

AN ASSESSMENT OF THE VIABILITY OF INDEPENDENT SCHOOLS

By

PETER A. VERBEEK

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STUDY LEADER: Prof. I. Nel

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CHAPTER 1

INTRODUCTION

1.1. BACKGROUND TO THE PROBLEM

An entrepreneur willing to view the field of secondary education as a potential venture for a business opportunity must realise that the nature of this field has its rewards (learners & sales) and limitations (educators & fixed costs).

1.1.1. The entrepreneur

It is of the utmost importance for the entrepreneur to know what the most important cost drivers are when starting an independent school. An example of such a cost driver is an educator. Educators are professional people who need years of studying and experience before reaching their full potential. Educators are assets which draw learners to an independent school. A high turnover of educators will have a positive impact on the perception of increasing school managerial problems or decreasing curriculum quality. Ultimately this will culminate in decreasing sales, increasing cost of sales and marginalisation of business profits.

In this initial exploratory phase, the entrepreneur is seeking answers to the following basic questions:

- a.) Can the geographical area function as a natural feeder to sustain the number of learners envisioned?**

The geographical area is important to the entrepreneur because it will determine the number of possible learners for an independent school. The demand for education within that area will determine the amount of the annual school fees that can be levied.

The number of pupils X the amount of the annual school fees = the sales per year.

b.) What academic curriculum will be followed?

This is important for the entrepreneur because it determines the quality and quantity of educators to be employed. An independent school aiming to equip its learners with a university exemption certificate will need differently qualified and experienced educators from one catering to learners who only want to pass their secondary education. The demand for education and the content of the envisioned curriculum will determine the need for various educators and determine their salaries.

c.) Is it financially worthwhile to manage an independent school as a business opportunity?

As a business opportunity, the entrepreneur is interested in maximising profit and wealth. In bringing together supply (educators) and demand (learners) the entrepreneur is seeking financial reward concerning a return on equity.

1.1.2. The problem

The first democratic elections took place in South African in 1994. A coalition of major political parties and active role players – African National Congress (ANC), National Party (NP), Inkatha Freedom Party (IFP), South African Communist Party (SACP) and the Council of South African Trade Unions (COSATU) - formed a government of national unity. Differences of political perceptions eventually led to a tri-party coalition consisting of the ANC, SACP and COSATU forming a government. The main objective of the government was to implement a process of transformation in South Africa. Transformation was necessary to re-align South African society with demographic reality.

The previous political dispensation (1948-1994) culminated in the domination of South African society by the political philosophy of Apartheid as envisioned and implemented by the National Party (NP). Government structures were duplicated many-fold to accommodate the racial division of South African society (DoE, 2001: 3).

The National Party utilised the parliamentary democracy as an effective tool to entrench and impose their ideological belief of the supremacy of the White population on the rest

of South African society (IIEP, 2001: 5). One of the tangible consequences of implementing apartheid, was the discrepancy in the development of white and black education (IIEP, 2001: 4-11):

- a.) White education evolved to national government level in 1917. Furthermore, white education gained exponentially through the implementation of the policy of apartheid: the per capita ratio of government spending on education, was the highest for the white learners (Barnard, 1999: 490).
- b.) Black education evolved through the missionary schools and only during the apartheid years did it reach national government level in 1954. Education for the black community had to take place within the framework of economic benefit to the white community. The black person had to be educated enough to fulfil his pre-defined economic role (Barnard, 1999: 492).

With the dawn of the new constitutional democratic political dispensation in 1994, the government set out to rectify the previous educational inequalities by redefining the allocation of resources to previously disadvantaged schools for major upliftment concerning the implementation of the curriculum and the training of educators (IIEP, 2001: 5). This redefining of educational resources took place against the background of two structural developments (IIEP, 2001: 12-13):

1. The restructuring of the Department of Education:

The national and various provincial and homeland departments of education inherited from the previous political dispensation, had to be restructured into one national department of education.

Educators previously employed by a department now found themselves to be declared redundant and placed on an excess list. In appointing new educators to available positions, the School Governing Body had to take their provincial excess list into consideration.

2. Education Retrenchment Packages:

The new government's constitutional democratic philosophy entailed the offering of retrenchment packages to those educators wishing to leave the educational system. The consequence was the voluntary retrenchment of mainly white educators. In hindsight, the education sector lost a major portion of its highly qualified and experienced educators.

The creation of an excess list for educators and the payment of retrenchment packages to educators had a profound effect on the learner-to-educator ratio in government schools (IIEP, 2001: 11-15).

However, at present, most government schools have an **unofficial** learner-to-educator ratio of 45 to 60 learners per educator. According to the latest available statistics from the Department of Education (DoE, 2002: 4), the national learner-to-educator ratio is 33,4:1. It is assumed that these unofficial learner-to-educator ratios will be verified by official government statistics in the future. The increase will then be significant. There will be an increase of between 34,7% (a minimum increase from 33,4 to 45 learners) and 79,6% (a maximum increase from 33,4 to 60 learners).

Building on the above mentioned, this significant increase of between 11,6 and 26,6 learners per educator could have a major effect on classroom infrastructure and on the quality of education in public schools. Classrooms are built of bricks and mortar. These physical boundaries cannot be arbitrarily changed to accommodate a significant increase in the number of learners. An increase of between 11,6 and 26,6 learners per classroom entails the same increase in the numbers of desks and chairs, and the required personal space for each individual learner.

Educators physically cannot reach all the learners within the classroom. Decreasing control over learners decreases the effective implementation of the academic curriculum. The educator must present a lesson and assess whether this newly gained knowledge or skill has been understood by the individual learner. Effective teaching with 45 to 60 learners in a classroom becomes extremely taxing on the educator. It now becomes

questionable whether the implementation of the curriculum will attain its stated educational goal.

The above mentioned could lead to the conclusion that the problems within the field of secondary education are enhancing a growing perception that is held by the general public. The perception is that education at public schools is decreasing in standard and quality, whilst education at independent schools is perceived to be increasing in quality and standard.

1.1.3. The opportunity

Against this background of the restructuring of the department of education, retrenchment of educators and an increase in the learner-to educator ratio, a cyclical movement of learners is crystallising (IIEP, 2001: 13-15):

1. Learners from previously disadvantaged schools are enrolling with ex-Model C schools, specifically the previously white English medium schools. Ex-Model C schools are schools where the government owns the property and buildings, whilst the upkeep thereof is financed by the Governing Body. Furthermore, the government only finances the salaries of those educators that have a (government) personal salary number.
2. The English medium learners then started to leave these schools. They migrated and enrolled with the ex-Model C Afrikaans medium schools. Many of these schools have since become parallel-medium schools.
3. Presently it is ascertainable that there is a new movement of previously disadvantaged learners from the ex-Model C English medium schools to ex-Model C Afrikaans medium schools.

Assuming that this “push-movement” of learners through the ex-Model C schools is taken to its logical conclusion, the next step can therefore only be a “pull-movement” of learners from ex-Model C schools to the independent schools sector.

As previously indicated, there is a general perception of decreasing educational standards in public schools. On the other hand, the perception exists that the educational standards in independent schools are increasing. These perceptions are based upon the following (IIEP, 2001: 11-15):

1. Learner-to-educator ratio

Statistics from the Department of Education (DoE, 2002: 4) show that the national figure concerning the learner-to-educator ratio for independent schools is 17,1 learners per educator.

When comparing the learner-to-educator ratio of the independent schools to that of the government schools, a major discrepancy can be visualized:

a.) Official statistic learner-to-educator ratio government school 33,4:1

For every 17,1 learner's there is one educator at an independent school. At public schools the ratio is 33,4 learners to every educator. This means that at public schools there are nearly 100% more learners per educator than in an independent school. Or, consequently, independent schools have 50% of the number of learners that the public school has.

b.) Unofficial statistic learner-to-educator ratio government school 45/60:1

Using the unofficial learner-to-educator ratio, a different picture crystallises. An independent school has between 25 and 33% of the number of learners per educator. Or, public schools have between 300 and 400% the number of learners that an independent school has.

The logical conclusion of the low number of learners per educator for independent schools means educators have more effective teaching time at their disposal, can assess learners more thoroughly and spend more time per individual learner than their colleagues in government schools. This enhances the general perception that the standard and quality of education in an independent school is superior to that of a public school.

2. Accentuation of academic fields

The government is accentuating the importance of certain fields of academic study, namely: Mathematics, Sciences and Information Technology (Steyn *et al*, 1997: 42).

The accentuation of these specified academic fields is forcing the public schools into a lose-lose situation because of the following two factors:

a.) Educators

Highly qualified educators with no teaching experience learn the proverbial ropes in a public school. Once these educators have gained experience, higher salaries offered by the independent schools form a pull-movement to draw away highly qualified educators within these academic fields from public schools to independent schools. Public schools therefore, become a training ground and starting point for educators.

b.) Learners

This movement of educators to independent schools is functioning as a “pull-motion” on learners. The effective transfer of knowledge by highly skilled educators is “pulling” learners interested in these areas to search elsewhere for educators able to teach the above mentioned subjects.

The above mentioned creates the opportunity to establish a business venture in the field of secondary education with the aim of maximising profit and wealth.

1.2. DEFINING THE PROBLEM

The final question for the entrepreneur contemplating a business venture in the field of secondary education is whether it is financially viable to operate an independent school. But, what is “financial viability”?

For the purpose of this study, financial viability is defined as:

- a.) The minimum business activity necessary to attain break-even as an initial point of survival.
- b.) An acceptable profit.

1.3. PURPOSE OF STUDY

This purpose of the study is:

To establish whether independent schools are financially viable.

In order to solve the above mentioned, the following needs to be investigated:

1. The level of business activity necessary.
2. The influence of educators for survival.
3. The influence of infrastructure costs.

1.4. METHOD OF RESEARCH

To confer on this study the scientific value that it deserves, two methods of research have been employed:

1.4.1. Literature study

During this first phase of the study, a literature study is done to ensure that cognisance is taken of previous work already undertaken within this field. Furthermore, variables can be properly identified and limitations that were previously encountered can be reviewed against current knowledge. Procedures, instruments and statistical methods that have been successfully used and implemented can be included in refining the problem and variables of this study.

1.4.2. Empirical research

In this study, only the most important variables that influence financial viability, will be considered and compared against each other in table format. Within these tables, certain variables will be kept constant whilst the effect on another variable will be measured. For that purpose, this study assumes that there are four important variables that play a decisive role in determining the financial viability of an independent school, namely:

1. Number of learners

The variable “sales” is highly dependent on the potential **number of learners** that will be enrolled at an independent school. The following numbers of learners will be assumed for

the matrix as found in the various appendices: 100, 200, 250, 301, 400 and 500. These numbers are adapted to the start-up phase of an independent school, namely: small capital investment catering from 100 to 300 learners and a larger capital investment catering for 301 to 500 learners.

2. School fees

The variable “sales” is secondly dependent on the potential **amount of school fees** levied on the parents of the learners enrolled in an independent school. The following amounts will be assumed for the matrix: R 1 000 per month, R 1 500 per month, R 2 000 per month, R 2 500 per month, R 3 000 per month and R 3 500 per month. These amounts correspond with what is generally levied by independent schools in the Johannesburg area.

3. Number of educators

The variable “variable cost” is highly dependent on the **number of educators** that will need to be employed by an independent school. For the purpose of this study, this variable is assumed to be an asset that will draw the learners to an independent school. Seen from this perspective, the number of educators can be viewed as the proverbial “Cost of Sales” that is used in Accounting practices and that need to be incurred to attain a certain level of sales.

4. Infrastructure

The variable “fixed assets” is dependent on either the renting (fixed cost) or building of infrastructure (fixed asset) needed to accommodate the learners of an independent school.

The study will interpret the data gained from comparing the four variables with each other as measured in the 24 different tables as presented in the various Appendices. The information gained from these tables will be summarised and explained in six separate tables.

The newly gained knowledge will be reviewed in six different scenarios. These scenarios portray a certain reality that might confront the entrepreneur.

1.5. STRUCTURE OF MINI-DISSERTATION

The development, layout and presentation of the study can be summarised under different headings. These headings coincide with the logical construction of the various chapters that make up this research.

CHAPTER 1: INTRODUCTION

Chapter 1 contains background information that places the problem within its context and structures the layout of this study.

CHAPTER 2: THE SCHOOL AS ORGANISATION

Chapter 2 contains the information concerning the type of organisation and the sector in which this organisation is operating.

CHAPTER 3: QUANTIFYING THE VARIABLES

Chapter 3 provides a literature study that recognises and utilises previous knowledge.

CHAPTER 4: EMPIRICAL STUDY

Chapter 4 will present a collection of six tables depicting the different variables in relationship to each other. Chapter 4 will also analyse in depth the data collected in previous chapters. A summary, conclusions and recommendations will conclude the chapter.

1.6. SUMMARY

A growing perception concerning the decrease in the standard and quality of education offered by government schools coincides with the growing perception of increased standard and quality of education by independent schools. This creates a favourable environment with potential opportunities for an entrepreneur to establish a business venture in the field of secondary education with the aim of making a profit.

CHAPTER 2

THE SCHOOL AS ORGANISATION

2.1. INTRODUCTION

According to Basson *et al* (quoted by Theron, 2000: 37), an organisation is the framework within which human activities are directed and co-ordinated. It is a formal structure of authority that comes into being by grouping activities into departments and sub-departments, and arranging them in a certain order. Applying this definition to the field of secondary education entails that, within the formal organisational structure, the actions of educators are directed towards achieving educational goals.

The intention of this chapter is to inform the entrepreneur about the organisational environment that is characteristic to the field of secondary education. The entrepreneur's understanding of this environment will directly affect the structuring of the independent school as a business venture. For the purpose of this study, only two organisational models will be looked at: the traditional organisational structure and the flat pyramidal structure. These two models form each other's extreme on the same continuum. This study assumes that most of the other organisational models fall within these two extremes.

