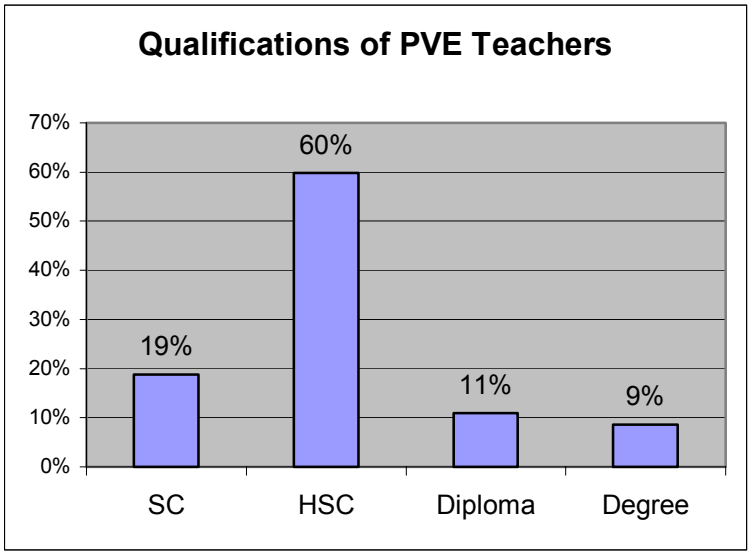
.

Findings

A. Teacher Profile

Of all the teachers participating in this exercise
26% were from State Schools
20% were from Confessional Schools
54% were from Private Schools

Regarding the qualifications of the teachers working in the Prevocational Streams, the table and chart below provide the relevant information.

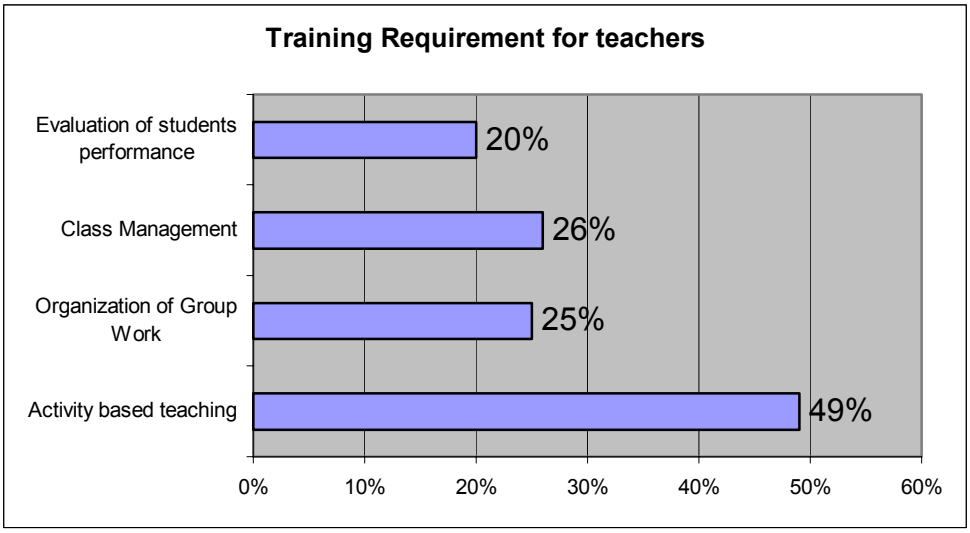
20% SC holders 60% HSC holders 11% Diploma Holders 9% Degree Holders	

B. Training needs of teachers

11% of the teachers are actually following a Pre-voc Diploma Course at the Mauritius Institute of Education (MIE) and 75% have been provided with some training (Pre-service and In-service) by the Ministry of Education.

Some 43% of the teachers feel that they have been adequately trained to work in the PVE stream, but they also feel that further training will greatly help them in their task because with time they keep seeing new pedagogical difficulties cropping up.

The need for further training was felt mainly in the following fields.



