

Theme: Balancing Quality and Quantity: The Global Challenge for Tertiary Education in Barbados

Sub-theme: Quality Tertiary Education and Training and the Labour Market

Title: The Influence of the Trinidad and Tobago Labour Market on Quality Technical/Vocational Education and Training (TVET)- The MIC Perspective

Written by:

Reynold John

Manager Training Administration, Metal Industries Company Ltd

Tel: (868) 663-4642 ext 3131

Fax: (868) 663-6055

Donna Bachoo

Senior Coordinator Pleasantville Technology Centre, Metal Industries Company Ltd

Tel: (868) 652-4595

Fax: (868) 657-6047

Gwenyth Bleasdel

Coordinator EDF Projects Unit, Metal Industries Company Ltd

Tel: (868) 663-4642 ext 3212

Fax: (868) 663-6055

Inputs by:

Cipriani Davis

Chief Executive Officer/General Manager Training, Metal Industries Company Ltd

Tel: (868) 663-4642 ext 3100

Fax: (868) 663-6055

Abstract

The Metal Industries Company Limited (MIC) has been established from its inception to combine training and real work. Therefore, MIC adapted the 'Training Factory Concept' as its preferred mode of delivering Technical Vocational Education and Training (TVET). This mode of training influenced the mission statement of the Training Division "Training for Industry" since this was a demand led model of TVET. This paper seeks to explore the best practices and some of the challenges experienced by MIC in fulfilling its mandate. Additionally the paper will examine the rigors required to maintain an adjustment with the quality requirement of industry and consequently influence the content of our curricula.

Table of Contents

Item	Page
Introduction	4
MIC as a Training Provider	5
MIC's View on Quality Training	7
MIC's Approach to Training	10
MIC's Approach to Curriculum and Quality	13
The DACUM Method	15
Curriculum Delivery and Industry	16
References	29

Introduction

Even in the midst of a global economic downturn it is agreed by most that the world economy is changing as knowledge supplants physical capital as the source of present and future wealth. As knowledge becomes more important, so does higher education. The quality of knowledge manifested at the higher education level and its availability to the wider community is extremely vital to national development and competitiveness. Acknowledgment of the above fuels the vital role of the Metal Industries Company Limited (MIC) as a Post-Secondary Tertiary training provider.

Established in 1974, the Metal Industries Company Limited's (MIC) initial objectives were to develop local capability in the making of tools, dies and moulds, precision machining and manufacturing engineering. The company at that time was a joint venture of the Government of Trinidad and Tobago (GOTT), and the United Nations Development Programme/United Nations Development Organization (UNDP/UNIDO). It has since evolved into a partnership of the Government of Trinidad and Tobago (GOTT) and a number of private local industries. Trinidad and Tobago's (T&T) insufficient experience in the areas of manufacturing 35 years ago stimulated the creation of MIC's Precision Machine Shop which manufactures small machine parts, moulds and press tools as well as carrying out specialized machining processes. The company is an innovator and has introduced into the region specialized machine tool processes, such as Electrical Discharge Machining (EDM), Computer Numerical Controlled Machining (CNC) and Computer Aided Design/Manufacturing (CAD/CAM), Coordinate Measuring Machining (CMM) and Rapid Prototyping Machining (RPM).

MIC as a Training Provider

One of the most recent developments for MIC is its achieving Registration Status with the Accreditation Council of Trinidad and Tobago (ACTT). The Training arm of the organization received the maximum number of three (3) years available for registration. This registration by an external evaluator attests to the validity of the training constituent of MIC.

MIC assumed the training of its employees from its inauguration, and also provided training for technical personnel from the industrial and manufacturing sectors of the region. This function of training and educating has developed exponentially over the years to satisfy the demand for well trained, competent and industry-ready personnel. Therefore MIC currently operates both as a Training Institution and a Commercial Factory, consistent with framework of the Training Factory Model.

In 1994 the role of MIC as a training provider expanded significantly when the following programmes were introduced:

- National Skills Development Programme (NSDP). This programme is modeled on the German dual system of Technical Vocational Education and Training (TVET). This programme is only conducted in Trinidad and Tobago.
- The Master Craftsman Programme. This programme is also modeled on the German dual system of Technical Vocational Education and Training (TVET). The initial six-month period of training is conducted in Trinidad and Tobago, followed by a three-month training period in Germany.

Both of the above-mentioned programmes are accredited by the German Chamber of Crafts. It should also be noted that MIC's welding facilities and programmes at the Macoya, Laventille Technology and Continuing Education Centres are fully accredited by the American Welding Society (AWS).

MIC as a training provider extended its range when it embarked on another new portfolio in October 2004. MIC assumed the management of the Helping You Prepare for Employment (HYPE) programme. HYPE is a government sponsored programme in Building Construction Technology which had been established in 2002 under the auspices of the National Energy Skills Centre (NESC). MIC is currently undergoing the reconfiguration of the HYPE programme that will detail the certification levels allowing seamless movement into other MIC programmes such as the NSDP etc.

