

# THE APPLICATION OF AN INTEGRATED DEMONSTRATION AND TRAINING BUSINESS INCUBATOR TO ENHANCE THE START-UP OF ENTREPRENEURIAL SMALL BUSINESSES IN RURAL COMMUNITIES

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## SUMMARY

In many less developed and low-income countries, a substantial proportion of the population lives in rural areas where poverty presents a real challenge. Rural inhabitants often migrate to towns and cities in search of improved livelihoods, but end up being unemployed due to low education and skills levels. This adds to a growing portion of peri-urban dwellers trying to sustain a livelihood with limited means and in turn this creates communities in distress who live in poverty and experience a low quality of life. It is widely acknowledged that entrepreneurship and small business development can play an important role in the economic growth and social development of such communities. This paper reports on some issues relating to entrepreneurship training and small business development in a disadvantaged rural community in South Africa. Action research methodologies are employed to investigate if the conventional business incubation concept can be adapted and applied within the context of a disadvantaged rural community in order to enhance the start-up of entrepreneurial SME's. The use of a "demonstration and training business incubator" (DTBI) is explained, describing how entrepreneurship- and business training is integrated with hands-on demonstrations and actual participation in a small business operation in incubation. Preliminary results indicate that the DTBI can be applied with success in a rural setting and contribute to SME start-up through increased learning, entrepreneurial capacity development and exposure to the profitable operation and management of a business in incubation.

**Keywords:** entrepreneurship, small business, incubator, action research, rural community

## INTRODUCTION

In South Africa, a large proportion of the rural and peri-urban inhabitants has a limited education, lives in poverty, and generally experiences a low quality of life (UNDP, 2003; May, 1998). Smallbone, North, Baldock & Ekanem (2002) state that poverty and low levels

of education present real barriers to development and should be addressed before the economy is to thrive. It is widely accepted and acknowledged that entrepreneurship and small business development plays an important role in economic growth and social development of countries across the world (Drucker, 1995; Gorman & Hanlon, 1997; Lalkaka, 1997; OECD, 1998; GEM, 2002). However, a study by Hübner (2000) on SME development in transition economies refers to aspects such as limited own resources, lack of market economy experience, limited possibilities to identify business opportunities and a general lack of understanding about modern business as barriers to entrepreneurship and SME development. In developing countries 37 % of existing entrepreneurs fall in the category of necessity entrepreneurs (GEM, 2002) and opportunities to progress beyond subsistence levels are remote, mainly due to limited education and entrepreneurial skills (Gibb, 1987; Rosa, Jayatilika & Kodithuwakku, 1997). Research shows however that entrepreneurship education and training can play an important role in enhancing the entrepreneurial propensity of individuals (Rabbior, 1990; Jack & Anderson, 1999; GEM, 2002).

This paper draws from experiences and results of a community outreach project in South Africa, jointly managed by an academic institution and a provincial government department. The purpose of the outreach project is to benefit communities in the greater Southern Cape area of South Africa by establishing and sustaining outreach programmes in the field of entrepreneurship education, rural SME development and technology transfer. Simultaneously, an attempt is made to develop the necessary institutional, staff and student capacities and capabilities of the academic institution in the field of community outreach.

The paper focuses specifically on the application of business incubation concepts in the context of a rural community. The background to the project is discussed first to provide some context, followed by a brief overview of the role of incubators in enterprise development. An explanation of the integrated demonstration and training business incubator (DTBI) and it's application in the rural context is provided, followed by preliminary findings and experiences based on action research methodology. The paper concludes with a critical reflection on the application of the DTBI.