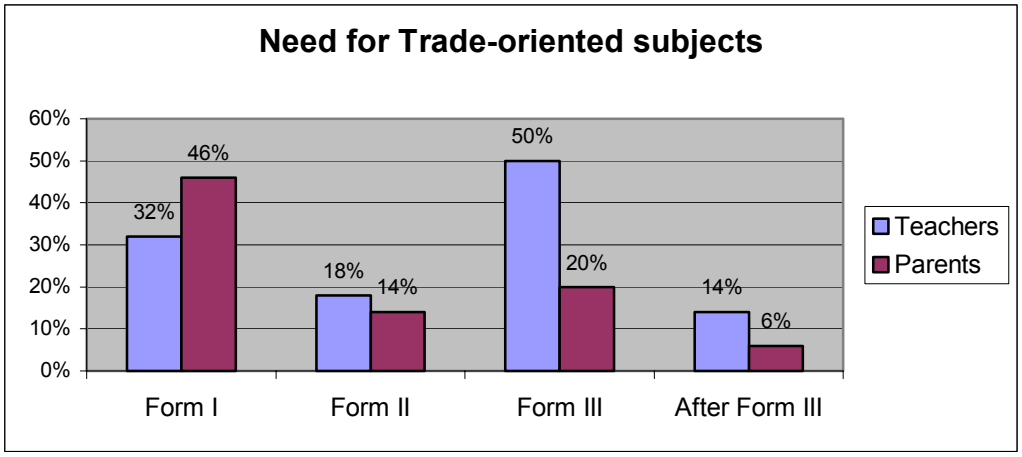
C. The Curriculum

As far as the PVE scheme is concerned, most teachers feel that Year 1 and Year 2 curriculum designed for that category of students is appropriate, though a considerable number (40%) of the teachers feel that trade-skills orientation is required. 91% of the teachers express the need for trade-oriented courses.

This state of thinking has evolved out of the previous pattern of Pre-vocational Training schools that were trade oriented. Most of the teachers from the state sector 99% have been roped in from teaching staff in those schools (10 in number) that are in the process of phasing out. The previous condition only will take time to be effaced from the mind set in the change process.

This also reflects the need for further clarification about the objective being preparation for trade training and not trade training itself.

The parents of the PVE students have more or less the same opinion as far as trade-oriented courses are concerned. But 81% of those parents find the curriculum appropriate. They have expressed appreciation about their children now liking to go to school, sitting to complete homework such as writing or tasks on creativity or others allotted to them, becoming proactive in many household chores etc.

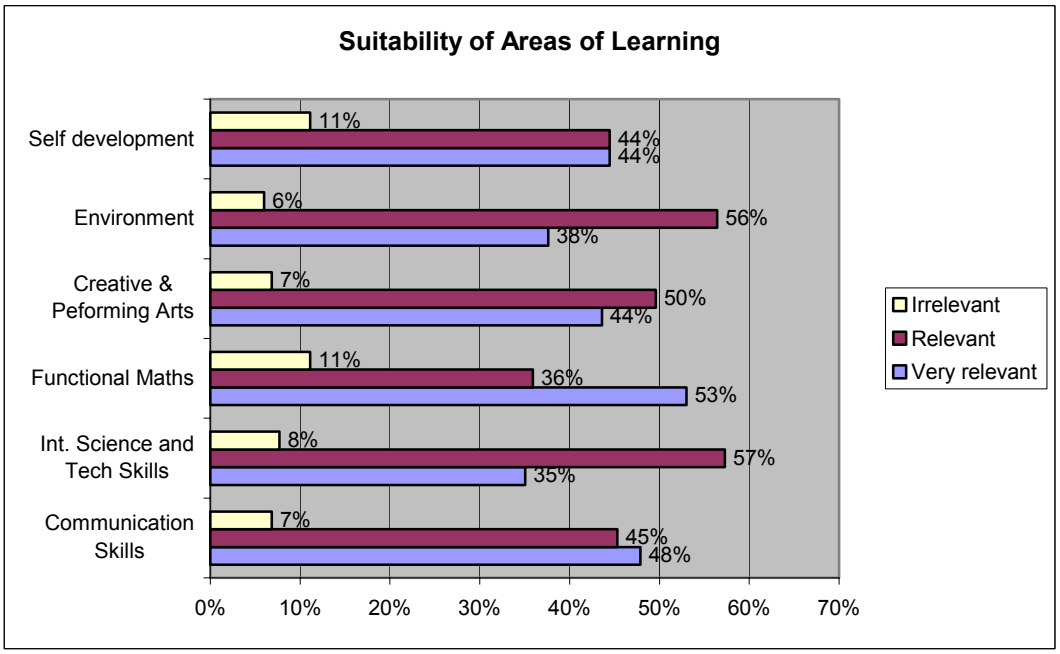


The chart above reflects the views of teachers and parents on the need if any and as from which level for trade-oriented courses.