The choice of an organisational structure will directly relate to and influence the number of staff (academic and support) members that need to be appointed. Salary is a cost driver that has a profound impact as the cost of sales needed to generate the annual sales, namely the enrolment of the numbers of learners per annum.

The alignment of the organisational structure with the targeted number of learners per annum is of crucial importance towards the attainment of the financial viability of an independent school. Two examples amplify this alignment:

a.) Many staff in relation to too few learners

The staff-learner ratio will affect the cost of sales in relation to the sales and decrease the gross profit. The gross profit is needed to cover the expenditure incurred for the financial year. Ultimately this will culminate in the question of whether the entrepreneur will need to delve into his invested capital to keep the school open. In this example, there will be a negative correlation between the effectiveness of the number of staff in relation to their added value to the school as a business enterprise. In this example, the entrepreneur will have to pay the proverbial “price” for the contentment of staff and learners. The crux of the matter is: what and when is there a return on the capital for the entrepreneur, and, is the entrepreneur willing to wait that period of time?

b.) Few staff in relation to many learners

The staff-learner ratio will affect the cost of sales in relation to the sales to such an extent, that the margin of the gross profit will increase substantially. This will increase the chances of the entrepreneur’s covering all expenditure for the financial year with a possibility of even making a profit. In this example, there is a positive correlation between the effectiveness of the number of staff in relation to their added value to the business enterprise. In this example, it will be the staff that will have to pay the proverbial “price” for the contentment of the entrepreneur and the learners. The question that now needs to be answered is: how long will this period of time be and how will the staff be compensated for their input and loyalty?

2.2. THE TRADITIONAL ORGANISATION

Theron (2000: 42-70) lists 11¹ particular characteristics that can be associated with schools. The cross-referencing of these particular characteristics against the subject of

¹ The school as an: open and closed organization, formal and informal organization, bureaucratic professional organization, contingency organization, organization with loosely coupled structures, organized anarchy, organization characterized according to structural and outcome variables, mechanistic dynamic organization, social system, metaphoric organization and an organization functioning within different frames.

this study resulted in one particular characteristic that stood out prominently, namely the school as a formal organisation.

2.2.1. Characteristics of the traditional structure

According to Basson *et al* (quoted by Theron, 2000: 45), formal organisations come about by means of purposeful planning, organising and structuring. This entails the active participation of staff and learners in preplanned activities that serve to attain specified goals and objectives.

The traditional structure is based on the delegation of authority and responsibility from the highest position to the lowest position (Bisschoff, 2000: 88 – 90). In the field of secondary education this means that the Principal is the highest authority within the school. The Principal personifies and embodies the school.

On the one hand, the Principal personifies the vision of the school that the school has of itself in the future. How does the school envision the future and how does it contemplate reaching that point? On the other hand, the Principal embodies the totality of tasks and duties that need to be fulfilled if the school wishes to attain its pre-determined educational goals and objectives.

It is impossible for the Principal to do everything. The Principal now delegates tasks and duties to individual staff members. The execution of these tasks and duties can only take place in a formal setting where the Principal delegates authority to the individual staff member to be able to carry out the various tasks and duties for which they have been appointed. The individual staff members are now accountable and responsible for the manner in which they acquit themselves in the execution of the different tasks and duties.

Another important characteristic of the traditional structure is the effective structuring of the channel of communication. The traditional structure is an interrelated process that links the top and the bottom of the school with each other (Van der Westhuizen, 1999(a):

165, 172-176). Information and communication is aligned with the structure of the business enterprise in ensuring that relevant information reaches the correct staff member. Furthermore, information that is not of direct concern to the execution of duties of other staff members need not be given to them.

Figure 1 visualizes the traditional line organizational structure of a school.

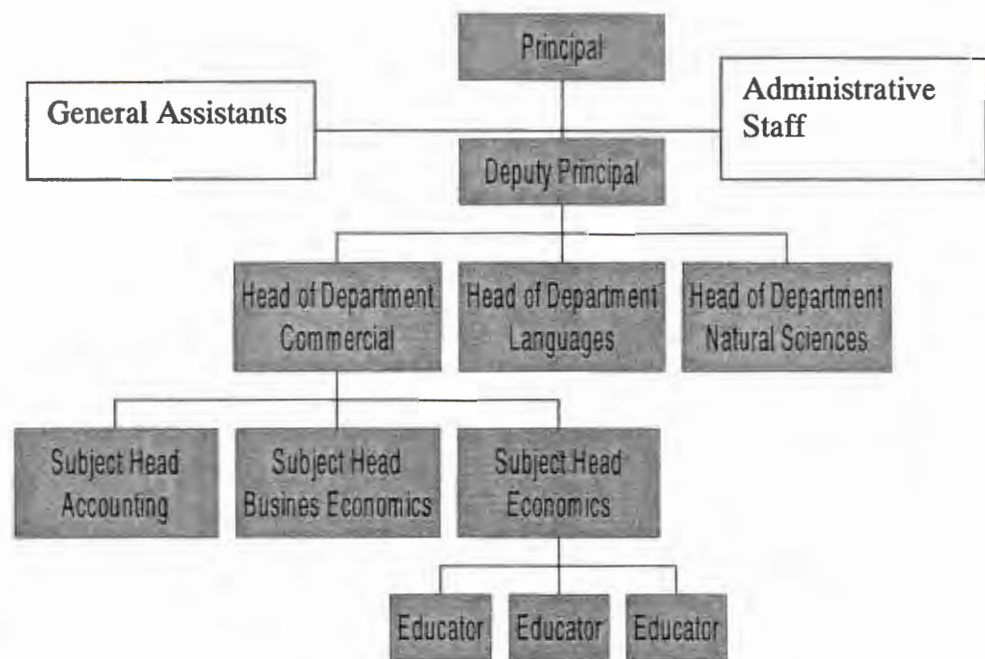


Figure 1. The traditional line organisational school structure

(Adapted from Van der Westhuizen, 1999(a): 166; Basson, Van der Westhuizen & Niemann, 1999: 606-607)

2.2.2. Relevance for financial viability

The importance and the relevance of the traditional structure lies in the support it can give to increase the sales (the number of learners) of the independent school as a business venture. It is a managerial tool in the hands of the entrepreneur. This tool must be utilised optimally to pre-position an independent school in its chosen market segment. An

independent school as a business venture, must maximise profit and generate wealth for its shareholders.

According to government statistics, the national learner-to-school ratio for an independent school is 264: 1. The Gauteng learner-to-school ratio for an independent school is 325:1 (DoE, 2002:4). For argument sake, let us assume that the independent schools are divided into two categories: the larger schools (with 301 to 500 learners) and the smaller schools (with up to 300 learners).

What is the possible effect of the traditional line organisational structure on both categories of independent schools?

a.) LARGER INDEPENDENT SCHOOL

The application of this model for this independent school will in all probability have more advantages than disadvantages:

1. Division of tasks and duties

Clearly described delegation of authority enhances the probability of accountability and responsibility of individual staff members. Furthermore, the complex nature of various needs of this school will make this model more suitable as a management tool in converting policies into reality.

2. Diminishing costs

Total costs can be carried by more learners to create a comparative average cost-per-learner ratio.

3. Communication channels

These need to be better structured to optimise the alignment between the structure of the organisation and the attainment of educational goals. The complexity of the organisation necessitates clearly defined communication channels.

4. Curriculum

The larger schools tend to offer more subject choices within their academic curriculum. Increasing the subject choices entails the appointment of extra educators. Even if a smaller number of learners follow these subjects, it still means that these costs are carried by the total number of enrolled learners.

b.) SMALLER INDEPENDENT SCHOOL

For an independent school catering exclusively for a small number of learners, the implementation of this structure will not support its sales base. This model will not form the ideal structure to attain up to 300 learners per year. The reasons for the unsuitability of this model are:

1. The structure of authority, delegation, accountability and responsibility becomes too cumbersome. This structure will hamper quick and effective communications amongst its staff.
2. The complexity of this model will far outweigh the advantages of specialisation of the various tasks and duties.
3. It places an enormous financial burden on the entrepreneur of an independent school. Financial resources might not be readily available to implement the traditional line organisational structure within the start-up phase of the school as a business enterprise (Timmons, 1999: 414).

2.3. THE FLAT PYRAMIDAL ORGANISATION

A flat pyramidal structure implies a less finely determined distinction of jobs, lower levels of authority and more individuals occupying similar positions (Bisschoff, 2000: 89). Regulation of authority still takes place, but there are fewer levels than the traditional line organizational structure (Smit & Du Plessis, 1994: 91).

Figure 2 visualises the flat pyramidal structure.

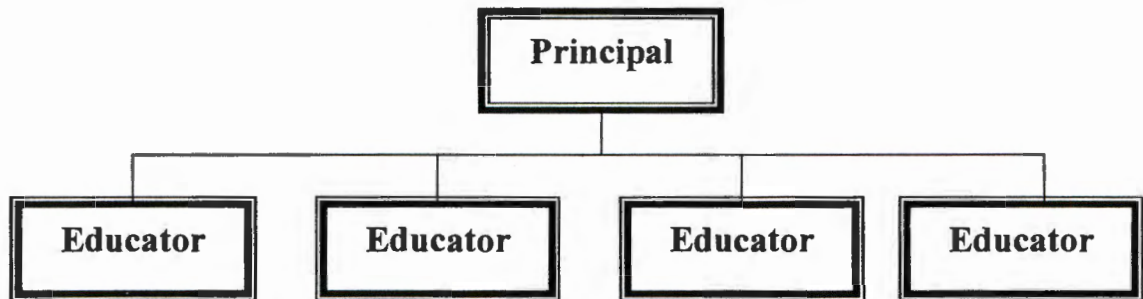


Figure 2. A flat pyramidal organisational structure. (Adapted from Smit & Du Plessis, 1994: 91)

2.3.1. Proposed flat pyramidal structure

The flat pyramidal organisational structure as proposed in figure 2 is one that, without some adjustment, is difficult to implement in an independent school. The main reason for this is the fact that educators have an X-number of periods per week on their timetable. This time is reserved for the education of the learners. Even though educators do double up on other tasks and duties, a certain percentage of the workable hours per day are tied down. Flexibility in execution of various tasks and duties is not always possible or implementable.

An enhanced flat pyramidal organisational structure for an independent school needs to be generated. Figure 3 shows the enhancement of the flat pyramidal organisational structure to incorporate elements of both the educational and business components.

Figure 3 visualises the enhancement of the flat pyramidal organisational structure.

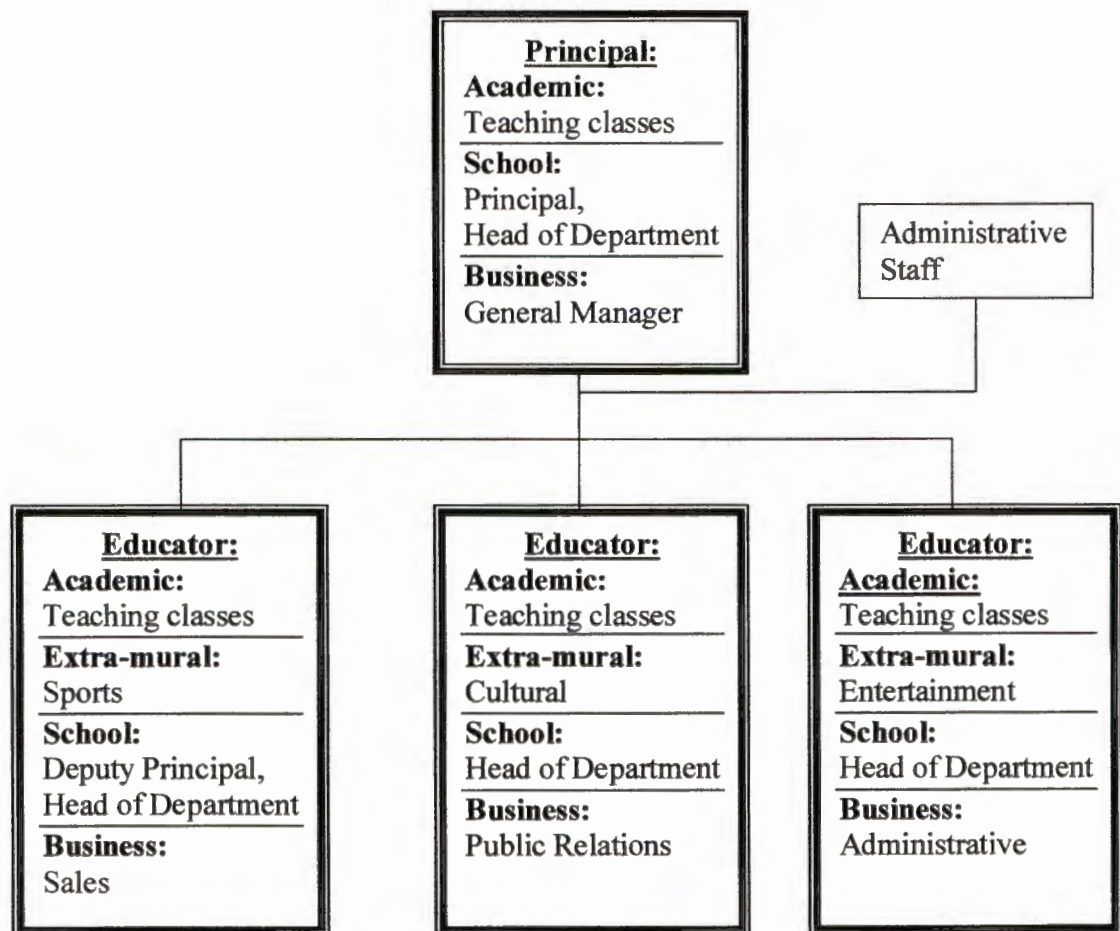


Figure 3. Enhanced flat pyramidal organisational structure (Source: own)

Figure 3 shows that all relevant educational and business tasks and duties of a fledging independent school will need to be divided over as few staff as possible. Maximum tasks and duties are executed by the minimum numbers of educators.