## **Contextual background**

In South Africa, 45 % of the population lives in rural areas where education levels are generally low and poverty presents a real challenge; over 20 % of the total population have no formal education and almost half (48.5%) the population of South Africa is living below the current poverty line of R 354 (US\$ 50) per month (UNDP, 2003; May, 1998). Often, the only means of income is from government pensions and welfare payments. Many rural inhabitants migrate to towns and cities in search of improved livelihoods, but end up being unemployed due to low education and skills levels (GEM 2001; GEM 2002). This adds to the growing portion of peri-urban dwellers trying to sustain a livelihood with limited means. This in turn creates communities in distress, living in poverty, experiencing food insecurity and a low quality of life.

Agriculture forms a significant sector in the South African rural economy, and has the potential to contribute to reducing social and economic inequalities by increasing the income and employment opportunities of the poor, improve food security and aid the conservation of agricultural resources through sustainable resource use (Oosthuizen, 1998; Kydd, Dorward, Morrison & Cadisch, 2002; DFID, 2003).

The initial focus of the outreach programme is to provide educational courses for rural and peri-urban agricultural communities to encourage enterprise formation and enhance the entrepreneurial, business and marketing skills of existing agro-based entrepreneurs. In conjunction with the provincial Department of Agriculture of the Western Cape, the first community targeted for outreach was the land reform beneficiaries of the local Thembaletu agricultural community in the immediate vicinity of George. The main question was to determine an appropriate means to facilitate enterprise development and entrepreneurship education within the particular community context. As such, business incubation proved to be an option to investigate further.

## Business incubation systems

Business incubation systems are reported in various studies as being innovative instruments to support entrepreneurship development and enterprise creation (Smilor & Gill, 1986; Bearnse, 1993; Lalkaka, 1997; Erikson & Gjellan, 2003). Business incubation is generally regarded as a process of enterprise development where entrepreneurs with young enterprises are assisted and nurtured under controlled conditions to survive and grow during the vulnerable start-up phase (Smilor & Gill, 1986; Adkins, Sherman & Yost, 2001; NBIA, 2003). The main distinguishing characteristics of incubators include: providing managed work space for carefully selected start-up businesses, shared facilities, hands-on management assistance, an entrepreneurial learning environment, access to financing, exposure to business and technical support needs and access to mentors and investors (Bearnse, 1993; Lalkaka, 1997; Schuyler, 1997; Cassim, 2001; UKBI, 2003). The real benefits are flourishing businesses that stimulate economic activity, equity growth and employment growth across the entire supply chain network (Greenwood, 1996; Matlock, 1996). A secondary effect of the incubator is the catalytic role it plays in developing entrepreneurial competencies and experiences. Entrepreneurship experience is regarded by Hart, Stevenson and Dial (1995) as a unique knowledge asset, which can be employed in the start-up of a business venture just like other business assets.

Various types of incubators, each with specific characteristics, objectives, services and approaches exist in practice (Sherman & Chappel, 1998; Lalkaka, 1997; ANZABI, 2003). In a seven-country study, Lalkaka and Bishop (1996) identify eight types of incubators, each with various objectives. Cassim (2001) provides a typology of South African incubators, confirming varying objectives for different types of incubators. A summary of the generic objectives of incubators is given in Table 1.

**Table 1. Generic objectives of business incubators**

<i>primary objectives</i>	<i>secondary objectives</i>
venture creation and growth	empowerment
enhancing entrepreneurial culture	diversify economic base of a region
employment creation	utilize existing/vacant facilities
economic development	generate income for the incubator
innovation	create goodwill in the community
commercialization of technology	technology transfer
	institutional collaboration

*Source:* Adapted from Allen & McLuskey, 1990; Bearnse, 1993; Martin, 1997; Cassim, 2001

Although many of the above objectives are not easily quantifiable or measurable, the performance and impact of incubators can be assessed against their missions and objectives (Bearnse, 1993; Lalkaka, 1997; Cassim 2001).