D. Relevance of Curriculum Content to Students Needs

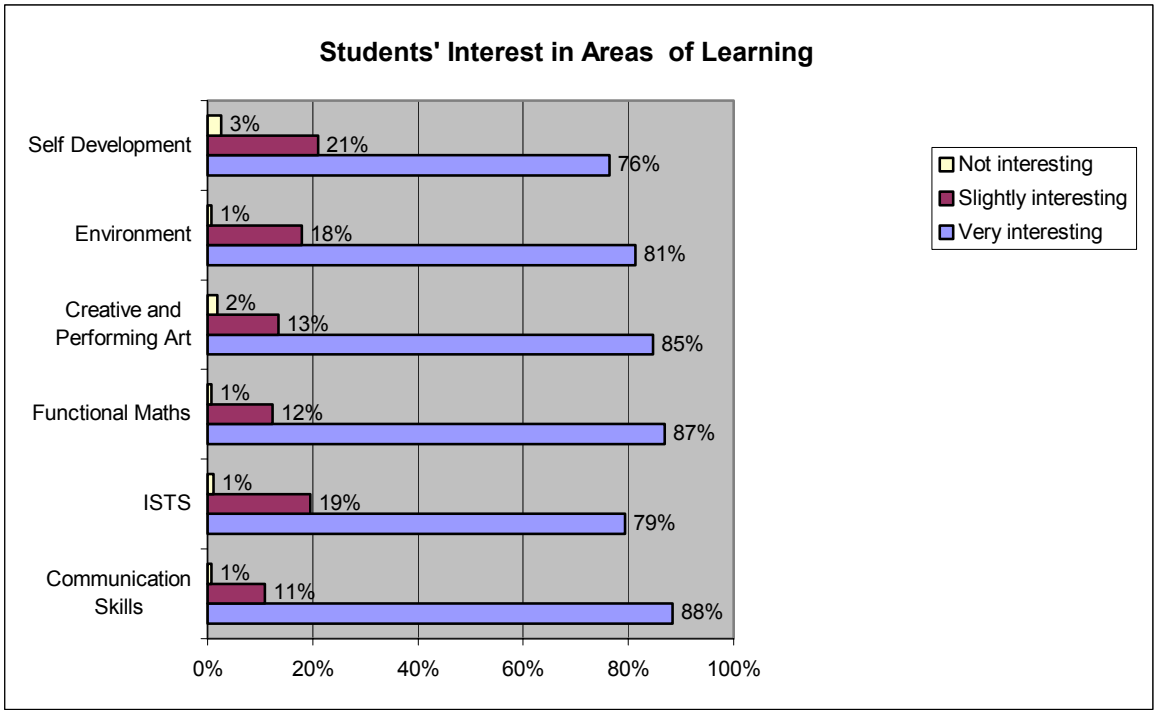
The curriculum is oriented towards the development of literacy and numeracy. As such, its specific objectives related to the content have been clustered under six Learning Areas, namely: (i) Communication Skills

(ii) Functional Mathematics
(iii) Environment
(iv) Integrated Science and technological Skills
(v) Creative and Performing Art
(vi) Self Development



Teachers have been asked to express their views on the areas of learning and the data collected are displayed in the chart above.

Students have been asked to express their degree of interest in each of the six areas of learning and the chart below provides a picture of the students' appreciation like and dislike about these.



It is reassuring to find that students needs and interest have been catered for in the curriculum content.

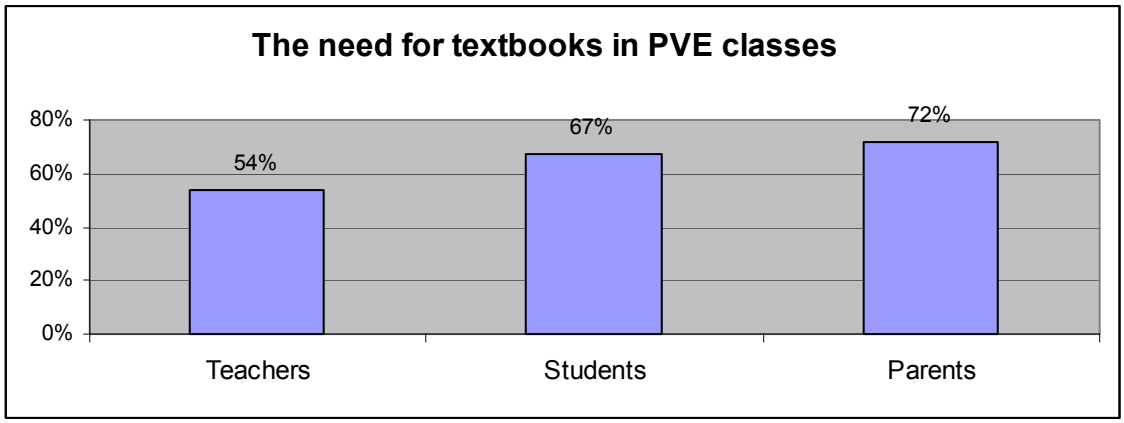
According to teachers, the interest of the students in the PVE course is as follows:

Highly interested	56%
Interested	34%
Not interested	10%

E. Textbooks

As this project aims at developing a liking for schooling and kindling an interest for further learning, no textbook is prescribed within the first 2 yrs with a view to relieve the child from the painful impression of incapacity and failure. But the teachers, the students and the parents view it differently. The teachers feel that textbooks are essential essentially because they are facing difficulty in their teaching without a book. This can be fairly understood in the sense that full confidence can be developed to teach without a book only after longer experience. Teaching without a textbook requires a lot of effort to prepare teaching/learning materials and the non-availability of adequate material acts as a deterrent. However, 46% of the teachers feel that the absence of textbooks is NOT a major handicap.

The chart below reflects the need for textbooks as expressed by the stakeholders.



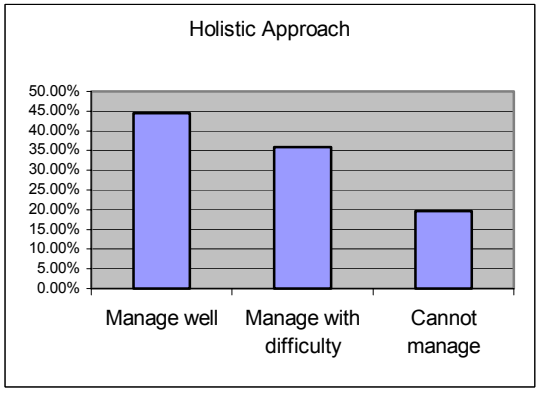
In a system where schooling is highly competitive and loads of books seem a strong indicator of good studentship, such a paradigm shift will take time for internalising that learning can happen without textbooks. Demand for books from students can however be interpreted as a positive result reflecting students' harnessed wish to learn.Pedagogy

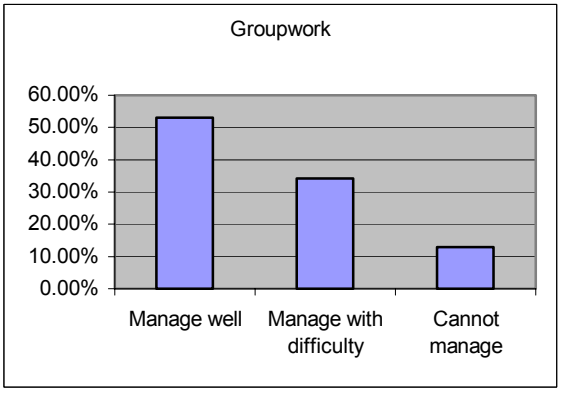
Considering the conceptual framework of the new curriculum, the teaching-learning process among others, is mostly oriented towards:

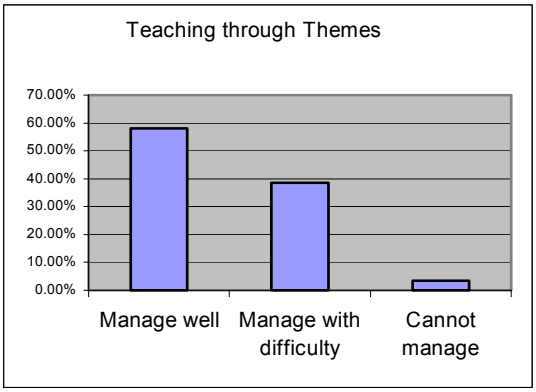
(i) holistic teaching approach
(ii) learning through self experience
(iii) activity-based teaching
(iv) group work
(v) project work
(vi) peer learning

From the data collected through this impact evaluation, it is found that among the teachers, there is a general feeling that activity-based teaching is an effective pedagogy. But 33% of the teachers are facing difficulty in applying that pedagogy and 3% cannot manage at all.

The application of skills within the purview of different methods and teaching strategies imparted during training programs was analysed. The same is displayed in the charts below.







95% of the students, find learning through activities very interesting.

