• PO Box 77000 • Nelson Mandela Metropolitan University
• Port Elizabeth • 6031 • South Africa • www.nmmu.ac.za

Nelson Mandela Metropolitan University
for tomorrow

FACULTY OF EDUCATION
RESEARCH TECHNOLOGY & INNOVATION UNIT
VIDEO-BASED SELF-REGULATED LEARNINING PROJECT: *Education kills poverty!*
REPORT: VBSRL PILOT STUDY
DATE: 26th AUGUST 2008

INTRODUCTION

The high failure rate amongst poor, historically disadvantaged grade twelve learners continues to be a major challenge and concern to educators, parents, employers, the government and other stakeholders despite our democracy being in its 14th year of existence. Recent media reports clearly illustrate an educational system that has not adequately addressed the needs of our poor learners in disadvantaged communities. Failure denies such high risk learners the opportunity to realise their aspirations of pursuing a career based on a qualification attained at a higher education institution. These learners are *at risk* when they are in danger of failing to complete their education with an adequate level of knowledge and skills.

Therefore, in order to strengthen the capacity of the educational resources for grade twelve learners in the Port Elizabeth district, the VBSRL project was initiated in 2007 with key role players being the ECDoE in Port Elizabeth and the Missionvale campus of the Nelson Mandela Metropolitan University. The partnership arrangement between the ECDoE and NMMU was that the pilot project would focus solely on preparing the grade twelve learners who failed the 2007 examinations. The enrichment activities for these learners supplemented the formal programme introduced by the ECDoE to enable these learners to pass the examinations scheduled for May/June 2008. The pilot project was aptly titled:

> *Use of Video-Based Self-Regulated Learning (VBSRL) instructional strategies to prepare and enable the poor, disadvantaged grade twelve learners to pass their supplementary examinations.*

A culture of high expectations is a hallmark of high achieving schools. Unfortunately, low expectations are common in high poverty schools. Fire building is an apt metaphor for what we hope to achieve with poor, disadvantaged learners with the VBSRL programme – not igniting a Roman candle that quickly burns out, but creating a blaze that burns steadily and continuously with the relevant support structures firmly in place. This is what we plan and planned to achieve with VBSRL. Those of us who have laboured to ignite learning under challenging conditions know that – like building a fire in damp woods – it is neither easy to spark a flame nor simple to sustain it. Through the apt use of VBSRL strategies to supplement the formal school curriculum programmes, an interest in learning and commitment to excel by grade twelve high risk learners can be developed and sustained.

WHAT IS VBSRL?

Different learners require varying amounts of time to attain mastery of knowledge. VBSRL makes adequate provision for differential time in terms of input and output. VBSRL as an instructional strategy is based on a combination of two processes, namely video-based learning (VBL) and self-regulated learning (SRL).

VBL is a form of "tutored video" that integrates subject content with a visual presentation on the videotape by a subject specialist. The presentation is controlled by a knowledgeable tutor or even by the learners themselves in a flexible, non-absolutist way. The outcomes are determined by the degree of peer interaction and intervention to eradicate cognitive dissonance and the ability by the learners to inculcate the knowledge and skills through the processes of self-regulation and group – based activities.

Self-regulated learning implies activities directed at acquiring information, skills, and knowledge that involve self-involvement, self-discovery, self-pacing, self-directedness, and other self-motivated activities that ultimately lead to self-regulation of cognition and behaviour in learning and achievement. VBSRL therefore comprises of three processes namely: self-monitoring, self-evaluation, and self-reinforcement. These processes involve varied activities to enable learners to regulate their own *success* in learning.

Unlike the traditional classroom lesson, *VBSRL enables high risk learners to enquire and seek a solution at their own pace*. The number of times that the video may be stopped-played-stopped depends entirely on the learner's ability to comprehend the information. VBSRL enables high risk learners to capture data meaningfully by taking down notes and consulting with peers and the facilitator/ teacher.