Lalkaka (1997) observes an increasing need for tailoring incubation programmes for specific needs and opportunities, blending advanced technologies with traditional processes to cater for early-stage entrepreneurs in rural settings. Although business incubation is widely accepted as a means to facilitate enterprise formation and entrepreneurship development, it is however not clear to what extent it can be applied in the particular context of a disadvantaged rural community and whether it will have the desired effect. In addition to incubation being a largely unknown concept in general, rural communities have unique characteristics, including poverty, a lack of infrastructure, low education, subsistence entrepreneurs, etc. This leads to the following research question:

**RQ 1:** *Can conventional business incubation systems be adapted and successfully applied within the context of a disadvantaged rural community?*

## RESEARCH METHODOLOGY AND DESIGN

The study was designed to investigate two issues: firstly, whether a conventional business incubation system can be *adapted* to fit the rural context, and secondly, to determine if such an adapted incubator can be successfully *applied* in a rural setting.

The study was conducted at a site currently occupied by a Trust of thirty indigenous smallholder farmers. A vacant outbuilding has been used as a demonstration and training business incubator (DTBI) facility. The DTBI was designed as follows: a small broiler rearing operation of 200 chickens was established as a business in incubation. Five people from the community were able to “buy” into the business as “trainee entrepreneurs” by each paying R 120 (US\$ 17). This entitled them to own 40 broiler chickens each in this operation and allowed them to participate in a training programme. The academic institution provided seed money in the form of an interest-free loan to the business, to be paid back at the end of each rearing cycle of eight weeks. The trainee entrepreneurs managed the operation as a team. At the end of the rearing cycle, each entrepreneur was to sell their birds and pay back their portion of the loan (the actual costs incurred, minus the initial fee of R 120). Entrepreneurs had the option of retaining their profits or to utilize it for re-investing in a new cycle. A maximum of five cycles (8 weeks each) is allowed before the entrepreneur should graduate from the incubator. During each cycle, hands-on demonstration and training took place. The main focus was on business and entrepreneurship training, practically simulating the whole business process in each cycle (from start-up when the day-old chickens are ordered, the day-to-day management of the operation, the marketing of the mature birds, assessing the profitability of the venture and finally, at the end of each 8-week cycle the “liquidation” of the operation when the seed money is to be repaid).

To address the question as to whether a business incubation system can be *adapted* to the rural context, an assessment was made of the extent to which the DTBI matched the characteristics and requirements of conventional incubators. To determine the successful *application* of the incubator concept in a rural setting, an assessment was made on three levels: firstly at the level of the incubator, determining the extent to which the DTBI satisfies the generic objectives of conventional incubator systems; secondly, at the level of the business in incubation, to assess the financial viability of the broiler operation; thirdly, at the level of the participants, to evaluate the entrepreneurial learning of the entrepreneurs.

The DTBI started with the broiler rearing operation in February 2003. To allow for community participation and flexibility in learning from the experiences as the project developed, action research methodologies were applied. Data collection was based on recording information extracted from informal discussions with community members, physical observation and the experiences and perceptions of the researchers during the project.

Dick (2000) describes action research as employing a family of research methodologies, having the dual aim of action and research: action is to bring about change in some situation; research is to increase the understanding of the researcher or the client. The two concepts work in unity in that action informs understanding and understanding assists in action. Action research involves a cyclic approach to investigation, starting with planning, followed by action, observation and then reflection or critically reviewing the results for input in the next cycle (Kemmis & McTaggart, 1988). Due to the cyclic nature and responsiveness of action research, it is often difficult to determine beforehand where an intervention will end and therefore precise research questions at the beginning of the project may be restrictive to the research. Action research therefore tends to be more qualitative in nature (Dick, 2000). The responsiveness of action research allows it to be used to develop new hypotheses as the research progresses, capitalizing on the understanding developed in earlier stages. Early cycles of investigation are used to decide how to conduct later cycles. In later cycles, the results or interpretations of early cycles can be challenged, tested or refined. Action research methodology is regarded as particularly suitable for investigative research and lends itself to be used in community settings (Smallbone *et al.*).