Next, activity-based teaching requires "group work". However, only 17% of the teachers are devoting more than half of the teaching time to group work, when 84% of the students find "group work" as a very interesting means to learn. This anomally is the focus of training with next batch of yr one teachers. Perhaps less group work in classrooms could be explained by the fact that the required materials are not provided. 40% of the teachers consider the provision of materials required for such a pedagogy as being insignificant.

Moreover, 34% of the teachers find difficulty in managing group work and 13% fail completely in the organization of group activity. Another important fact that requires due consideration is the holistic approach and the thematic teaching as they are areas where teachers lack pedagogical skills.

F. Institutionalisation of the PVE project

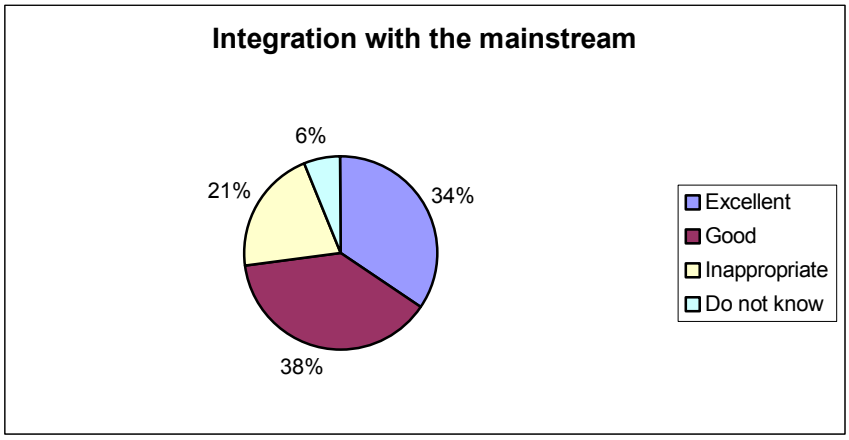
Various attempts have been made with a view to ensure continued educational provision to CPE drop. Many efforts such as the Community schools/Basic Secondary Schools /Pre Vocational Training Centres/State Secondary Schools (Vocational) prior to the PVE project had been injected into the school system, but none could make provision to accommodate all CPE failures with a well structured program in the secondary school cadre.

The PVE project developed with the participation of all stakeholders including the Ministry of Education and Scientific Research, the Bureau d'Education Catholique (BEC), the Private Secondary Schools Authority (PSSA), has tried to introduce a new approach. This project has been conceived with a view to institutionalize the pre-vocational education within the secondary school structure.

(i). Integration

The findings of this impact evaluation reflect that 34% of the PVE teachers see the integration of the PVE project with the mainstream as excellent whereas 21% of the

teachers see it as inappropriate specially as it gives rise to the sense of loss of identity in a larger institution. It is worth pointing out here that the views of the teachers from the mainstream have not been collected.

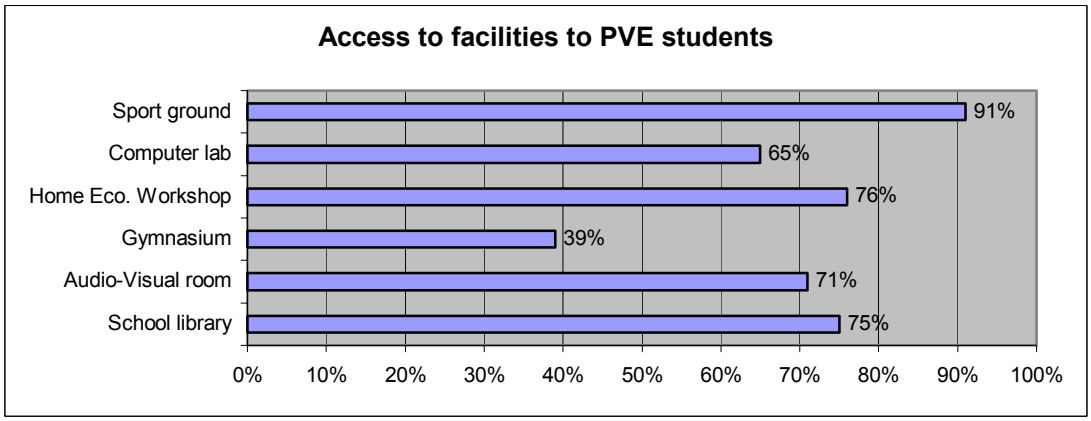


The PVE teachers feel that they are not welcomed in the secondary schools, and 32% of them rate the integration of the PVE project as poor.