Educators employed will be required to invest a maximum of energy stretching over maximum tasks and duties of both the educational and the business components of an

independent school. This requirement will increase the chances of survival during the start-up phase of an independent school.

Educators will have to teach classes, help with all the extra-mural activities, create and implement educational management policies, and execute business aspects, all within the proverbial “day’s work”.

2.3.2. Relevance for financial viability

The importance and the relevance of the flat pyramidal organisational structure lies in the support it can give to increase the sales (the number of learners) of the independent school as a business venture. As has already been stated, it is a managerial tool in the hands of the entrepreneur. This tool must be utilised optimally to position an independent school in its chosen market segment. An independent school as a business venture must maximise profit and generate wealth for its shareholders.

Using the previously defined distinction of larger and smaller independent schools, the relevance of the flat pyramidal organizational structure on both the larger and smaller independent schools can now be ascertained:

a.) LARGER INDEPENDENT SCHOOL

The application of this model will, in all probability, have more disadvantages than advantages:

1. The complex nature of various needs of this school will make this model unsuitable as a management tool to convert policies into reality.
2. The complexity of the various needs of this school necessitates clearly defined communication channels, which this model cannot offer.
3. The larger schools tend to offer more subject choices within their academic curriculum. Educators are placed under enormous stress to comply with various aspects of all their tasks and duties. This will increase the pressure within the organizational structure, and inherently will increase the chances of making this structure an unworkable model.

b.) SMALLER INDEPENDENT SCHOOL

For an independent school, catering exclusively for a small number of learners, the implementation of this structure will support its sales base. This model will form the ideal structure to accommodate up to 300 learners per year. The reasons for the suitability of this model are:

1. There is an optimal alignment between the structure of the school, the number of staff appointed, the number of learners enrolled and the attainment of educational goals. The implementation of this structure will streamline and increase quick and effective communications amongst its staff.
2. The simplicity of this model will far outweigh the advantages of implementing the traditional line organisational structure.
3. There is more alignment between the financial benefits and the incurred expenses and the burden that it places on the entrepreneur of an independent school. Financial resources might not be readily available to implement the traditional line organisational structure within the start-up phase of the school as a business enterprise (Timmons, 1999: 414).

2.4. SUMMARY

Schools are classified as an organisation because they operate within a framework where human activities are directed and coordinated. A formal structure of authority comes into being by grouping activities into departments and sub-departments, and arranging them in a certain order. This means, that within the formal organizational structure, educator's actions are directed at achieving effective education.

Schools are classified as an organisation because they operate within a framework where human activities are directed and coordinated. A formal structure of authority comes into being by grouping activities into departments and sub-departments, and arranging them in certain order. This means, that within the formal organizational structure, educators actions are directed at achieving effective education.

CHAPTER 3

QUANTIFYING THE VARIABLES

3.1. INTRODUCTION

The purpose of this study is to find an answer to the question of whether or not it is financially viable to operate an independent school. The method that will be followed, is to assume that there are four important variables: the number of learners enrolled at the school, the amount of school fees levied, the number of educators to be employed and the renting or building of infrastructure.

In this chapter, the four assumed variables need to be defined in terms of the role that they will play in determining if it is financially viable for an entrepreneur to operate an independent school as a business opportunity. In Chapter 4, these variables will be compared against each other in various matrices.

3.2. THE NUMBER OF LEARNERS

The variable “sales” is highly dependent on the potential number of learners that will be enrolled in an independent school. The entrepreneur will firstly, need to establish the geographical area in which the school will operate. Secondly, the entrepreneur will need to determine the extent to which this area has the potential of being classified as a feeder area, able to guarantee future enrolment of learners per year.

In determining the potential of this feeder area, the entrepreneur will have to take various factors into consideration, namely the different income groups in this area, the stratification of this income group, the present economic activities and the economic

potential in the near future, the number of schools in the area, the dissatisfaction of the parents with the quality of education offered by public schools, the impact of various national and provincial educational policies and the effect of perceived globalisation and its impact on education.

For that purpose, this study is assuming that independent schools can be divided into larger and smaller schools. The distinction will be made on the basis of government statistics as presented by the Department of Education in February of 2002 (DoE, 2002: 4). According to these statistics, in the year 2000, there were 426 (44%) independent schools nationwide with an enrollment of more than 301 learners per year, in contrast to the 542 (56%) independent schools with learner enrollment of less than 300 learners per year.

This study is therefore assuming that:

- a.) Smaller independent schools are categorized as a school with a maximum of 300 enrolled learners per year. This variable will be quantified and used in the matrix in Chapter 4 and broken down into 100, 200 and 250 enrolled learners per year.
- b.) Larger independent schools are categorized as a school with a minimum of 301 enrolled learners per year. This variable will be quantified and used in the matrix in Chapter 4 and broken down into 301, 400 and 500 enrolled learners per year.

3.3. SCHOOL FEES

Sales is the revenue generated by the business venture. The main generator of sales for an independent school will be the levying of school fees. Other sources are available to the school to generate more income and these include donations, contributions from private institutions, interest on trust funds and the letting of facilities (Mentz & Oosthuizen, 2000:187).

The formula for Sales will then be:

$\text{Sales} = \text{the number of learners enrolled} \times \text{the amount of school fees to be levied}$
--

An independent school that receives no subsidies from the government must operate as a business. This means that the needs of the target group have to be satisfied in order to generate profit, which will be re-invested to finance the growth of the business to enhance shareholders' return on equity. The covering of all expenses will therefore, be the point of departure in determining the amount of the school fees that will need to be levied on the parents of the enrolled learners.

The following four independent schools have been approached regarding their annual school fees:

1. Henley High in Henley on Klip: R 9 000 per year
2. Greenacres Private High School in Meyerton: R 22 000 per year
3. St. Benedict's in Bedfordview: R 25 000 per year
4. Crawford College in Sandton: R 30 000 per year

For the purpose of this study, the variable "sales", will be quantified as the potential amount of school fees levied on parents of the learners enrolled in an independent school. The following amounts will be assumed for the matrix that will be generated in Chapter 4: R 1 000 per month, R 1 500 per month, R 2 000 per month, R 2 500 per month, R 3 000 per month and R 3 500 per month.

3.4. THE NUMBER OF EDUCATORS

As has previously been indicated, there is a general perception of decreasing educational standards in the public schools. On the other hand, the perception exists that the educational standards in independent schools are increasing.

The number of educators to be employed multiplied with various salary packages offered by the independent school makes it a cost factor of substantial importance. Educators are seen as professional people who need many years of studying and experience before reaching their full potential. For an independent school, the selection and appointment of its educators is a major draw card to the potential parents to invest in their child's education at a particular school. For parents, a high turnover of staff is perceived to have a positive correlation with increasing school managerial problems and decreasing curriculum quality.

The selection and appointment of educators now becomes a crucial element as the cost of sales in attaining the highest sales possible, namely the number of enrolled learners. The appointment of educators becomes one of the more important managerial aspects with implications affecting the turnover and profit margins of the school as a business venture.

This study is assuming two distinct methods in determining the number of educators that will need to be employed by the entrepreneur of an independent school:

1. Based on the curriculum

- a.) Basic curriculum needed for the learners to attain a university exemption certificate at the end of Grade 12.
- b.) Extensive curriculum offering a variety of subjects that cater to those learners wishing to attain a university exemption certificate and those that just wish to pass Grade 12.

2. Number of learners per educator

For the purpose of this study, it is assumed that the learner-to-educator ratio will be based on government statistics for an independent school of 17 learners for every educator

(DoE, 2002: 4). The data generated in the various appendices and Chapter 4 are based upon this ratio. Furthermore, to be able to compare data with each other, an assumed learner-to-educator of 22 learners for every educator is used for analytical purposes.

3.4.1. Number of educators based on the curriculum

Salaries for educators feature prominently in any independent's school's budget. It therefore, becomes quite understandable, that it is of paramount importance for independent schools to know the precise number of educators that need to be employed.

3.4.1.1. *Basic curriculum: university exemption*

An entrepreneur starting an independent **high** school must realize that, in contrast to a **primary** school, one educator per grade is insufficient to carry the variety of subjects that will be offered. To keep the costs of educator salaries within the financial resources available, the entrepreneur will need to make a choice regarding the different subjects that the school will initially offer. An approach is to offer a basic package of subjects that will guarantee the learner a university exemption certificate at the end of Grade 12. This certificate will give the learner entrance into university.

The examination subjects from which the Grade 9 learner must make a final choice, are divided into the following six groups of subjects:

- **GROUP A:** Official languages. Two languages are compulsory.
- **GROUP B:** Mathematics
- **GROUP C:** Natural sciences: Physical Science and Biology
- **GROUP D:** Third languages
- **GROUP E:** Humanities: History, Geography and Economics
- **GROUP F:** Additional subjects: Housecraft, Typing, Art, Woodwork, Technical subjects, Accounting, Business Economics and Travel & Tourism

To gain access to the university, the learner must have a university exemption certificate that complies with the following requirements:

1. Both languages must be on Higher Grade.
2. Two out of the available four subjects from two different groups on Higher Grade.

The entrepreneur can now apply a cross-reference of these subject choices against a limited selection of university fields. Assuming that these academic fields are: medicine, engineering and commerce, cross-referencing will now narrow the choice of subjects to: English, Afrikaans, Mathematics, Physical Science, Biology and Accounting. All subjects will then be compulsory in order to comply with the requirements of a university exemption certificate at the end of Grade 12.

High school educators must qualify in two Grade 12 subjects to attain a teaching diploma. But, having stated that, it is rare to find a Grade 12 educator able and willing to present two subjects concurrently in one academic year. The psychological pressure of preparing Grade 12 learners for their Final Examination means that Grade 12 educators should concentrate on one subject.

Bearing this approach in mind, the entrepreneur will need to select and appoint six educators in order to present the six subjects from Grade 8 to Grade 12 level. Five grades, six subjects with one class per grade.

A curriculum based on university exemption will have a minimum of six educators.

3.4.1.2. Extensive curriculum: the periods per subjects

An alternative method based on the curriculum, is to quantify the number of educators to be employed according to the number of periods that will be taught per subject, per grade, per week. Table 1 presents a breakdown of these numbers.

Table 1. Number of periods per subject per grade

SUBJECTS:	GRADE 8	GRADE 9	GRADE 10	GRADE 11	GRADE 12	TOTAL
Languages:						
English	8	8	9	10	10	45
Afrikaans	6	6	7	8	8	35
Mathematics:						
Ordinary Grade	9	9				18
Standard Grade			10	10	10	30
Higher Grade			10	10	10	30
Natural Sciences:	6	6				12
Science			8	8	8	24
Biology			8	8	8	24
Economic Man. Science:	8	8				16
Accounting			8	8	8	24
Business Economics			5	5	5	15
Economics			5	5	5	15
Human & Social Sciences:	6	6				12
Geography			8	8	8	24
History						
Music	4	4				8
Computer Literacy	2	2	2	2	2	10
Arts & Culture	3	3				6
Life Orientation	1	1				2
Technical	1	1				2
Cycle Test	2	2	2	2	2	10
Library	2	2	2	2	2	10
Assembly	1	1	1	1	1	5
Sport	1	1	1	1	1	5
TOTAL	60	60	86	88	88	382

Working on 12 periods per day, a weekly School Timetable of 30 minutes per period entails a total of 60 periods-per-week.

Explanation of Table 1

- Effective teaching time by the individual educators will maximize at 60 periods per week.
- The entrepreneur must appoint an educator for a main subject. Table 1 presents the necessary total number of periods per subject per grade on a 60 period timetable.
- To fill up the educator's timetable, the entrepreneur can add various other subjects that the educator is qualified to teach.

- d.) In general, the entrepreneur can generate a timetable per educator consisting of between 54 and 59 periods-per-week on a 60 period weekly timetable.

The extended curriculum approach, as presented in Table 1, can lead to the following number of educators to be employed:

Table 2. Possible combination to determine the number of educators to be employed

EDUCATORS:	SUBJECTS:	Periods:	POST:
Principal	Library; Physical Science; Assembly	23	Full
Deputy & Head of	Accounting; Business Economics;	54	Full
Department Commercial	Economics		
Head of Department	Mathematics; Cycle Test	50	Full
Mathematics			
Head of Department	English; Arts & Culture; Cycle Test	53	Full
Languages			
Head of Department	Afrikaans; Biology; Cycle Test	53	Full
Natural Sciences			
Educator 1	Human & Social Sciences;	48	Full
	Geography; Cycle Test; Sport		
Educator 2	Mathematics; Science	54	Full
Educator 3	Sports; Cycle Test; Technology; Life	40	Full
	Orientation; Economic &		
	Management Sciences		
Educator 4	Music	8	1/8 Post
Educator 5	Computer	10	1/6 Post
TOTAL:		393	8,3 = 9 Educators

THE GENERALISATION TRAP

The entrepreneur starting an independent high school, must beware of a generalisation trap into which he or she might fall. As has been stated, adding on one grade does not entail the addition of one educator as is the case in a primary school. Different subject choices will require more educators to be employed even if a few learners are physically present in the classroom. The subject is still offered.

Generalisation of the figures presented in Table 1 will lead to a biased approach of employing the incorrect number of educators:

1. The number of total periods from Table 1 (382), divided by the number of weekly periods (60), envisions 6,4 educators. This in contrast to generating a possible combination of subjects per educator that envisions 8,3 educators in Table 2.
2. The maximum number of periods, that learners per grade can attend per week, is 60. The school will have five grades of learners, therefore, only five educators need to be employed. This is a calculation method that to a certain extent, is appropriate for a primary school where an educator teaches the entire class, all subjects. The various combination choices of different subjects necessitate the selection and appointment of extra educators.