## RESULTS AND DISCUSSION

Four 8-week cycles of broiler rearing have been completed in the DTBI. To assess if the business incubation system can be *adapted* to the rural context, the DTBI characteristics have been compared with those of conventional incubators. The extent to which the DTBI conformed to the characteristics of conventional incubators is presented in Table 2.

**Table 2. Extent to which the DTBI fit the distinguishing characteristics of conventional incubators**

Characteristics of conventional incubators	DTBI characteristics	Fit
<b>1. Provides managed work space and shared facilities</b>	1. A shared and managed work space is facilitated within easy reach of the community	+
<b>2. Start-up businesses are carefully selected</b>	2. Entrepreneurs not selected ; incubator prescribes type of business (broiler)	-
<b>3. Hands-on management assistance</b>	3. Management assistance is provided by academic institution and extension officer	+
<b>4. Entrepreneurial learning environment</b>	4. An environment conducive to experimentation is maintained; mistakes are allowed; training in entrepreneurship is provided	+
<b>5. Access to financing</b>	5. Seed money is provided for each cycle; no other access to financing is provided	+
<b>6. Exposure to business and technical support needs</b>	6. Business and technical support is given throughout each cycle by academic institution and extension officer of government Department of Agriculture	+
<b>7. Access to mentors</b>	7. Academic institution and extension officer initially	+

8. Access to investors	provide mentorship 8. No access to investors provided	-
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- + DTBI characteristics fit requirements/characteristics of conventional incubator to a higher degree
- DTBI characteristics fit requirements/characteristics of conventional incubator to a lesser degree

With the exception of two characteristics, the DTBI fits the majority of the requirements and characteristics of conventional incubators. One of the most important characteristics of the incubator system, the careful selection of start-up businesses (and entrepreneurs), has not been practiced by the DTBI. The DTBI provides access to any individual or group, even without a business idea. The reason is that, in the early stage of the project, more emphasis is placed on the *training and development* of a *potential* entrepreneur, rather than on the *existing* entrepreneur's *business development*. At a later stage, when entrepreneurs have graduated from the incubator and have started a business, the focus could be broadened.

The other characteristic not present in the DTBI is the provision of access to investors. This is again due to the focus of the DTBI on training and development rather than on the start-up business itself. However, indirectly, the DTBI may enhance the potential of the entrepreneur to attract investment. With increased entrepreneurial and business management skills, the potential entrepreneur graduating from the incubator may have a better chance for obtaining financing, either through the traditional means of obtaining loan capital, or attracting venture capital.

The DTBI therefore seems to be appropriately adapted and suitable as a means to facilitate enterprise formation and entrepreneurship development in a rural setting.

To determine the extent to which the *application* of the incubator concept in a rural setting was successful, an assessment was first made at the level of the incubator, comparing the outcomes achieved by the DTBI against generic objectives of conventional incubator systems (Table 3). It is interesting to note that almost all the secondary objectives of conventional incubators are already met by the DTBI in this early stage, while very few of the primary objectives are met. It might be that the primary objectives are more long term in nature (venture creation, economic development, technology commercialization, etc.) and it is too early to expect the primary objectives to be achieved. The achievement of secondary objectives over a relatively short time span is significant, especially when considering the nature of these secondary objectives with regard to community development. Most of these secondary objectives seem to be necessary prerequisites for providing a solid base from which to operate when engaging in the socio-economic development of a region (*viz.* community goodwill, institutional collaboration, utilization of existing/vacant infrastructure, empowerment, diversification of the economic base, etc.). The application of the DTBI in the current context seems to be a possible way to contribute to the development of entrepreneurial capacity in individuals. Only when assessed over a longer time period, the DTBI will reveal its potential value to contribute to the primary objectives of enhancing enterprise formation, employment creation and economic development in disadvantaged rural communities.