ACADEMIC DEVELOPMENT POTENTIAL OF VBSRL

The academic development potential of VBSRL in South African schools cannot be easily repudiated due to the lack of resources in poor communities:

- The availability of the entire curriculum on a videotape enables the learners to control the pace at which they receive and master knowledge and skills.
- It eliminates the problems associated with unqualified and under-qualified teachers.
- It also closes the gap where teachers are not available to teach new sections of the new curriculum.
- The advantage of being able to interrupt the video lecture is in direct contrast to the situation in a typical large class where it is expected that learners *grab* relevant information when it is lectured.
- The presence of a trained facilitator who is an important support figure in the learning process enhances the learner's self-confidence.
- The continuous encouragement and reward of learner participation creates a *low risk* environment in which it is safe to make mistakes and then self-regulate the desired learning outcome.

Hence, video-based instructional programmes contribute to self-initiated learning techniques because learners are required to participate in their own learning according to their volition and they cannot, therefore, remain passive in a dynamic educational environment.

KEY OBJECTIVES OF THE VBSRL PROJECT

1. VBSRL strategies break the traditional boundaries of *formal once-off instruction* in the regular classroom and consequently create opportunities for high risk learners especially in the disadvantaged communities, to have the subject matter repeated thereby contributing to the effective assimilation of subject knowledge.
2. Supplements normal teaching that takes place in the regular classroom. It does not replace the specialist teacher but creates maximum opportunities for high risk learners to assimilate knowledge and develop their skills at their pace.
3. The pace of instruction is tailored to meet the learners' individual needs. Promotes peer group interaction.
4. Difficult concepts are made easier to comprehend because of the repetitive nature of the media used.
5. Empower learners to overcome habits that undermine their progress.
6. Use VBSRL as a motivational instructional intervention to increase their optimism of attaining success: *I can learn to be successful!*

FINANCIAL SUPPORT FOR THE VBSRL PILOT PROJECT

A donation of R43 500 from the Joan St Leger Lindbergh Trust was received on 27 November 2007 to specifically finance the VBSRL pilot project for poor, disadvantaged learners. The money was deposited into a specially created account at the University. Access to the funds had to be motivated by the project leader (Prof Singh) to purchase the following media and equipment as was originally planned:

- DVDs from the SABC Learning Channel (prices as per catalogue)
- 10 DVD players
- 10 TV sets.

Supporting documents had to be produced to verify the expenditure incurred and to make the necessary payments. The expenditure for this project had to be approved by the Director of FERTI, Prof Paul Webb.

PROJECT TEAM MEMBERS

1. Mr Khaya Matiso (Principal: NMMU Missionvale Campus)
2. Mr Isaac Metembo / Mr Andre van Heerden (PE ECDoE)
3. Prof Prakash Singh (Project Leader)
4. Ms Sindi Mbokodi (Deputy Project Leader)
5. Mr David Gola (Operations Manager)
6. Ms Aneeqa Simon (Programme Administrator)
7. Ms Omaya Allie (Missionvale Campus Librarian)
8. Mr Gavin Ludick (Technical Advisor)

VBSRL COORDINATING CENTRE: NMMU MISSIONVALE CAMPUS

The Missionvale Campus of NMMU serves as the coordinating centre for the VBSRL project. The ten matriculation intervention Centres created by the DoE were used to implement the VBSRL pilot project. The principal of the Missionvale Campus fully supported the VBSRL pilot project. He provided administrative staff to co-ordinate the project.

TARGET POPULATION FOR THE VBSRL PILOT PROJECT

The target population comprised of grade 12 learners who failed in 2007 in Port Elizabeth. The intervention programme assisted these learners to prepare for the supplementary examinations scheduled for May/June 2008. Twelve first year student teachers from the Nelson Mandela Metropolitan University volunteered to serve as facilitators in this project as part of their community service. This arrangement formed phase one of the VBSRL project.

SUBJECT FOCUS AREAS

The following subjects were identified in the VBSRL project to improve the results of grade twelve learners:

- English,
- Mathematics,
- Physics,
- Chemistry,
- Biology,
- Geography,
- Economics,
- Business Economics
- Accounting.