Generalisation fails to incorporate the following:

1. The Principal teaches an average of 25% of the timetable. As the number of learners enrolled into the school increases, the number of periods taught by the Principal needs to be reduced. Procedural, policy, administrative and disciplinary matters have to be dealt with (Van der Westhuizen, 1999(b): 1-5; GDE, 1998: 7).
2. Government requirements for teaching periods of Heads of Department (HoD) stand at 60% of the timetable (GDE, 1998: 7). HoD's form part of the school management team and are also responsible for subject content, effective administration, maintaining discipline, and creating and implementing policies (Van der Westhuizen, 1999(c): 49-52).
3. High school educators qualify in two Grade 12 subjects.
4. Grade 12 educators tend to be more experienced and will thus command a higher salary.
5. The psychological pressure of preparing Grade 12 learners for their Final Examination means that Grade 12 educators concentrate on one subject. It is rare to find a Grade 12 educator able and willing to present two subjects concurrently in one academic year.
6. For most senior phase subjects, the differentiation between Higher Grade and Standard Grade is one of examination questions. The subject content is hardly

differentiated. The exception to the rule is Mathematics for Grades 10, 11 and 12. The syllabus demands that from Grade 10 onwards, mathematics must be taught separately in two classes, one for Higher Grade, and one for Standard Grade.

An independent school caters towards the needs of a specified target group. The entrepreneur must realize that the quality of education presented to the learners has a direct influence on the sustainability of the school as a business enterprise.

3.4.2. Number of educators based on learner ratio

A different approach to selecting and appointing educators is to use a fixed system of a certain number of learners per educator. According to government statistics concerning the year 2000, an independent school has a learner-to-educator ratio of 17,1:1 (DoE, 2002:4).

One educator for every 17 learners

The perception of the general public of increasing standards of education found in independent schools places a limit on the number of learners that an entrepreneur can place within a classroom. Implementing a learner-to-educator ratio that slightly differs from that of a public school (33,4:1) will negate one of the major advantages of operating an independent school, namely classrooms with smaller numbers of learners. A high learner-to-educator ratio will in the end, defeat an independent school's reason for existence.

3.5. INFRASTRUCTURE

The physical environment of a classroom can function as a parameter in determining whether it is prudent for an entrepreneur to rent premises to operate an independent school, or whether it is more cost effective to build the necessary infrastructure.

For the purpose of this study, it is assumed that the floor space per individual learner is 3,5 square meters. This figure is based on an assumption that the personal space of the individual learner is 2,5 square meters. To this figure is added 1,0 square meters for office and toilet facilities.

Furthermore, infrastructure is defined as **only** educational structure. Sports and extra-mural facilities are not taken into consideration when data is generated in various appendixes and tables throughout this study.

3.5.1. Rent infrastructure

According to Mr. Mike Avnit of Kingsway Estate c.c. in Henley on Klip, to rent existing premises for the purpose of operating an independent school, the entrepreneur is looking at as much as R 25 per square meter in and around the local area. This will contrast with prices per square meter if the entrepreneur is looking for a prime site location in and around Eastgate in Johannesburg. In Eastgate the price of rent can increase to as much as R 300 per square meter.

The variable rent is quantified in Chapter 4 as floor space. For this purpose, the rental price is assumed at different prices per square meter, namely: R 25, R 50, R 75 and R 100.

3.5.2. Build infrastructure

Mr. Avnit also explained the difference between the price of building for industrial purposes and for private homes. Cost drivers that increase the price per square meter in the building of a private home have little or no effect on the building of an industrial infrastructure. Italian tiles and Oregon pine floors are expensive and will increase the value of a private home, but it is questionable whether they will have the same effect on the value of an industrial infrastructure.

Depending on the location of the building site and whether it has prime property value, prices could vary from R 1 200 to R 2 400 per square meter to build an infrastructure.

3.6. SUMMARY

An independent school caters for the needs of a specified target group. The quality of education presented to the learners has a direct influence on the sustainability of the school as a business enterprise.

Salaries for educators feature prominently in any independent's school's budget. Independent schools that are based on the "profit" motive receive no subsidies from the government, and must provide for all expenditure out of the income that they generate themselves. It is of paramount importance for independent schools to know the precise number of educators that need to be employed.

CHAPTER 4

EMPIRICAL STUDY

4.1. INTRODUCTION

The four most important variables previously mentioned (the number of learners enrolled, the amount of school fees per month, the number of educators to be employed and the renting or building of infrastructure) have been compared with each other in 24 different tables and can be found as appendices at the end of this study. The data presented in these tables form the master template from which six different tables will be summarised.

Chapter 4 concludes by reviewing the newly gained knowledge in six different scenarios. These scenarios portray a certain reality that can confront the entrepreneur.

4.2. DATA ANALYSIS

The purpose of the study is to assess whether an entrepreneur can operate an independent school of a financially viable basis. In order to solve this assessment, the following need to be investigated:

1. The level of business activity necessary.
2. The influence of educators for survival.
3. The influence of infrastructure costs.

For that purpose, the study concentrates on the four most important variables – as outlined above - and how they influence each other.

4.2.1. Appendices

To assess the financial viability of independent schools, the study has generated various measurements in six different appendices. Each appendix has four tables presenting various basic

data. In total, 24 tables of data have been created, presenting measurements concerning the influence that variables have on each other.

4.2.2. Tables

The generated data from the various appendices now need to be analysed and interpreted because the study needs to address the question of whether or not it is financially viable to operate an independent school as a business venture.

Table 3 presents a summarised version of the four tables generated in Appendix A. With salaries for educators varying, Table 3 presents a concise overview of what happens to the profit of an independent school, bearing in mind the lowest and highest amount envisioned for building costs per square meter for basic educational infrastructure. With school fees fixed at R 1 000 per learner per month, the entrepreneur is making a small profit. The small profit is generated on the explicit condition that the salaries for the educators do not exceed the R 10 000 per educator per month scale.

TABLE 3

Learner-to-educator ratio of 17:1 Variables educator salaries and building costs per square meter

Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
School fees per month		R1 000	R1 000	R1 000	R1 000	R1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R1 200	R 25 506	R 51 012	R 76 518	R102 024	R 137 531
	R2 400	R 19 346	R 38 691	R 58 037	R 77 382	R 106 728
Educator salary per month		R15 000	R15 000	R15 000	R15 000	R15 000
Cost to build per square meter	R1 200	(R 4 494)	(R 8 988)	(R 13 482)	(R 17 976)	(R 7 469)
	R2 400	(R 10 654)	(R 21 309)	(R 31 963)	(R 42 618)	(R 38 272)
Educator salary per month		R20 000	R20 000	R20 000	R20 000	R20 000
Cost to build per square meter	R1 200	(R 34 494)	(R 68 988)	(R 103 482)	(R 137 976)	(R 152 469)
	R2 400	(R 40 654)	(R 81 309)	(R 121 963)	(R 162 618)	(R 183 272)
Educator salary per month		R25 000	R25 000	R25 000	R25 000	R25 000
Cost to build per square meter	R1 200	(R 64 494)	(R 128 988)	(R 193 482)	(R 257 976)	(R 297 469)
	R2 400	(R 70 654)	(R 141 309)	(R 211 963)	(R 282 618)	(R 328 272)

Assuming that the entrepreneur wishes to start a small independent school that in the coming years will grow to its full potential, he will have to entice learners with low enrolment fees. Table 3 shows, that if school fees were to be less than R 1 000 per learner per month, it will not be financially viable to operate an independent school. The small profit envisioned leaves little room for miscellaneous and unforeseen expenses.

The question the entrepreneur now has to answer is: for what purpose does he wish to operate an independent school? If the reason d'être is to make a profit, then yes, it will be possible to employ educators at a salary of R 10 000 per month. If the reason for operating an independent school is more complex in nature, then the entrepreneur should answer the question: Is it possible to attract quality educators (qualifications, experience, Matric results and peer recognition) at R 10 000 per month?

Instead of building the necessary basic educational infrastructure, the entrepreneur can look for a suitable property to rent. The entrepreneur might encounter problems in accessing the financial markets to fund the basic educational infrastructure. Factors like the current economic cycle, the potential risk involved and the amount needed could force the entrepreneur to seek a viable alternative. Table 4 gives a concise idea of the influence of the renting of property on the basic financial viability.

Table 4 shows the relationship between the salaries per educator and the cost of rent per square meter. With school fees being fixed at R 1 000 per learner per month, the salaries for educators cannot exceed the R 10 000 per educator per month scale. Given these two variables, the entrepreneur can rent educational infrastructure to a maximum of R 75 per square meter. Keeping in mind that it is financially prudent to cater for unforeseen expenses, Table 4 proves that a rent of R 50 per square meter will provide optimum flexibility for the entrepreneur.

The cost of rent per square meter will determine the geographical location in which the entrepreneur can now scout for suitable premises. The question that now arises is: Is the geographical location of the rented premises convenient for the feeder area?

TABLE 4

Learner-to-educator ratio of 17:1 Variables educator salaries and rent per square meter						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
School fees per month		R1 000	R1 000	R1 000	R1 000	R1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to rent per square meter	R 25	R 22 917	R 45 833	R 68 750	R 91 667	R 124 583
	R 50	R 14 167	R 28 333	R 42 500	R 56 667	R 80 833
	R 75	R 5 417	R 10 833	R 16 250	R 21 667	R 37 083
	R100	(R 3 333)	(R 6 667)	(R 10 000)	(R 13 333)	(R 6 667)
Educator salary per month		R15 000	R15 000	R15 000	R15 000	R15 000
Cost to rent per square meter	R 25	(R 7 083)	(R 14 167)	(R 21 250)	(R 28 333)	(R 20 417)
	R100	(R 33 333)	(R 66 667)	(R 100 000)	(R 133 333)	(R 151 667)
Educator salary per month		R20 000	R20 000	R20 000	R20 000	R20 000
Cost to rent per square meter	R 25	(R 37 083)	(R 74 167)	(R 111 250)	(R 148 333)	(R 165 417)
	R100	(R 63 333)	(R 126 667)	(R 190 000)	(R 253 333)	(R 296 667)
Educator salary per month		R25 000	R25 000	R25 000	R25 000	R25 000
Cost to rent per square meter	R 25	(R 67 083)	(R 134 167)	(R 201 250)	(R 268 333)	(R 310 417)
	R100	(R 93 333)	(R 186 667)	(R 280 000)	(R 373 333)	(R 441 667)

The reason behind this question is that if the distance between suitable premises and feeder area is too great, the entrepreneur might have to start a transportation system to guarantee that the targeted learners do actually enrol at the independent school. Transportation will increase his expenses and ultimately negatively influence the financial viability.

The purpose of any business venture is to generate profit - more precisely, to generate maximum profit given a predetermined set of parameters. Table 5 presents an extract of the profit possible given various levels of school fees levied on the parents of the learners. Appendix C shows a detailed breakdown of these figures.

Assuming that the entrepreneur has access to the financial markets, Table 5 has taken the average building cost of basic educational infrastructure at R 1 600 per square meter. Paying educators a salary of R 10 000 per month means that the entrepreneur must levy a minimum of R 1 000 school fees per month on the parents of the learners.

TABLE 5

Learner-to-educator ratio of 17:1 Variable educator salary. Variable school fees						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
Cost to build per square meter		R1 600	R1 600	R1 600	R1 600	R1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R 750	(R 1 547)	(R 3 095)	(R 4 642)	(R 6 190)	R 2 263
	R1 000	R 23 453	R 46 905	R 70 358	R 93 810	R 127 263
	R1 500	R 73 453	R 146 905	R 220 358	R 293 810	R 377 263
	R2 000	R123 453	R 246 905	R 370 358	R 493 810	R 627 263
	R2 500	R173 453	R 346 905	R 520 358	R 693 810	R 877 263
Educator salary per month		R15 000	R15 000	R15 000	R15 000	R15 000
School fees per month	R1 000	(R 6 547)	(R 13 095)	(R 19 642)	(R 26 190)	(R 17 737)
	R1 500	R 43 453	R 86 905	R 130 358	R 173 810	R 232 263
	R2 000	R 93 453	R 186 905	R 280 358	R 373 810	R 482 263
	R2 500	R143 453	R 286 905	R 430 358	R 573 810	R 732 263
Educator salary per month		R20 000	R20 000	R20 000	R20 000	R20 000
School fees per month	R1 250	(R 11 547)	(R 23 095)	(R 34 642)	(R 46 190)	(R 37 737)
	R1 500	R 13 453	R 26 905	R 40 358	R 53 810	R 87 263
	R2 000	R 63 453	R 126 905	R 190 358	R 253 810	R 337 263
	R2 500	R 113 453	R 226 905	R 340 358	R 453 810	R 587 263
Educator salary per month		R25 000	R25 000	R25 000	R25 000	R25 000
School fees per month	R1 500	(R 16 547)	(R 33 095)	(R 49 642)	(R 66 190)	(R 57 737)
	R2 000	R 33 453	R 66 905	R 100 358	R 133 810	R 192 263
	R2 500	R 83 453	R 166 905	R 250 358	R 333 810	R 442 263

Assuming that the entrepreneur wants to attain maximum profit, Table 5 shows the effect the different salary scales for educators have on the level of school fees to be levied. An increase in the salary per month to the educators goes hand in hand with an increase in the school fees that need to be levied per month in order to generate profit.

The following tables (6, 7 and 8) form a variation on the previously mentioned tables (3, 4 and 5). The last mentioned tables are based on government statistics for independent schools of 17 learners to every educator (DoE, 2002: 4). The entrepreneur now faces the possibility of increasing the number of learners per educator and therefore increasing the financial operating viability.