The second level on which the application of the DTBI in the rural context can be evaluated is to assess the financial viability of the business in incubation. Table 4 depicts some basic economic and financial results of the broiler rearing operation over the four cycles.

**Table 3. Extent to which observed DTBI outcomes fit the generic objectives of conventional incubators**

Generic objectives of conventional incubators	Observed DTBI outcomes	Fit
<i>primary objectives</i>		
<b>1. venture creation and growth</b>	1. no outcome observed yet	0
<b>2. enhancing entrepreneurial culture</b>	2. trainees display increased self-confidence, increased awareness of opportunities, creative adaptation of production, marketing and financial processes, etc.	+
<b>3. employment creation</b>	3. limited use of community members or family members in the marketing process	+
<b>4. economic development</b>	4. no outcome observed yet	0
<b>5. innovation</b>	5. no outcome observed yet	0
<b>6. technology commercialization</b>	6. no outcome observed yet	0
<i>secondary objectives</i>		
<b>1. empowerment</b>	1. increased self-confidence, financial gain, training in business knowledge and skills etc.	+
<b>2. diversify economic base</b>	2. introduction of broiler production in area diversify traditional farming as well as retailing	+
<b>3. utilize existing facilities</b>	3. utilize vacant infrastructure	0
<b>4. generate incubator income</b>	4. no outcome yet	+
<b>5. create goodwill in the community</b>	5. goodwill was definitely created between community and academic institution	+
<b>6. technology transfer</b>	6. technology transfer is both on the education & training level as well as the scientific level with advanced broiler genetics and feed technology	+
<b>7. institutional collaboration</b>	7. collaboration is between academic institution, government, local business and NGO's	+

- + DTBI characteristics fit requirements/characteristics of conventional incubator to a higher degree
- DTBI characteristics fit requirements/characteristics of conventional incubator to a lesser degree
- 0 no outcome yet

Table 4 indicates that there is a positive trend in the majority of the variables measured, indicating efficiency in the performance of the business in incubation. Although sales figures moved sideways in the second cycle (due to mortalities), net income as well as the margin per bird sold increased sharply towards the third cycle. The slight decline in margin in the fourth cycle is normal as feed consumption and costs increase during winter months (June – August). Costs decreased gradually, mainly due to decreased feed costs, which was in large the result of birds being marketed at a younger age. The sharp decline in transport costs from cycle 1 was a direct effect of increased management capabilities and business understanding. The percentage cash inflow exhibits a sharp increase from the first to the second cycle. This was due to adjustments to the debtor policy and the marketing strategy induced by learning derived from the initial production cycles.

**Table 4. Selected economic and financial results of the broiler rearing operation**

Item	Cycle 1		Cycle 2		Cycle 3		Cycle 4	
	Value ZAR	Value *US \$	Value ZAR	Value *US \$	Value ZAR	Value *US \$	Value ZAR	Value *US \$
Sales	R 5 218	\$ 745	R 4 059	\$ 580	R 5 885	\$ 841	R 6 265	\$ 895
Total cost	R 4 766	\$ 681	R 3 792	\$ 542	R 3 324	\$ 475	R 4 092	\$ 585
Net income	R 452	<b>\$ 65</b>	R 267	<b>\$ 38</b>	R 2 561	<b>\$ 366</b>	R 2 173	<b>\$ 310</b>
Cost per bird sold	R 25.22	\$ 3.60	R 27.48	\$ 3.93	R 18.67	\$ 2.67	R 22.24	\$ 3.18
Margin per bird	R 2.39	<b>\$ 0.34</b>	R 1.93	<b>\$ 0.28</b>	R 14.39	<b>\$ 2.06</b>	R 11.81	<b>\$ 1.69</b>