RESEARCH FINDINGS

A survey based on the quantitative research method was conducted at the ten matriculation intervention sites. A total of 154 structured questionnaires were distributed amongst the 154 learners who were preparing to rewrite the matriculation examinations in May/June 2008. The rate of return was 100% because the VBSRL Operations Manager, who had administered the questionnaires, collected them himself. However in spite of the 100% rate of return, 16% were spoilt because not all the questions were responded to. The latter occurred because the learners did not turn the page over and only responded to the questions on the first page. These incomplete questionnaires were not considered for analysis. The findings of the investigation are therefore based on the remaining 84% responses.

Ninety eight percent of the learners enjoyed viewing the DVDs. Ninety five percent noted that they had no difficulty in understanding the contents of the curriculum explained on the DVDs. Ninety two percent of the learners strongly agreed that the DVDs were a great help in making them understand the lessons. These students found the DVDs to be a very good supplement to

their teachers teaching as this enabled them to work at their own pace and repeat sections of the lessons which were not possible in the regular classroom. Ninety one percent of the learners strongly agreed that DVDs allowed them enough time to monitor their progress. Ninety six percent of the learners did indicate that they preferred to listen to their teachers first and then use the DVDs for revision. They experienced no challenge in understanding the language of the presenters on the DVDs. Eighty three percent of the learners were able to compile their own notes after listening to the DVDs. The learners also pointed out that they were quite capable to operate the equipment to view the DVDs. Learners agreed that the VBSRL instructional approach enabled them to:

- have additional time on specific curriculum tasks;
- control their pace of learning;
- engage effectively in learner-to-learner interactions; and
- have higher expectation levels for them to succeed.

CHALLENGES EXPERIENCED IN THE PILOT PROJECT

Some of the notable challenges that we experienced were:

- limited finance available to purchase the DVDs, DVD players and TV sets for all the Centres;
- learners were only permitted to use the facilities at the ten Centres on Saturdays;
- formal instruction by teachers reduced the time available on Saturdays to many learners to have access to the VBSRL facilities for longer periods of time;
- subject teachers at the ten Centres were not always available to merge class activity with media activity;
- the Centre facilitators needed to be made more aware of the benefits of the integration of VBSRL with the formal instructional programme;
- the pilot project focused only on poor learners in the Port Elizabeth area.

FUTURE PLANS

Audiovisual media selected with a sagacity that includes the understanding of the poor, high risk learner plays a significant role in empowering such learners to assimilate the subject matter. VBSRL can be employed to raise learner expectations by adjusting the subject matter, conditions of studying and the medium of communication. Availability of videos on the relevant subjects can enable the poor learners to adjust learning to their pace, and this consequently allows for the curriculum to be adjusted to their specific learning needs.

Teaching poor, high risk learners with limited resources within a rigid time constraint is unsatisfactory seeing that the lessons cannot be adapted to the pace of the learners. A model that combines the salient features of class-based activities with VBSRL provides a low-risk and low-cost approach to serve such high-risk learners. When information is difficult to master for learners, there is a greater need for *creating opportunities for learners to learn how to learn*. The approach as presented in this pilot project paves the way for learners to assume responsibility for their learning and succeed. Under these circumstances they tend to demonstrate more intelligence by getting to know what to do when the odds are against them!

Evidently, the VBSRL project has revealed that it can serve as a significant instructional strategy in our historically poor, disadvantaged and under-resourced schools to prepare the grade twelve learners for their examinations. In order to sustain the project and to consequently expand the programme as a national initiative, it is hoped that major sponsors will be found to back this worthwhile educational endeavour to overcome the learning obstacles of our poor, disadvantaged learners.

Sincerely,

Mr Khaya Matiso
Principal: NMMU Missionvale Campus

Mr Andre van Heerden
EC Dept of Education

Professor Prakash Singh
Project Leader

Ms Sindi Mbokodi
Deputy Project Leader