Tables 6, 7 and 8 are based on the assumption of 22 learners to every educator for an independent school. It will serve no purpose for an entrepreneur to place as many learners as possible into a classroom. As has been previously stated, one of the reasons that the general public perceives an independent school to have a higher quality of education is because there are fewer learners in a classroom and more individual attention can be given to every learner. To place 34 learners in a classroom will therefore defeat the purpose of existence of an independent school. But a few more learners in a classroom can have a positive effect on the financial viability.

When comparing Table 6 (learner-to-educator ratio of 22:1) with Table 3 (learner-to-educator ratio of 17:1), the effect of this increase is to strengthen the profit for the entrepreneur, given educator salaries at R 10 000 and school fees at R 1 000 per month.

TABLE 6

Learner-to-educator ratio of 22:1 Variables educator salaries and building costs per square meter						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
School fees per month		R1 000	R1 000	R1 000	R1 000	R1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R1 200	R 35 506	R 81 012	R 116 518	R 162 024	R 197 531
	R2 400	R 29 346	R 68 691	R 98 037	R 137 382	R 166 728
Educator salary per month		R15 000	R15 000	R15 000	R15 000	R15 000
Cost to build per square meter	R1 200	R10 506	R 36 012	R 46 518	R 72 024	R 82 531
	R2 400	R 4 346	R 23 691	R 28 037	R 47 382	R 51 728
Educator salary per month		R20 000	R20 000	R20 000	R20 000	R20 000
Cost to build per square meter	R1 200	(R 14 494)	(R 8 988)	(R 23 482)	(R 17 976)	(R 32 469)
	R2 400	(R 20 654)	(R 21 309)	(R 41 963)	(R 42 618)	(R 63 272)
Educator salary per month		R25 000	R25 000	R25 000	R25 000	R25 000
Cost to build per square meter	R1 200	(R 39 494)	(R 53 988)	(R 93 482)	(R 107 976)	(R 147 469)
	R2 400	(R 45 654)	(R 66 309)	(R 111 963)	(R 132 618)	(R 178 272)

However, the major difference is that, the entrepreneur now has the possibility at his disposal to increase the salary per educator to R 15 000 per month and still generate a small profit for the independent school. Salary scales of R 20 000 and higher are not financially viable with the current school fees of R 1 000 per learner per month.

The above-mentioned major difference now also becomes visible when comparing Table 7 with Table 4. The profits are strengthened and the range of cost per square meter is increased to R 100. A logical extension of this is that the entrepreneur can now also seek suitable premises more in line with the feeder area of the targeted learners.

TABLE 7

Learner-to-educator ratio of 22:1 Variables educator salaries and rent per square meter						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
School fees per month		R1 000	R1 000	R1 000	R1 000	R1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to rent per square meter	R 25	R 32 917	R 75 833	R 108 750	R 151 667	R 184 583
	R 50	R 24 167	R 58 333	R 82 500	R 116 667	R 140 833
	R 75	R 15 417	R 40 833	R 56 250	R 81 667	R 97 083
	R100	R 6 667	R 23 333	R 30 000	R 46 667	R 53 333
Educator salary per month		R15 000	R15 000	R15 000	R15 000	R15 000
Cost to rent per square meter	R 25	R 7 917	R 30 833	R 38 750	R 61 667	R 69 583
	R100	(R 18 333)	(R 21 667)	(R 40 000)	(R 43 333)	(R 61 667)
Educator salary per month		R20 000	R20 000	R20 000	R20 000	R20 000
Cost to rent per square meter	R 25	(R 17 083)	(R 14 167)	(R 31 250)	(R 28 333)	(R 45 417)
	R100	(R 43 333)	(R 66 667)	(R 110 000)	(R 133 333)	(R 176 667)
Educator salary per month		R25 000	R25 000	R25 000	R25 000	R25 000
Cost to rent per square meter	R 25	(R 42 083)	(R 59 167)	(R 101 250)	(R 118 333)	(R 160 417)
	R100	(R 68 333)	(R 111 667)	(R 180 000)	(R 223 333)	(R 291 667)

Table 7 furthermore shows that if an entrepreneur wishes to attract more highly qualified educators (R 15 000 per month), he will need to seek suitable premises in a geographical location where the rental price is R 25 per square meter.

Whether this scenario is a realistic one needs to be seen. Firstly, the small profit envisioned leaves little room for miscellaneous and unforeseen expenses. Secondly, if suitable premises are found but the distance to the feeder area is too great, transportation costs could erode the envisioned profit or deter learners from enrolling into the independent school.

Also, Table 4 and Table 7 both prove that to rent suitable premises assuming R 1 000 school fees per month, becomes a problem. An entrepreneur wishing to operate an independent school on a financially viable basis will, in all probability, have to increase his level of school fees to R 1 500 per learner per month.

TABLE 8

Learner-to-educator ratio of 22:1 Variable educator salary. Variable school fees						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
Cost to build per square meter		R1 600	R1 600	R1 600	R1 600	R1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R 750	R 8 453	R 26 905	R 35 358	R 53 810	R 62 263
	R1 000	R 33 453	R 76 905	R 110 358	R 153 810	R 187 263
	R1 500	R 83 453	R 176 905	R 260 358	R 353 810	R 437 263
	R2 000	R 133 453	R 276 905	R 410 358	R 553 810	R 687 263
	R2 500	R 183 453	R 376 905	R 560 358	R 753 810	R 937 263
Educator salary per month		R15 000	R15 000	R15 000	R15 000	R15 000
School fees per month	R1 000	R 8 453	R 31 905	R 40 358	R 63 810	R 72 263
	R1 500	R 58 453	R 131 905	R 190 358	R 263 810	R 322 263
	R2 000	R 108 453	R 231 905	R 340 358	R 463 810	R 572 263
	R2 500	R 158 453	R 331 905	R 490 358	R 663 810	R 822 263
Educator salary per month		R20 000	R20 000	R20 000	R20 000	R20 000
School fees per month	R1 250	R 8 453	R 36 905	R 45 358	R 73 810	R 82 263
	R1 500	R 33 453	R 86 905	R 120 358	R 173 810	R 207 263
	R2 000	R 83 453	R 186 905	R 270 358	R 373 810	R 457 263
	R2 500	R 133 453	R 286 905	R 420 358	R 573 810	R 707 263
Educator salary per month		R25 000	R25 000	R25 000	R25 000	R25 000
School fees per month	R1 500	R 8 453	R 41 905	R 50 358	R 83 810	R 92 263
	R2 000	R 58 453	R 141 905	R 200 358	R 283 810	R 342 263
	R2 500	R 108 453	R 241 905	R 350 358	R 483 810	R 592 263

Table 8 shows, in contrast to Table 5, that with an increase in the number of learners per educator from 17 to 22, the entrepreneur can lower the level of school fees and still generate a profit. Furthermore Table 8 proves that the profit is strengthened per level of school fees. Even with miscellaneous and unforeseen expenses there is profit to be made. Also, with lower school fees needed, the entrepreneur can safely assume that he will obtain the enrolment of the necessary number of learners.

4.2.3. General conclusion: Tables

The information presented and explained in the previous paragraph's tables confirms that a general conclusion can be drawn. It is financially viable to operate an independent school as a business venture under the following conditions:

1. Learner-to-educator ratio is a minimum of 17 learners to every educator.
2. Salaries for educators do not exceed R 10 000 per month per educator.
3. A minimum amount of R 1 000 is levied on the parents of the learners per month.
4. Building of suitable infrastructure has a more positive influence on the profit than the renting of suitable premises.
5. Floor space per individual learner does not exceed 3,5 square meters.

4.2.4. Scenarios

From the outset, the study has set out to inform the entrepreneur about the field of education for potential business venture purposes. The field of education is one that is characterised by its own specific nature. This nature functions as a parameter in determining what the entrepreneur, bearing in mind his goal of attaining maximum profit, metaphorically speaking can and cannot do.

With this paragraph, the study wishes to describe six different scenarios that can confront the entrepreneur. Each scenario explains a specific situation and presents a possible solution. All the scenarios are done in table format. At the end of the day, the entrepreneur wants to know: Is it financially viable or not? And, what financial consequence does each solution have?

SCENARIO 1

Floor space increases from 3,5 to 5,0 square meters per learner.

A change within the economic environment of the school could necessitate this change in the floor space per individual learner.

The entrepreneur of an independent school will need to show to the potential parents the added advantage that their child will attain by enrolling into his independent school. As we are all aware, information technology is steadily becoming a more integrated aspect of society and our daily lives. It is therefore not inconceivable that the entrepreneur will want to incorporate personal computers (PC's) into the classroom setting. Every learner will therefore have to have his own PC and desk area. To be able to accommodate this added value the entrepreneur will have to increase the floor space per individual learner. For the purpose of this scenario, the study assumes the floor space to increase from 3,5 to 5,0 square meters per individual learner. Table 9 presents the profit based on the information generated in Appendix A, Table A1.

TABLE 9

Floor space is 3,5 square meters per learner						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
School fees per month		R1 000	R1 000	R1 000	R1 000	R1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R1 600	R 23 453	R 46 905	R 70 358	R 93 810	R 127 263

Table 10 shows the financial consequences of the increase in the individual floor space. Keeping the other variables constant, the entrepreneur is moving from a situation in which he was making a healthy profit, to one in which he is now making a loss.

TABLE 10

Floor space increases to 5,0 square meters per learner						
Number of educators		8	17	25	33	42
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
School fees per month		R1 000	R1 000	R1 000	R1 000	R1 000
Floor space in square meters		500	1 000	1 500	2 000	2 500
Cost to build per square meter	R1 600	(R 68)	(R 10 135)	(R 10 203)	(R 10 271)	(R 20 339)

To rectify the situation to one in which the entrepreneur is again making a profit, Table 11 shows that the school fees need to be increased to R 1 250 per learner per month.

TABLE 11

Increase in school fees per month per learner						
Number of educators		8	17	25	33	42
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
School fees per month		R1 250	R1 250	R1 250	R1 250	R1 250
Floor space in square meters		500	1 000	1 500	2 000	2 500
Cost to build per square meter	R1 600	R 24 932	R 39 865	R 64 797	R 89 729	R 104 661

SCENARIO 2

Building cost increases from R 1 600 to R 3 600 per square meter.

In this scenario the study is assuming that various factors lead to a significant increase in the annual inflation rate of South Africa. Both internal (wage increases, agricultural shortages) and external factors (South African exchange rate in comparison to other currencies, supply and demand of petrol) can influence the increase in the inflation rate. Table 12 gives a presentation of this information. An increase of roughly 100% in the cost of building educational infrastructure, leads to a nearly 50% decrease in the envisioned profits.

TABLE 12**Building costs per square meter increase from R 1 600 to R 3 600**

Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
School fees per month		R1 000	R1 000	R1 000	R1 000	R1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R1 600	R 23 453	R 46 905	R 70 358	R 93 810	R 127 263
	R3 600	R 13 185	R 26 370	R 39 555	R 52 740	R 75 925

In this scenario the study is assuming that, in the first instance, the educators stay on the pre-determined salary of R 10 000 per educator per month. However, the annual update of the contracts that the educators have with the school will lead to a demand from the side of the educators to increase the salaries as much as possible to compensate for the loss of purchasing power that they as consumers experience. Table 13 presents the potential loss that this demand for an increase in the salaries for the educators will bring to the entrepreneur of the independent school.

TABLE 13**Educators demand an increase in salary to R 15 000**

Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R15 000	R15 000	R15 000	R15 000	R15 000
School fees per month		R1 000	R1 000	R1 000	R1 000	R1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R3 600	(R 16 815)	(R 33 630)	(R 50 445)	(R 67 260)	(R 69 075)

The paramount reason that any entrepreneur is in business is because he aims to make a maximum profit given certain parameters in the environment wherein he operates. To accept a loss means that the entrepreneur will have to delve into his own capital to finance the incurred deficit. Table 14 presents an alternative for the entrepreneur in the form of raising the level of school fees to be levied per learner per month.

TABLE 14

Increase in the school fees per learner per month						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R15 000	R15 000	R15 000	R15 000	R15 000
School fees per month		R1 250	R1 250	R1 250	R1 250	R1 250
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R3 600	R 8 185	R 16 370	R 24 555	R 32 740	R 55 925

By increasing the school fees to R 1 250 per learner per month, the entrepreneur is now showing a small profit. However, this estimated profit allows little leeway in the form of unforeseen expenses.

This small profit could prompt the entrepreneur to increase his level of school fees to R 1 500 per learner per month. At first glance this would seem to be a wise precaution to hedge expenses against a larger profit. However, the entrepreneur must realise, that every increase in school fees will generally mean that a number of parents will be unable to afford this increase out of their current salary. It is therefore not inconceivable that a number of learners will have to leave the independent school and seek suitable education elsewhere. The entrepreneur will have to weigh the consequences of the various increases against each other.

SCENARIO 3

Different Interest Rate choices financeable in South Africa and the European Union

With South Africa joining the community of nations in 1994, it is conceivable that people from foreign countries have come to South Africa to invest foreign savings and participate in our national economy. It is therefore possible that a foreign citizen could operate an independent school on a financially viable basis.

Scenario 3 assumes that the foreign citizen has access to the financial market in his own country. It is therefore possible that this entrepreneur might obtain a lower interest rate than an entrepreneur securing a loan on the South African market. Table 15 provides data concerning

three different interest rates and the influence that this will have on the profit that the entrepreneur can generate.

TABLE 15

Different Interest Rate choices financeable in South Africa and the European Union						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
School fees per month		R1 000	R1 000	R1 000	R1 000	R1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter		R1 600	R1 600	R1 600	R1 600	R1 600
(RSA: Best Interest Rate)	12%	R 25 501	R 51 001	R 76 502	R 102 002	R 168 331
(RSA: Present Interest Rate)	17%	R 23 453	R 46 905	R 70 358	R 93 810	R 168 329
(European Union)	7%	R 27 325	R 54 650	R 81 975	R 109 300	R 168 332

Table 15 shows that securing a foreign loan from a country that is a member of the European Union will enhance the envisioned profits. A special note of caution must be made. The profit generated due to an interest rate of 7% does not take into account transfer charges, fluctuations in the exchange rate or change in government policies concerning foreign currencies.