<b>Selected costs:</b>								
- Feed cost	R 3 492	\$ 499	R 2 969	\$ 424	R 2 531	\$ 362	R 3 055	\$ 436
- Transport	R 465	<b>\$ 66</b>	R 80	<b>\$ 11</b>	R 40	<b>\$ 6</b>	R 80	<b>\$ 11</b>
Age at sale (weeks)	9		7		6		6.5	
Birds sold:	189		138		178		184	
- live birds	136		44		0		10	
- slaughter	53		94		178		174	
Feed consumption (kg)	1300		1100		1000		1200	
Cash inflow	R 2 929	\$ 418	R 3 630	\$ 519	R 3 220	\$ 219	R 1 605	\$ 229
Cash flow %	61.46%		95.73%		46.03 %		39.22 %	

\* Exchange rate (R/\$) = R 7. 00

However, from the second cycle onwards, a steady decrease in cash flow was experienced. This trend resembles a pattern characteristic of the dynamics often encountered in rural disadvantaged communities and revolves *inter alia* around issues such as community purchasing power, buyer behavior and migration of poor people. Food is often purchased with the promise to pay at a later stage when (if) money becomes available. If money is not available, the payment period is merely extended. In some cases people might migrate from the area in search of a better livelihood, before it becomes possible to settle outstanding debts. The combined effect usually results in cash deficiencies for such an enterprise, affecting further growth and expansion of the venture.

When assessing the financial viability of the broiler rearing operation, the early indication is that it is possible to incubate a business successfully within the DTBI milieu. The business showed economic viability and the capacity to generate profits. However, if cash flow and debtors are not managed properly, the business may eventually have to consider closing down.

A third level on which the successful application of the DTBI in the rural context can be measured is to assess the learning of the trainee entrepreneurs. From Table 4 it is evident that performance of the operation increased progressively, indicating positive learning curve effects. Five key incidents observed from the actions of the trainee entrepreneurs are indicative of entrepreneurial learning that has taken place:

- *incident 1:* from an interpretation of cost and profit figures, the production cycle was shortened to 7 weeks in the second cycle and 6 weeks in the next; the recording of production and sales data was initiated for improved management decision making.
- *incident 2:* changing the transport contractor and utilizing freight capacity optimally by ordering more feed units less frequently led to decreased transport cost
- *incident 3:* proportionately less live birds and more slaughtered birds (some cooked) were sold, thereby adding value to the primary product
- *incident 4:* the production cycle was synchronized with pension and welfare payouts in the community in order to have marketable birds ready when customers

had money available, thereby securing a larger target market, and simultaneously reducing potential debtors

- *incident 5:* one entrepreneur initiated the replication of the DTBI at another site in another community, realizing the potential contribution towards reduction of poverty in the community

When assessing the few critical incidents reported above, quite a number of entrepreneurial-like attitudes and behaviors are recognized, such as opportunity recognition, initiative, creativity, ability to adapt and change, intimate knowledge of customer needs, value creation, coping with ambiguity / uncertainty (Timmons, 1999; Hornaday, in Kuratko & Hodgetts, 1995; Carland, Hoy, Boulton & Carland, 1984) and much more. Through demonstration, training and hands-on participation in a supported learning environment, participants were able to develop entrepreneurial capacity and a range of entrepreneurial skills, all necessary pre-requisites for enhancing the start-up of entrepreneurial SME's.

## Critical reflection

An assessment of the DTBI as a means to facilitate enterprise formation and entrepreneurial development shows positive outcomes. The DTBI is different from conventional incubators in some important ways. It focuses more on entrepreneurship capacity development of teams of potential entrepreneurs rather than on existing entrepreneurs and their own start-up ventures.