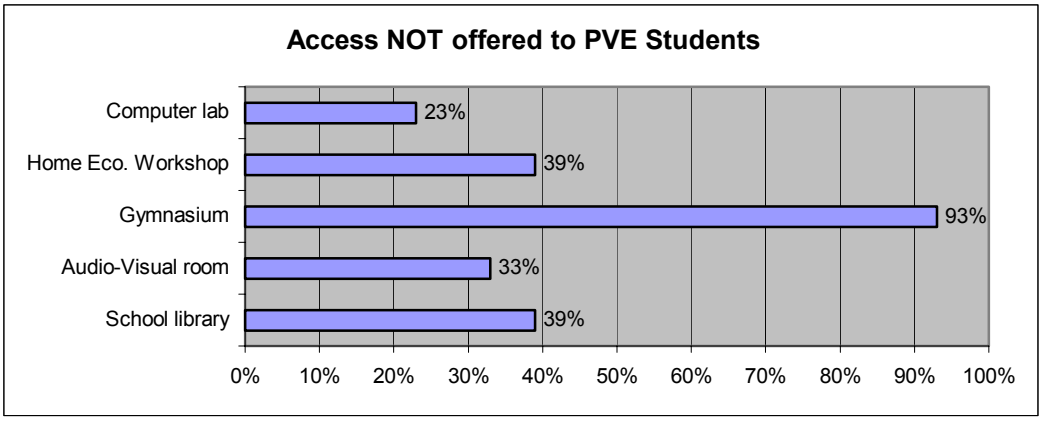
The integration of the new project comprising all its aspects are one of the main focus of the education reform at present During the first phase of implementation, priority was given initially to access, curriculum development and teacher training and providing necessary materials as accompanying support services. The next phase aims at consolidating the good practices, institutionalizing the prevoc stream in the secondary school structure, clarifying all operational and management issues. Actually all mechanism and procedures to realize the second phase have already been set amarch.

(ii) Access to facilities

As far as the access to facilities available is concerned, the data collected from the PVE teachers are as follows:



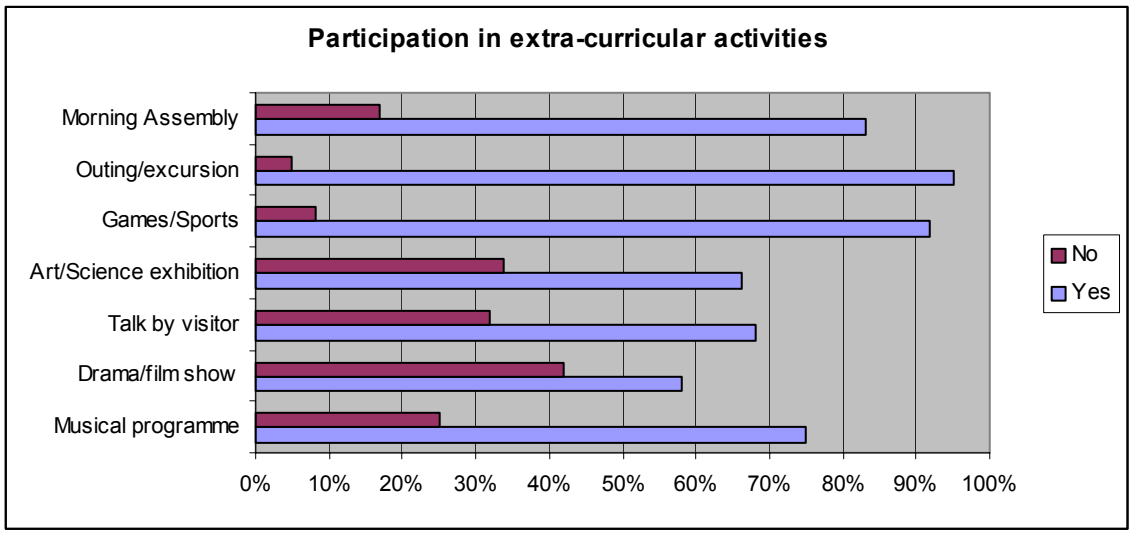
And the students' point of view as far as these facilities are not being available to them is reflected in the chart below.



It should be noted that the high rating regarding access to gymnasiums is due to non-availability of such facilities in several new state secondary and many private secondary schools.

(iii) Extra-curricular Activities

Some students feel that they have never been offered the opportunity to participate in extra-curricular activities alongside students of the main stream organized by the school. The chart below reflects the percentage of students participating in the different activities.