The purpose of this scenario is to prove to the entrepreneur that scouting around for other venues that can give access to other financial markets, can be a worthwhile endeavour. It is now up to the entrepreneur to weigh the advantages of foreign access against the possible negative consequences for his profit.

SCENARIO 4

The number of educators doubles up. The learner-to-educator ratio changes from 17:1 to 8:1

Even though this scenario looks totally unrealistic and no entrepreneur would ever contemplate halving his learner-to-educator ratio, there are two instances in which this scenario would prove sound:

1. The entrepreneur extends the offered curriculum from a basic package to one where a variety of different subjects are available and numerous subject choices can be made. In

other words, the number of educators that will need to be employed now cannot be worked out according to the “basic curriculum” formula, but through the implementation of the “periods-per-subject-per-grade” formula.

2. The entrepreneur wishes to operate an independent school and has a motive other than financial viability. The entrepreneur could be aiming for a certain high quality of education and is prepared to finance the first number of years. The generating of profit is then postponed to a later date.

This scenario starts with Table 16 in which the learner-to-educator ratio for an independent school is 17 learners to every educator. This basic data is found in Appendix C, Table C1, and has been used as a basis throughout the study.

TABLE 16

Learner-to-educator ratio of 17:1 Educator salary at R 10 000. Variable school fees						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
Cost to build per square meter		R1 600	R1 600	R1 600	R1 600	R1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R1 000	R 23 453	R 46 905	R 70 358	R 93 810	R 127 263
	R1 500	R 73 453	R 146 905	R 220 358	R 293 810	R 377 263
	R2 000	R123 453	R 246 905	R 370 358	R 493 810	R 627 263

Table 17 highlights the consequence of the doubling up of the number of educators and thereby effectively halving the learner-to-educator ratio for an independent school from 17 to eight learners per educator.

With a 17:1 learner-to-educator ratio, the entrepreneur was making a healthy profit (R 23 453) at R 1 000 school fees levied on the parents per month. A substantial profit (R 73 453) is forecast with school fees fixed at R 1 500 per learner per month.

In decreasing the learner-to-educator ratio for an independent school to eight learners per educator, the entrepreneur’s previous forecast of R 23 453 profit is turned into an enormous loss

of R 46 547. The entrepreneur can regain profit by increasing the level of school fees by 100% to R 2 000 per learner per month. Table 17 proves that this is only possible if the salaries for educators do not exceed the R 10 000 per educator per month level.

TABLE 17

Learner-to-educator ratio of 8:1 Educator salary at R 10 000 Variable school fees						
Number of educators		13	25	38	50	63
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
Cost to build per square meter		R1 600	R1 600	R1 600	R1 600	R1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R1 000	(R 46 547)	(R 83 095)	(R 129 642)	(R 166 190)	(R 212 737)
	R1 500	R 3 453	R 16 905	R 20 358	R 33 810	R 37 263
	R2 000	R 53 453	R 116 905	R 170 358	R 233 810	R 287 263
	R2 500	R103 453	R 216 905	R 320 358	R 433 810	R 537 263
	R3 000	R153 453	R 316 905	R 519 642	R 633 810	R 787 263

As has been previously stated, an entrepreneur operating an independent school needs to be cautious concerning a high turnover of educational staff. Educators are professional people who need to invest in years of studying and in the acquiring of specific skills, to attain full potential. Because an independent school offers a service, the educators can be viewed as assets for the school. The specific quality, experience or skill that the individual educator has, tends to draw learners to enrol at that particular independent school.

TABLE 18

Learner-to-educator ratio of 8:1 Educator salary at R 15 000 Variable school fees						
Number of educators		13	25	38	50	63
Number of learners		100	200	300	400	500
Educator salary per month		R15 000	R15 000	R15 000	R15 000	R15 000
Cost to build per square meter		R1 600	R1 600	R1 600	R1 600	R1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R1 000	(R 111 547)	(R 208 095)	(R 319 642)	(R 416 190)	(R 527 737)
	R1 500	(R 61 547)	(R 108 095)	(R 169 642)	(R 216 190)	(R 277 737)
	R2 000	(R 11 547)	(R 8 095)	(R 19 642)	(R 16 190)	(R 27 737)
	R2 500	R 38 453	R 91 905	R 130 358	R 183 810	R 222 263
	R3 000	R 88 453	R 191 905	R 329 642	R 383 810	R 472 263

To effectively manage these assets so that they can generate the optimum profit for the entrepreneur, the educators need to be motivated to align personal and professional goals. This alignment can only be done if the entrepreneur can promise future rewards for the individual educator.

Table 18 projects the influence of increasing the salary of the educators to R 15 000 per educator per month. The entrepreneur aiming for a certain quality of education and deferring profits to a later date, must realize that at R 2 000 school fees per month, an envisioned loss of R 11 547 per month will accumulate into an enormous amount of capital that the entrepreneur will be required to invest to keep the school operational.

The alternative is for the entrepreneur to increase the level of school fees to R 2 500 per learner per month to generate R 38 453 profit. A logical consequence of this choice will be that, the entrepreneur will have to re-examine his targeted group or feeder area to ascertain whether this group is capable of affording the level of school fees.

SCENARIO 5

Educator salaries double to R 20 000

The study assumes that in scenario 5, the entrepreneur is confronted with a 100% increase in the salaries for the individual educators. The reasons for the increase in the salary to R 20 000 per educator per month could be:

1. A shortage of educators qualified in certain fields of study, for example, mathematics and natural sciences. This shortage implies that the independent schools will compete against each other and the public schools to attract educators with these qualifications.
2. A general shortage of qualified educators in all fields of study due to natural attrition. More educators are leaving the system, than those entering the educational system. Highly qualified and experienced educators can demand higher salaries.

Table 19 projects the financial viability of fixing the salaries of educators at R 20 000 per educator per month. With school fees determined at R 1 000 per learner per month, the entrepreneur is faced with severe financial losses.

TABLE 19**Educator salaries double to R 20 000. Variable building costs per square meter**

Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R20 000	R20 000	R20 000	R20 000	R20 000
School fees per month		R1 000	R1 000	R1 000	R1 000	R1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R1 200	(R 34 494)	(R 68 988)	(R 103 482)	(R 137 976)	(R 152 469)
	R1 600	(R 36 547)	(R 73 095)	(R 109 642)	(R 146 190)	(R 162 737)
	R2 000	(R 38 601)	(R 77 202)	(R 115 803)	(R 154 404)	(R 173 005)
	R2 400	(R 40 654)	(R 81 309)	(R 121 963)	(R 162 618)	(R 183 272)

Table 19 presents a situation that is unacceptable to the entrepreneur. At these projected losses an independent school is financially unviable. A remedy is needed to rectify the situation and make it possible for the entrepreneur to regain profit. Two potential alternatives are possible:

1. To increase the level of school fees per month.
2. To increase the number of learners for every educator employed by the school.

The first alternative is to increase the level of school fees necessary to facilitate this increase in the salaries of the educators. Table 20 provides information based on a 50% increase in the level of school fees to R 1 500 per learner per month. The more the entrepreneur contains his building cost per square meter, the higher his profit will tend to be.

TABLE 20**Educator salaries double to R 20 000. School fees increase to R 1 500**

Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R20 000	R20 000	R20 000	R20 000	R20 000
School fees per month		R1 500	R1 500	R1 500	R1 500	R1 500
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R1 200	R 15 506	R 31 012	R 46 518	R 62 024	R 97 531
	R1 600	R 13 453	R 26 905	R 40 358	R 53 810	R 87 263
	R2 000	R 11 399	R 22 798	R 34 197	R 45 596	R 76 995
	R2 400	R 9 346	R 18 691	R 28 037	R 37 382	R 66 728

As has been previously stated, the entrepreneur must realise that every increase in school fees will generally mean that a number of parents will be unable to afford this increase out of their current salary. It is therefore not inconceivable that a number of learners will have to leave the independent school and seek suitable education elsewhere. The entrepreneur will have to weigh the consequences of the various increases against each other.

The second alternative to remedy the heavy losses of a salary increase to R 20 000 per educator per month is, to increase the number of learners for every educator employed by the school. Table 21 shows the envisioned profit when the number of learners is increased from 17 to 22 per educator. Even with a learner-to-educator ratio of 22 learners to every educator, the entrepreneur is still making a loss. In comparing Table 19 with Table 21 the study proves that the losses are cut by 50% but the individual amounts as such are still too high to contemplate changing only the learner-to-educator ratio.

TABLE 21

Educator salaries double to R 20 000. Learner-to-educator ratio increases to 22:1

Number of educators		5	9	14	18	29
Number of learners		100	200	300	400	500
Educator salary per month		R20 000	R20 000	R20 000	R20 000	R20 000
School fees per month		R1 000	R1 000	R1 000	R1 000	R1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R1 200	(R 14 494)	(R 8 988)	(R 23 482)	(R 17 976)	(R 152 469)
	R1 600	(R 16 547)	(R 13 095)	(R 29 642)	(R 26 190)	(R 162 737)
	R2 000	(R 18 601)	(R 17 202)	(R 35 803)	(R 34 404)	(R 173 005)
	R2 400	(R 20 654)	(R 21 309)	(R 41 963)	(R 42 618)	(R 183 272)

The entrepreneur will have to increase the level of school fees levied on the parents to R 1 250 per learner per month. Table 22 proves that the entrepreneur is again making profit. To increase the profits, the entrepreneur will have to decrease the building cost per square meter as much as possible.

TABLE 22

Learner-to-educator ratio increases to 22:1 and school fees increase to R 1 250						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R20 000	R20 000	R20 000	R20 000	R20 000
School fees per month		R1 250	R1 250	R1 250	R1 250	R1 250
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R1 200	R 10 506	R 41 012	R 51 518	R 82 024	R 92 531
	R1 600	R 8 453	R 36 905	R 45 358	R 73 810	R 82 263
	R2 000	R 6 399	R 32 798	R 39 197	R 65 596	R 71 995
	R2 400	R 4 346	R 28 691	R 33 037	R 57 382	R 61 728

The problems that crystallise out of the information generated from Table 22 are as follows: Firstly to increase the number of learners from 17 to 22 per educator, will not just materialise overnight. It will take time, and time might be the factor that the entrepreneur might not have. Time can be an expensive luxury because the entrepreneur will have to finance the deficit out of his own capital.

Secondly, even if the entrepreneur does increase his learners per educator from 17 to 22, the independent school is still financially unviable. The entrepreneur still needs to increase the level of school fees to R 1 250 per learner per month.

To conclude scenario 5, with educator salaries doubling up to R 20 000 per educator per month, the entrepreneur will have to increase the number of learners per educator in combination with an increase in the level of school fees to be levied per month to make a profit.

SCENARIO 6

Only 80% of the school fees are collected

In the previous scenarios it was assumed that 100% of all school fees were collected. In scenario 6, the study is assuming that a maximum of 80% of the school fees are collectable. Two diverse reasons are form the basis of this approach:

1. Political environment

The study assumes that, for the purposes of this scenario, independent schools are perceived as schools that only cater to those that can afford to pay the school fees as they are stipulated. Assuming that the majority of the various income groups in South Africa do not have the

possibility of sending their child to an independent school, it is conceivable that in the near future it could become a political item on the agenda of the ruling party that needs to be addressed in order to reflect the demographic reality of South Africa.

An entrepreneur could decide to be act pro-active within this scenario and therefore offer 20% of the enrolled learners the possibility of obtaining a better quality education on the basis of a 100% scholarship. The scholarship is dependent on parents being unable to afford the stipulated school fees, and the learner attaining a pre-determined academic record.

2. Economic environment

From an economic point of view this scenario is also conceivable due to the fact, that as in any business, customers i.e. parents are not always able to comply with the financial obligations that they have taken upon themselves.

TABLE 23

Variable educator salary. Variable school fees collected at 80%

Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R10 000	R10 000	R10 000	R10 000	R10 000
Cost to build per square meter		R1 600	R1 600	R1 600	R1 600	R1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R 750	(R 16 547)	(R 33 095)	(R 49 642)	(R 66 190)	(R 72 737)
	R1 000	R 3 453	R 6 905	R 10 358	R 13 810	R 27 263
	R1 500	R 43 453	R 86 905	R 130 358	R 173 810	R 227 263
Educator salary per month		R15 000	R15 000	R15 000	R15 000	R15 000
School fees per month	R1 000	(R 26 547)	(R 53 095)	(R 79 642)	(R 106 190)	(R 117 737)
	R1 500	R 13 453	R 26 905	R 40 358	R 53 810	R 82 263
	R2 000	R 53 453	R 106 905	R 160 358	R 213 810	R 282 263
Educator salary per month		R20 000	R20 000	R20 000	R20 000	R20 000
School fees per month	R1 500	(R 16 547)	(R 33 095)	(R 49 642)	(R 66 190)	(R 62 737)
	R1 750	R 3 453	R 6 905	R 10 358	R 13 810	R 37 263
	R2 000	R 23 453	R 46 905	R 70 358	R 93 810	R 137 263
Educator salary per month		R25 000	R5 000	R25 000	R25 000	R25 000
School fees per month	R2 000	(R 6 547)	(R 13 095)	(R 19 642)	(R 26 190)	(R 7 737)
	R2 250	R 13 453	R 26 905	R 40 358	R 53 810	R 92 263
	R2 500	R 33 453	R 66 905	R 100 358	R 133 810	R 192 263

A 100% collection of school fees might not always be possible. For the purpose of this scenario, the study assumes that 20% of all possible school fees will have to be written off at the end of the financial year.