The broiler rearing venture was found to be particularly suited for the purpose of learning about entrepreneurial business ventures whilst in incubation. A few of the characteristics are highlighted below:

- The complete venture cycle and business process, from start-up to harvest, are simulated over each of the broiler rearing cycles of 8 weeks.
- In repeating the cycle several times (5 cycles allowed before graduation), it allows for adequate practical exposure and experiential learning about the intricacies of business processes.
- Because broiler rearing is a risky business, it allows for first-hand experience about business- and financial risk and the effects of these on business survival.
- By inviting five trainee entrepreneurs to participate in each cycle, team work and mutual accountability for the successful operation of each cycle was assumed.
- The number of broilers raised per cycle, (200 +), are too many to consume individually and consequently, encouraged (forced) the entrepreneurs to sell commercially. It provided cash flow for the entrepreneur and an excellent source of protein for the community.
- The broiler rearing operation also served as an example of successful technology transfer, where the possibilities of combining traditional rural systems with high-tech genetics and feed technology were demonstrated practically.

Some of the problems and difficulties experienced in the process that would serve as valuable inputs for future phases of the project include:

- The objectives of the project were not clearly communicated to the community by the academic institution, resulting in beneficiaries of the project not being clearly identified and informed
- Ownership of the project was not clearly defined, resulting in some confusion about responsibilities after the DTBI had been introduced at the particular venue
- Some deep-rooted differences and historic conflicts within the community on issues relating to the access and use of the particular venue; this resulted in much less trainee entrepreneurs participating in the DTBI than initially indicated.

However, the DTBI concept provides a good basis for demonstration and training of the main topics and issues associated with normal business. It differs from other modes of training in that entrepreneurs are motivated to learn, because they actually learn about what they experience and experience what they learn about. They can easily relate to the training content because it becomes a part of their frame of reference.

For the academic institution, the following learning experiences can be documented:

- establish trust and get buy-in from the local leadership as well as from those influencing the local leaders; informal leaders operating in the background often have more influence and power than formal leaders in the community; appreciate and respect the community dynamics
- start small and develop slowly and step-wise; involve other potential partners and collaborators only gradually to avoid the perception of a “hostile take-over”
- the responsibility for the management of projects should not remain with the academic institution, but rather be developed, mentored and transferred to the community
- lay the foundations first; basic life-skills and social empowerment are as important as economic empowerment
- it is vital for the academic institution to be in a position (financially and otherwise) to commit resources and provide tangible support over a meaningful time period otherwise community outreach becomes “window dressing”, resulting in more harm than good.

The limitations in the study are apparent. The DTBI was introduced in the community as a single project, applied at a single location, with an assessment largely based on observations of the researchers over a relatively short time span of four completed cycles. Although the findings are encouraging, evaluations made over longer time periods need to be undertaken, possibly employing statistical analyses where appropriate. In line with action research practices and principles, the observations and results of this study can be used to structure follow-up phases of the project or aid in replicating this project at other venues in other communities. Without any attempt to assess the significance of the DTBI outcomes statistically, the learning experiences are perhaps the most important outcomes of the project.

## **CONCLUSION**

It is clear from the above results that conventional business incubation concepts can be appropriately tailored and successfully applied within a disadvantaged community context. The secondary objectives of incubators are met at an early stage, while few of the primary

objectives are met. In the particular community context this may suggest that until the secondary objectives are met, the primary objectives may never be properly realized.

The financial viability of the broiler rearing operation indicates that it is possible to incubate a business successfully within the DTBI milieu. The business showed economic viability and the capacity to generate profits. The focus of the DTBI on income generation through the production of a food commodity had dual positive effects on household food security: the product could be used to increase household food security directly through increased household consumption or indirectly through the income generated through sales.

The action research methodology proved to be useful and contributed to enhanced learning and change at both the community and institutional levels. Trainee entrepreneurs were able to develop a range of entrepreneurial skills in a supported learning environment. It is anticipated that the participants that ultimately graduate from the DTBI will possess the entrepreneurial skills and experience required for the start-up and operation of a commercially oriented SME.

The experience gained from the DTBI was invaluable from an institutional point of view. The capacity and experience to provide education, training and mentorship to non-traditional target groups was increased, together with a realization of the importance of adopting a more central position in the provision of education and training for the economic and social development of the region it serves.

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