G. Minimum Attainable Achievements in Student Performance.

The detailed objectives have been clustered under six learning areas. That was essential in order to facilitate the implementation of the curriculum, to ensure purposeful and progressive activities in the teaching-learning process and to enable diagnostic assessment of students' achievement.

This impact evaluation has tried very subtly, to make an assessment of the achievement attained by students after some 18 months in a PVE class. The table below gives a picture of the information collected, regarding objectives established for year one in the curriculum guidelines.

Achievement	could	could not but now can	could not and still can not
Read and understand French	24%	48%	28%
Write sentence in French	25%	52%	24%
Read and understand English	17%	64%	18%
Write sentence in English	19%	60%	21%
Add two numbers	25%	46%	29%
Subtract a number from another	23%	41%	36%
Count up to 100	24%	40%	36%
Multiply two numbers	22%	45%	33%
Perform a simple division	20%	47%	33%
Read time	24%	38%	38%

The achievements reflected above is mainly on the development of only 2 areas related to functional literacy and numeracy, which is one of the main curriculum goals of the PVE project. It should be however noted that this achievement has been scored with the framework of all the constraints that exist during trial period in an implementation process.

Moreover the students have expressed their views on the classroom climate. 94% of the students find their teacher very helpful and 90%, say that there is a good relationship between teacher and students and that they find no difficulty in calling on the teacher for support wherever the need is felt.

Students find that the learning activities are very interesting as opportunities are offered for developing the self-confidence and re-establishment of the self-esteem.

The 15-minute conversation has helped greatly in that achievement but some 10% of the students said that such activity has never taken place in their class. 84% of the students have found the project work very interesting.

H. Parental Participation

The parents have contributed greatly in the achievement of some of the curriculum goals. The extent to which the parents have provided their support is shown in the table below.

Support from Parent	Always	Sometimes	Never
Money	90%	18%	5%
School Materials	79%	20%	1%
Help to do homework	49%	37%	14%
Proper lunch	88%	11%	1%
Participation in meeting	52%	40%	8%
Discussion about student at school	54%	37%	9%

It is noted that whenever parents are called to school in connection with the performance.

Support Mechanism

i). **Curriculum Panel**

Panels set up for the curriculum has provided the curriculum guidelines and necessary support materials to teachers on time through curriculum dissemination sessions and regular in-service programs.

ii). **Training Scheme**

The training strategy is closely linked to a career path. The training strategy set up worked marvelously with 47 days training during school holidays one day monthly in-service and other ad-hoc training based on teacher needs (for batch 1 yr 2001)

The 'Diploma in Pre-Vocation Education Course' was launched in August 2002.

A new course 'Teachers Certificate' for teachers, holding only school certificate and not qualifying to enroll for the Diploma course, has been concerned. Teachers have already enrolled for the course.

Since around 2 % of students in pre-voc classes are illiterate, assistance from **Luxembourg Development Programs and UNICEF** was sought to train trainers to develop skills for Adolescent Literacy. The three phases incorporated in the strategy have been completed. An evaluation exercise has been carried out to identify potential trainers who will eventually train teachers to develop necessary related skills.

The support of **UNICEF** in curriculum development, teacher training and provision of equipment and materials to offset implementation of the curriculum has been instrumental in the actualization of the new PVE project.

iii**). Financial Support**

Financial support in terms of increase in per capita grant, specialist room allowance, initial classroom renovation grant, have all been provided to the private sector to facilitate the implementation of the project. However delay in the disbursement of funds in the private sector has been a cause of concern raised.

iv). **Motivation Allowance**

The discontinuation of the motivation allowance was viewed as a withdrawal of support to teachers. After freezing of the monthly motivation allowance to class teachers, considerable absence has been noted during school holiday workshops and the momentum gathered at the outset in 2001 has started losing its effects.

v). **Teacher status / Salary**

The delay in rationalization of the status of teachers with a variety of employers and conditions of service has been a demotivating factor.

vi). **Structural reorganization of the Ministry**

The re-structurization of the Ministry of Education & Scientific Research and pre-voc responsibility redistributed under staffing, curriculum, school management divisions has brought a laxity in the zeal with which the new scheme was set amarch. It gives a strong indication of the needs to have a focal person.

vii). **Monitoring Team**

In the advent that only six officers who have been assigned the duties of monitoring implementation, are called upon to alongside these provide drafts/edit curriculum materials and disseminate the same, conduct training programs / school visits involving so many implications, it is imperative that quality of output will suffer.

With the merger of this team in the National Inspectorate, which will shortly become fully functional, will partly relieve the team from the heavy burden of workload and duties requisited for from left, right and center. This situation needs to be regularized.