When reviewing Appendix C, the data shows that with 100% of the possible school fees to be collected per year, the entrepreneur can generate a healthy profit of R 23 453, given that the parameters of salaries for educators do not exceed the R 10 000 per educator per month and the school fees are fixed at R 1 000 per learner per month.

Table 23 provides information regarding the fact that only 80% of all school fees can be collected within that financial year. As the table projects, with educator fees at R 10 000 and school fees fixed at R 1 000, the entrepreneur sees his profit reduced to R 3 453 per month. The profit generated leaves no room for unforeseen expenses. To create a healthy profit, the entrepreneur will have to increase the level of school fees to R 1 500 per learner per month.

As has been previously stated, the consequences of increasing the amount of school fees levied on the parents by as much as 50%, is something that the entrepreneur will have to weight against introducing the scholarship system and/or making sure that the amount of school fees not collected is kept to the absolute minimum.

4.2.5. General conclusion: Scenarios

The information presented and explained in various scenarios in the previous paragraph, confirms that a general conclusion concerning the scenarios can be drawn. It is financially viable to operate an independent school as a business venture under the following conditions:

1. Learner-to-educator ratio must be increased to a minimum of 22 learners for every educator.
2. Salaries for educators can increase to R 25 000 per month per educator.
3. The amount of school fees that will need to be levied on the parents of the learners will start at R 1 250 per month and can increase to as much as R 2 500 per learner per month.

The above-mentioned general conclusion brings forward the following problems for the entrepreneur wishing to operate an independent school on a financial viable basis:

1. How realistic is it to expect an increase in the number of learners from 17 to 22 per educator within a short period of time in order to minimise the potential financial losses that could arise for the entrepreneur?
2. How realistic is it to expect an increase in the amount of school fees to be accepted by all the parents? Has the entrepreneur any indication as to how many parents will seek suitable education for their child elsewhere? This indication forms an important factor in determining the possible solution that the entrepreneur can apply given changes in the environment and how they will affect the financial viability of operating an independent school as a business venture.

4.3. SUMMARY

A master model consisting of six different appendices has generated the necessary basic data in 24 various tables. These tables contain the influence that the four most important variables have on each other. The various appendices form the basis of the data presented and analysed in various tables throughout this chapter. Assuming a certain number of learners as the basis of every table, the four variables (the number of learners, the amount of school fees, the different salaries of the educators and the renting of building of the infrastructure) are viewed according to a specified learner-to-educator ratio.

The empirical study confirms that it is possible for an entrepreneur to operate an independent school on a financially viable basis. Assuming that certain variables are held constant it is possible to measure the effect that other variables have on the basic financial viability.

The entrepreneur should be aware of the danger of being held at gunpoint by the demands of the learners. The low enrolled numbers have a direct impact on the financial viability. In addition, the educator is an asset to the independent school and should be utilised to draw learners to enrol in the school. The entrepreneur must realise that a delicate management of this asset must lead to future salary increases for the individual educator. A high turnover of educational staff will increase the general perception of academic and managerial problems and will ultimately be detrimental to the financial viability.

The various scenarios sketched in this chapter are meant to give the entrepreneur the proverbial food for thought concerning the possible solutions and the effect that they will have on the financial viability of operating an independent school as a business venture. The various tables presented within the scenarios bring to the forefront the basic problem that the entrepreneur faces: how realistic is it to increase the learners from 17 to 22 per educator, and, does the entrepreneur have any indication concerning the possible number of learners that will seek suitable education elsewhere when the school fees are increased?

4.4. CONCLUSIONS

The empirical study has the following conclusions:

1. It is financially viable for an entrepreneur to operate an independent school.
2. The number of educators that need to be employed in combination with a structured salary scale is the most significant factor contributing to the variable cost of an independent school.
3. According to the analysed data it is more cost effective to build educational infrastructure than to rent suitable infrastructure.
4. To build the necessary educational infrastructure implies that the entrepreneur has access to financial markets.
5. Using the national statistics for an independent school of 17 learners to every one educator, a profit can be generated, given that the most important parameters - salaries for the educators and school fees - do not exceed the R 10 000 per educator per month and school fees are fixed at R 1 000 per learner per month respectively.
6. Assuming conceivable changes in the environment of the school, the entrepreneur should aim to attain a learner-to-educator ratio of 22 learners for every educator. This is needed in order to minimise the potential financial losses that can arise for the entrepreneur.
7. Salaries for educators can increase to R 25 000 per month per educator. The increase can only be financed by increasing the amount of school fees that will need to be levied on the parents of the learners. The school fees will fluctuate between a minimum of R 1 250 per month to as much as R 2 500 per learner per month.
8. Any increase in the amount of school fees per month must be weighted against the potential number of parents that might take their child out of the school and seek suitable

education elsewhere. This potential number of parents forms an important but intangible factor in determining the possible solution that the entrepreneur can apply and what effect it will have on the financial viability.

4.5. RECOMMENDATIONS

For the entrepreneur wishing to operate an independent school on a financially viable basis it will be prudent to bear the following in mind:

1. Market research concerning the geographical area is of vital importance for the financial viability of an independent school. Can the targeted area function as a natural feeder to sustain those number of learners envisioned for the school? The potential supply of learners will have a direct impact on the amount of school fees that the entrepreneur can levy on their parents.
2. Determine, prior to operating an independent school, what academic curriculum package will be offered to the learners: a basic academic curriculum that culminates in a university exemption certificate, or, an extended academic curriculum that offers a variety of possible combinations of various subjects culminating in either a university exemption certificate or a school leaving certificate. The second choice implies an increase in the number of educators that will need to be employed.
3. The entrepreneur must therefore calculate whether it is financially viable to enlarge the various subject choices offered to the learners. Is there a significant increase in the profit based on the increased number of enrolled learners versus the increased cost of salaries for the employment of additional educators?
4. The ideal situation is one of win-win for all three concerned parties, namely: the learners, the educators and the entrepreneur. Assuming that a win-win situation is not possible for all parties concerned, which party will have to be content with less?

a.) The learners

A high turnover of learners enhances the negative image of the school, leading to a lower quality of learners.

b.) The educators

A high turnover of educators enhances the perception of low educational standards, or dissatisfaction with conditions of employment.

c.) The entrepreneur

Much initial capital will need to be invested in the independent school as a business venture. The generating of profit will have to be deferred to a later date.

5. Educators should be viewed as an asset. The quality of their knowledge and/or skills draws learners to an independent school. It is important for the entrepreneur to manage this asset optimally to such an extent that the highest return on equity is attained per month. Assets need to be appreciated regularly and educators need to be motivated to keep the standard of their knowledge and skill as high as possible.
6. Salaries of educators should be market related. The entrepreneur must compare the salaries with those offered by other independent schools and not with those paid in public schools. Educators in public schools receive benefits on top of their salaries: allowances for housing, pension and medical aid schemes. Educators in independent schools do not receive these benefits. Furthermore, it is the other independent schools that draw on the discontent of educators in luring them to their school, not the public schools.

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APPENDIX A

**Tables A1 to A4 concerning:
Fixed learner-to-educator ratio of 17:1, variable educator
salary and variable building costs per square meter**

TABLE A1

Educator salary at R 10 000. Variable building costs per square meter						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 10 000	R 10 000	R 10 000	R 10 000	R 10 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R 1 200	R 25 506	R 51 012	R 76 518	R 102 024	R 137 531
	R 1 600	R 23 453	R 46 905	R 70 358	R 93 810	R 127 263
	R 2 000	R 21 399	R 42 798	R 64 197	R 85 596	R 116 995
	R 2 400	R 19 346	R 38 691	R 58 037	R 77 382	R 106 728

TABLE A2

Educator salary at R 15 000. Variable building costs per square meter						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 15 000	R 15 000	R 15 000	R 15 000	R 15 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R 1 200	(R 4 494)	(R 8 988)	(R 13 482)	(R 17 976)	(R 7 469)
	R 1 600	(R 6 547)	(R 13 095)	(R 19 642)	(R 26 190)	(R 17 737)
	R 2 000	(R 8 601)	(R 17 202)	(R 25 803)	(R 34 404)	(R 28 005)
	R 2 400	(R 10 654)	(R 21 309)	(R 31 963)	(R 42 618)	(R 38 272)

TABLE A3

Educator salary at R 20 000. Variable building costs per square meter						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 20 000	R 20 000	R 20 000	R 20 000	R 20 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R 1 200	(R 34 494)	(R 68 988)	(R 103 482)	(R 137 976)	(R 152 469)
	R 1 600	(R 36 547)	(R 73 095)	(R 109 642)	(R 146 190)	(R 162 737)
	R 2 000	(R 38 601)	(R 77 202)	(R 115 803)	(R 154 404)	(R 173 005)
	R 2 400	(R 40 654)	(R 81 309)	(R 121 963)	(R 162 618)	(R 183 272)

TABLE A4

Educator salary at R 25 000. Variable building costs per square meter						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 25 000	R 25 000	R 25 000	R 25 000	R 25 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R 1 200	(R 64 494)	(R 128 988)	(R 193 482)	(R 257 976)	(R 297 469)
	R 1 600	(R 66 547)	(R 133 095)	(R 199 642)	(R 266 190)	(R 307 737)
	R 2 000	(R 68 601)	(R 137 202)	(R 205 803)	(R 274 404)	(R 318 005)
	R 2 400	(R 70 654)	(R 141 309)	(R 211 963)	(R 282 618)	(R 328 272)

APPENDIX B

**Tables B1 to B4 concerning:
Fixed learner-to-educator ratio of 17:1, variable educator
salary and variable rent per square meter**

TABLE B1

Educator salary at R 10 000. Variable rent per square meter						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 10 000	R 10 000	R 10 000	R 10 000	R 10 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to rent per square meter	R 25	R 22 917	R 45 833	R 68 750	R 91 667	R 124 583
	R 50	R 14 167	R 28 333	R 42 500	R 56 667	R 80 833
	R 75	R 5 417	R 10 833	R 16 250	R 21 667	R 37 083
	R 100	(R 3 333)	(R 6 667)	(R 10 000)	(R 13 333)	(R 6 667)

TABLE B2

Educator salary at R 15 000. Variable rent per square meter						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 15 000	R 15 000	R 15 000	R 15 000	R 15 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to rent per square meter	R 25	(R 7 083)	(R 14 167)	(R 21 250)	(R 28 333)	(R 20 417)
	R 50	(R 15 833)	(R 31 667)	(R 47 500)	(R 63 333)	(R 64 167)
	R 75	(R 24 583)	(R 49 167)	(R 73 750)	(R 98 333)	(R 107 917)
	R 100	(R 33 333)	(R 66 667)	(R 100 000)	(R 133 333)	(R 151 667)

TABLE B3

Educator salary at R 20 000. Variable rent per square meter						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 20 000	R 20 000	R 20 000	R 20 000	R 20 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to rent per square meter	R 25	(R 37 083)	(R 74 167)	(R 111 250)	(R 148 333)	(R 165 417)
	R 50	(R 45 833)	(R 91 667)	(R 137 500)	(R 183 333)	(R 209 167)
	R 75	(R 54 583)	(R 109 167)	(R 163 750)	(R 218 333)	(R 252 917)
	R 100	(R 63 333)	(R 126 667)	(R 190 000)	(R 253 333)	(R 296 667)

TABLE B4

Educator salary at R 25 000. Variable rent per square meter						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 25 000	R 25 000	R 25 000	R 25 000	R 25 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to rent per square meter	R 25	(R 67 083)	(R 134 167)	(R 201 250)	(R 268 333)	(R 310 417)
	R 50	(R 75 833)	(R 151 667)	(R 227 500)	(R 303 333)	(R 354 167)
	R 75	(R 84 583)	(R 169 167)	(R 253 750)	(R 338 333)	(R 397 917)
	R 100	(R 93 333)	(R 186 667)	(R 280 000)	(R 373 333)	(R 441 667)

APPENDIX C

**Tables C1 to C4 concerning:
Fixed learner-to-educator ratio of 17:1, variable educator
salary and variable school fees**

TABLE C1

Educator salary at R 10 000. Variable school fees						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 10 000	R 10 000	R 10 000	R 10 000	R 10 000
Cost to build per square meter		R 1 600	R 1 600	R 1 600	R 1 600	R 1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R 500	(R 26 547)	(R 53 095)	(R 79 642)	(R 106 190)	(R 122 737)
	R 750	(R 1 547)	(R 3 095)	(R 4 642)	(R 6 190)	R 2 263
	R 1 000	R 23 453	R 46 905	R 70 358	R 93 810	R 127 263
	R 1 250	R 48 453	R 96 905	R 145 358	R 193 810	R 252 263
	R 1 500	R 73 453	R 146 905	R 220 358	R 293 810	R 377 263
	R 1 750	R 98 453	R 196 905	R 295 358	R 393 810	R 502 263
	R 2 000	R 123 453	R 246 905	R 370 358	R 493 810	R 627 263
	R 2 250	R 148 453	R 296 905	R 445 358	R 593 810	R 752 263
	R 2 500	R 173 453	R 346 905	R 520 358	R 693 810	R 877 263
	R 2 750	R 198 453	R 396 905	R 595 358	R 793 810	R 1 002 263
	R 3 000	R 223 453	R 446 905	R 670 358	R 893 810	R 1 127 263