Recommendations

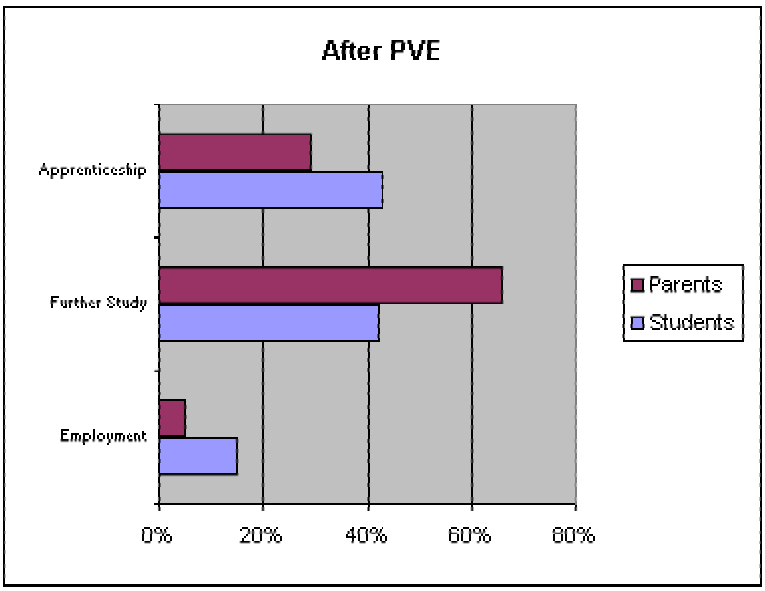
The impact evaluation was necessary. As a newly implemented project, the new PVE scheme needs feedback to ensure further modifications/ improvement or re-orientation. The data collected from the teachers, students and their parents have provided with crucial information regarding the project.
The recommendations based on findings are given below.

1. Course Duration of PVE

Final decision has yet to be taken , on whether the PVE project is a 3-year course or whether there will be a fourth year or even a fifth year.

What is the wish of the students concerned and their parents? The table and graphical representation below provides with a clear answer.

Option	Students	Parents
Employment	15%	5%
Further Study	42%	66%
Apprenticeship	43%	29%



Consultancy has been sought from UNESCO to assist the Ministry on an analysis of the curriculum guidelines and its alignment with international trends to finalise the best course of action to be taken.

2. Textbooks

The need for textbooks expressed by Teachers, students and parents should be situated in the context of the new scheme. As at this point in time activity-based teaching-learning has been advocated for and students' workbook have been introduced in the third year.

3. Training of Teachers

The Mauritius Institute of Education (MIE) is the only body in Mauritius, responsible for training of teachers at all levels. How long will it take to have all the PVE teachers trained? With the number of teachers increasing annually and with more and more

students enrolled in the PVE project, DE mode will have to be introduced in addition to face to face sessions.

4. Integration

The PVE project has been designed to institutionalize Pre-voc education in the secondary sector. It is however noted that a few private secondary schools have accommodated the PVE classes as outstations (in separate buildings in other areas far from the main school building). Loreto Curepipe, Rose Hill and Mahebourg, the St. Joseph College, the BPS of Tamarin are some examples. Means and ways to solve this problem should be a priority in the interest of students' development and parity of esteem.

Students and teachers of the mainstream should be adequately briefed so as to ensure development of the right attitude towards academic performance and the concept of human being as a whole.

Additional briefing sessions and enhanced communication are required to enable internalization of the spirit underlying prevocational education so as to develop the right attitude towards this stream in the secondary school system.

4. Support Mechanism

5.

1. Modalities for ensuring supply and distribution of materials to teachers should be reviewed.
2. Proper audit and monitoring of utilization of funds should be carried out to ensure that funds disbursed are used for the pre-voc sector.
3. Monitoring Services need to be rationalized. Improvement is not a product but a process; and to sustain to that process, close and systematic monitoring should become a regular feature.

   Therefore the monitoring team should be further consolidated in terms of number and quality service. This team needs to be further empowered to be able to carry out the staff appraisal and reporting functions as expected.

   This Team should be dissociated from the role of curriculum formulation / editing and finalizing materials to that of participation in curriculum formulation / dissemination and feed back antenna.

Tools used for data collection

- Questionnaire for teacher training achievements.
- Questionnaire for teacher's perception of the entire project.
- Questionnaire for assessing student's perception.
- Curriculum implementation status grids.
- Questionnaire to study parental appreciation of PVE project.