TABLE C2

Educator salary at R 15 000. Variable school fees						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 15 000	R 15 000	R 15 000	R 15 000	R 15 000
Cost to build per square meter		R 1 600	R 1 600	R 1 600	R 1 600	R 1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R 500	(R 56 547)	(R 113 095)	(R 169 642)	(R 226 190)	(R 267 737)
	R 750	(R 31 547)	(R 63 095)	(R 94 642)	(R 126 190)	(R 142 737)
	R 1 000	(R 6 547)	(R 13 095)	(R 19 642)	(R 26 190)	(R 17 737)
	R 1 250	R 18 453	R 36 905	R 55 358	R 73 810	R 107 263
	R 1 500	R 43 453	R 86 905	R 130 358	R 173 810	R 232 263
	R 1 750	R 68 453	R 136 905	R 205 358	R 273 810	R 357 263
	R 2 000	R 93 453	R 186 905	R 280 358	R 373 810	R 482 263
	R 2 250	R 118 453	R 236 905	R 355 358	R 473 810	R 607 263
	R 2 500	R 143 453	R 286 905	R 430 358	R 573 810	R 732 263
	R 2 750	R 168 453	R 336 905	R 505 358	R 673 810	R 857 263
	R 3 000	R 193 453	R 386 905	R 629 642	R 773 810	R 982 263

TABLE C3

Educator salary at R 20 000. Variable school fees						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 20 000	R 20 000	R 20 000	R 20 000	R 20 000
Cost to build per square meter		R 1 600	R 1 600	R 1 600	R 1 600	R 1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R 500	(R 86 547)	(R 173 095)	(R 259 642)	(R 346 190)	(R 412 737)
	R 750	(R 61 547)	(R 123 095)	(R 184 642)	(R 246 190)	(R 287 737)
	R 1 000	(R 36 547)	(R 73 095)	(R 109 642)	(R 146 190)	(R 162 737)
	R 1 250	(R 11 547)	(R 23 095)	(R 34 642)	(R 46 190)	(R 37 737)
	R 1 500	R 13 453	R 26 905	R 40 358	R 53 810	R 87 263
	R 1 750	R 38 453	R 76 905	R 115 358	R 153 810	R 212 263
	R 2 000	R 63 453	R 126 905	R 190 358	R 253 810	R 337 263
	R 2 250	R 88 453	R 176 905	R 265 358	R 353 810	R 462 263
	R 2 500	R 113 453	R 226 905	R 340 358	R 453 810	R 587 263
	R 2 750	R 138 453	R 276 905	R 415 358	R 553 810	R 712 263
	R 3 000	R 163 453	R 326 905	R 490 358	R 653 810	R 837 263

TABLE C4

Educator salary at R 25 000. Variable school fees						
Number of educators		6	12	18	24	29
Number of learners		100	200	300	400	500
Educator salary per month		R 25 000	R 25 000	R 25 000	R 25 000	R 25 000
Cost to build per square meter		R 1 600	R 1 600	R 1 600	R 1 600	R 1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R 500	(R 116 547)	(R 233 095)	(R 349 642)	(R 466 190)	(R 557 737)
	R 750	(R 91 547)	(R 183 095)	(R 274 642)	(R 366 190)	(R 432 737)
	R 1 000	(R 66 547)	(R 133 095)	(R 199 642)	(R 266 190)	(R 307 737)
	R 1 250	(R 41 547)	(R 83 095)	(R 124 642)	(R 166 190)	(R 182 737)
	R 1 500	(R 16 547)	(R 33 095)	(R 49 642)	(R 66 190)	(R 57 737)
	R 1 750	R 8 453	R 16 905	R 25 358	R 33 810	R 67 263
	R 2 000	R 33 453	R 66 905	R 100 358	R 133 810	R 192 263
	R 2 250	R 58 453	R 116 905	R 175 358	R 233 810	R 317 263
	R 2 500	R 83 453	R 166 905	R 250 358	R 333 810	R 442 263
	R 2 750	R 108 453	R 216 905	R 325 358	R 433 810	R 567 263
	R 3 000	R 133 453	R 266 905	R 400 358	R 533 810	R 692 263

APPENDIX D

**Tables D1 to D4 concerning:
Fixed learner-to-educator ratio of 22:1, variable educator
salary and variable building costs per square meter**

TABLE D1

Educator salary at R 10 000. Variable building costs per square meter						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 10 000	R 10 000	R 10 000	R 10 000	R 10 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R 1 200	R 35 506	R 81 012	R 116 518	R 162 024	R 197 531
	R 1 600	R 33 453	R 76 905	R 110 358	R 153 810	R 187 263
	R 2 000	R 31 399	R 72 798	R 104 197	R 145 596	R 176 995
	R 2 400	R 29 346	R 68 691	R 98 037	R 137 382	R 166 728

TABLE D2

Educator salary at R 15 000. Variable building costs per square meter						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 15 000	R 15 000	R 15 000	R 15 000	R 15 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R 1 200	R 10 506	R 36 012	R 46 518	R 72 024	R 82 531
	R 1 600	R 8 453	R 31 905	R 40 358	R 63 810	R 72 263
	R 2 000	R 6 399	R 27 798	R 34 197	R 55 596	R 61 995
	R 2 400	R 4 346	R 23 691	R 28 037	R 47 382	R 51 728

TABLE D3

Educator salary at R 20 000. Variable building costs per square meter						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 20 000	R 20 000	R 20 000	R 20 000	R 20 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R 1 200	(R 14 494)	(R 8 988)	(R 23 482)	(R 17 976)	(R 32 469)
	R 1 600	(R 16 547)	(R 13 095)	(R 29 642)	(R 26 190)	(R 42 737)
	R 2 000	(R 18 601)	(R 17 202)	(R 35 803)	(R 34 404)	(R 53 005)
	R 2 400	(R 20 654)	(R 21 309)	(R 41 963)	(R 42 618)	(R 63 272)

TABLE D4

Educator salary at R 25 000. Variable building costs per square meter						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 25 000	R 25 000	R 25 000	R 25 000	R 25 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to build per square meter	R 1 200	(R 39 494)	(R 53 988)	(R 93 482)	(R 107 976)	(R 147 469)
	R 1 600	(R 41 547)	(R 58 095)	(R 99 642)	(R 116 190)	(R 157 737)
	R 2 000	(R 43 601)	(R 62 202)	(R 105 803)	(R 124 404)	(R 168 005)
	R 2 400	(R 45 654)	(R 66 309)	(R 111 963)	(R 132 618)	(R 178 272)

APPENDIX E

**Tables E1 to E4 concerning:
Fixed learner-to-educator ratio of 22:1, variable educator
salary and variable rent per square meter**

TABLE E1

Educator salary at R 10 000. Variable rent per square meter						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 10 000	R 10 000	R 10 000	R 10 000	R 10 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to rent per square meter	R 25	R 32 917	R 75 833	R 108 750	R 151 667	R 184 583
	R 50	R 24 167	R 58 333	R 82 500	R 116 667	R 140 833
	R 75	R 15 417	R 40 833	R 56 250	R 81 667	R 97 083
	R 100	R 6 667	R 23 333	R 30 000	R 46 667	R 53 333

TABLE E2

Educator salary at R 15 000. Variable rent per square meter						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 15 000	R 15 000	R 15 000	R 15 000	R 15 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to rent per square meter	R 25	R 7 917	R 30 833	R 38 750	R 61 667	R 69 583
	R 50	(R 833)	R 13 333	R 12 500	R 26 667	R 25 833
	R 75	(R 9 583)	(R 4 167)	(R 13 750)	(R 8 333)	(R 17 917)
	R 100	(R 18 333)	(R 21 667)	(R 40 000)	(R 43 333)	(R 61 667)

TABLE E3

Educator salary at R 20 000. Variable rent per square meter						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 20 000	R 20 000	R 20 000	R 20 000	R 20 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to rent per square meter	R 25	(R 17 083)	(R 14 167)	(R 31 250)	(R 28 333)	(R 45 417)
	R 50	(R 25 833)	(R 31 667)	(R 57 500)	(R 63 333)	(R 89 167)
	R 75	(R 34 583)	(R 49 167)	(R 83 750)	(R 98 333)	(R 132 917)
	R 100	(R 43 333)	(R 66 667)	(R 110 000)	(R 133 333)	(R 176 667)

TABLE E4

Educator salary at R 25 000. Variable rent per square meter						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 25 000	R 25 000	R 25 000	R 25 000	R 25 000
School fees per month		R 1 000	R 1 000	R 1 000	R 1 000	R 1 000
Floor space in square meters		350	700	1 050	1 400	1 750
Cost to rent per square meter	R 25	(R 42 083)	(R 59 167)	(R 101 250)	(R 118 333)	(R 160 417)
	R 50	(R 50 833)	(R 76 667)	(R 127 500)	(R 153 333)	(R 204 167)
	R 75	(R 59 583)	(R 94 167)	(R 153 750)	(R 188 333)	(R 247 917)
	R 100	(R 68 333)	(R 111 667)	(R 180 000)	(R 223 333)	(R 291 667)

APPENDIX F

**Tables F1 to F4 concerning:
Fixed learner-to-educator ratio of 22:1, variable educator
salary and variable school fees**

TABLE F1

Educator salary at R 10 000. Variable school fees						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 10 000	R 10 000	R 10 000	R 10 000	R 10 000
Cost to build per square meter		R 1 600	R 1 600	R 1 600	R 1 600	R 1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R 500	(R 16 547)	(R 23 095)	(R 39 642)	(R 46 190)	(R 62 737)
	R 750	R 8 453	R 26 905	R 35 358	R 53 810	R 62 263
	R 1 000	R 33 453	R 76 905	R 110 358	R 153 810	R 187 263
	R 1 250	R 58 453	R 126 905	R 185 358	R 253 810	R 312 263
	R 1 500	R 83 453	R 176 905	R 260 358	R 353 810	R 437 263
	R 1 750	R 108 453	R 226 905	R 335 358	R 453 810	R 562 263
	R 2 000	R 133 453	R 276 905	R 410 358	R 553 810	R 687 263
	R 2 250	R 158 453	R 326 905	R 485 358	R 653 810	R 812 263
	R 2 500	R 183 453	R 376 905	R 560 358	R 753 810	R 937 263
	R 2 750	R 208 453	R 426 905	R 635 358	R 853 810	R 1 062 263
	R 3 000	R 233 453	R 476 905	R 710 358	R 953 810	R 1 187 263

TABLE F2

Educator salary at R 15 000. Variable school fees						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 15 000	R 15 000	R 15 000	R 15 000	R 15 000
Cost to build per square meter		R 1 600	R 1 600	R 1 600	R 1 600	R 1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R 500	(R 41 547)	(R 68 095)	(R 109 642)	(R 136 190)	(R 177 737)
	R 750	(R 16 547)	(R 18 095)	(R 34 642)	(R 36 190)	(R 52 737)
	R 1 000	R 8 453	R 31 905	R 40 358	R 63 810	R 72 263
	R 1 250	R 33 453	R 81 905	R 115 358	R 163 810	R 197 263
	R 1 500	R 58 453	R 131 905	R 190 358	R 263 810	R 322 263
	R 1 750	R 83 453	R 181 905	R 265 358	R 363 810	R 447 263
	R 2 000	R 108 453	R 231 905	R 340 358	R 463 810	R 572 263
	R 2 250	R 133 453	R 281 905	R 415 358	R 563 810	R 697 263
	R 2 500	R 158 453	R 331 905	R 490 358	R 663 810	R 822 263
	R 2 750	R 183 453	R 381 905	R 565 358	R 763 810	R 947 263
	R 3 000	R 208 453	R 431 905	R 640 358	R 863 810	R 1 072 263

TABLE F3

Educator salary at R 20 000. Variable school fees						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 20 000	R 20 000	R 20 000	R 20 000	R 20 000
Cost to build per square meter		R 1 600	R 1 600	R 1 600	R 1 600	R 1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R 500	(R 66 547)	(R 113 095)	(R 179 642)	(R 226 190)	(R 292 737)
	R 750	(R 41 547)	(R 63 095)	(R 104 642)	(R 126 190)	(R 167 737)
	R 1 000	(R 16 547)	(R 13 095)	(R 29 642)	(R 26 190)	(R 42 737)
	R 1 250	R 8 453	R 36 905	R 45 358	R 73 810	R 82 263
	R 1 500	R 33 453	R 86 905	R 120 358	R 173 810	R 207 263
	R 1 750	R 58 453	R 136 905	R 195 358	R 273 810	R 332 263
	R 2 000	R 83 453	R 186 905	R 270 358	R 373 810	R 457 263
	R 2 250	R 108 453	R 236 905	R 345 358	R 473 810	R 582 263
	R 2 500	R 133 453	R 286 905	R 420 358	R 573 810	R 707 263
	R 2 750	R 158 453	R 336 905	R 495 358	R 673 810	R 832 263
	R 3 000	R 183 453	R 386 905	R 570 358	R 773 810	R 957 263

TABLE F4

Educator salary at R 25 000. Variable school fees						
Number of educators		5	9	14	18	23
Number of learners		100	200	300	400	500
Educator salary per month		R 25 000	R 25 000	R 25 000	R 25 000	R 25 000
Cost to build per square meter		R 1 600	R 1 600	R 1 600	R 1 600	R 1 600
Floor space in square meters		350	700	1 050	1 400	1 750
School fees per month	R 500	(R 91 547)	(R 158 095)	(R 249 642)	(R 316 190)	(R 407 737)
	R 750	(R 66 547)	(R 108 095)	(R 174 642)	(R 216 190)	(R 282 737)
	R 1 000	(R 41 547)	(R 58 095)	(R 99 642)	(R 116 190)	(R 157 737)
	R 1 250	(R 16 547)	(R 8 095)	(R 24 642)	(R 16 190)	(R 32 737)
	R 1 500	R 8 453	R 41 905	R 50 358	R 83 810	R 92 263
	R 1 750	R 33 453	R 91 905	R 125 358	R 183 810	R 217 263
	R 2 000	R 58 453	R 141 905	R 200 358	R 283 810	R 342 263
	R 2 250	R 83 453	R 191 905	R 275 358	R 383 810	R 467 263
	R 2 500	R 108 453	R 241 905	R 350 358	R 483 810	R 592 263
	R 2 750	R 133 453	R 291 905	R 425 358	R 583 810	R 717 263
	R 3 000	R 158 453	R 374 761	R 500 358	R 683 810	R 842 263