In October 2006 the well established National Examinations Council (NEC) Craft programmes were handed to MIC by the Ministry of Science, Technology and Tertiary Education for administration. These programmes were the only ones prior to 1999 that were using coordinated industry-led occupational skills and competencies within a standardized technical vocational qualifications system. The training responsibilities of MIC once again are enormously expanded as the NEC programmes embraced amount to fifteen, including some non-MIC-traditional disciplines such as Food Preparation and Culinary Arts as well as Jewelry Making, Printing and Book Binding.

Other Training programmes conducted are the Train-the-Trainer Courses, Management/Supervisory Courses and a number of Specialized Training Programmes for companies in the industrial and manufacturing sectors. A most recent addition is the

Teacher Training Unit whose mandate is to train TVET instructors both within and outside of MIC. Some of the instructional areas are Pedagogy, Androgogy, Didactics, Instructional Design, Curriculum Delivery, and Practicum.

The Training Administration Division of MIC also offers a range of Consultancy Services and Technical Training through its Consultancy Unit and Advanced Technology Centre.

MIC's View on Quality Training

Evidence of an emphasis on quality can be seen in creation of MICs Quality Unit and the Training Division's Quality Manual. This manual clearly lays out the structures put in place to develop and monitor the systems implemented to provide quality trainee instruction. To allow goals and objectives to be actualized, a company's vision and mission must first be clearly articulated.

MIC's beginnings as primarily a manufacturing company that trained in the industrial and manufacturing sectors fuelled the company's overall Vision and Mission Statements, but also resulted in statements dedicated to the Training Division.

The overall company Vision and Mission statements speak to the dual functions of manufacturing and training. The overall vision statement is "To be the key institutional driver in strengthening technological capabilities, innovation and technical training in Trinidad and Tobago and internationally". (Training Division Quality Manual 2008) The overall mission statement says "We are a Customer driven organization providing high quality technological training for industry while fostering and encouraging innovation

and creativity.” (Training Division Quality Manual 2008) Emanating from these are more specific Vision and Mission Statements for the Training Division of the company.

The Training Division’s Vision Statement is:

“Our vision is to be the key institutional driver developing national technological capabilities for increasing quality, range and throughput of manufactured products and technical services for industry in Trinidad and Tobago”.

(Training Division Quality Manual 2008)

The Training Division’s Mission Statement is:

“In support of this vision, our mission is:

- To be a customer driven organization
- To establish production lines for the manufacture of product of metals, plastic and other materials
- To establish commercially sustainable turnkey operations
- To provide appropriate, high quality technical training for engineers, managers, technicians and craftsmen for the industry.” (Training Division

Quality Manual 2008)

MIC’s view of quality training is acknowledged within its Quality Manual. This manual documents the Quality Management System (QMS) of the Training Division and provides road maps towards the provision of effective instruction and support services. The QMS is assessed on a regular basis to improve instructional and programme design, trainee instruction, achievement of learning outcomes and support services aligned with

improvement objectives. The manual references as a normative document the ISO 9001:2000, International Standard – Quality Management Systems – Requirements. (MIC – Training Division Quality Manual, 2008, pp10)

The stated policy of the quality unit is that “MIC will achieve customer satisfaction by providing quality training programs, products and services, through continually improving our processes to meet or exceed our customer’s requirements, and deliver them on time at a competitive price”. (Training Division Quality Manual, 2008, pp18)

The Quality unit’s responsibility is “To provide quality trainee learning, which produces training products with relevant knowledge and high practical competence in their respective areas, who can make an immediate positive contribution to industry and society”. (MIC – Training Division Quality Manual, 2008, pp 9) This means utilizing a Continual Improvement Process Approach to every facet of training operations. This continual approach is also directed to the unit’s responsibilities and systems. Provisions are made to ensure ongoing systematic and integrated planning with regard to learning and assessment and improvement of such. These commitments and responsibilities span from the establishment of policy and procedures, to the development and implementation of strategies and formal mechanisms to ensure relevance, currency and consistency in all training centres.

Primary to MIC is having a commitment to quality and to ensure the continued viability of the training division. The strategies stated above outline this commitment in a concise and comprehensive manner.

MIC'S Approach to Training

MIC's history of Training and Development set the framework for the system of Training practiced at the institution today. Through the UNDP and UNIDO organizations, MIC developed a unique training system referred to as the Training Factory Concept – A group of trainees received hands-on training and theory lessons from foreign experts. In 1995 MIC adopted and adapted the German Dual system of Education and Training, positioning the organisation as a major player in the areas of Technical Vocational Education and Training (TVET).

The dual system of Education and Training adopted by MIC is similar to the Apprenticeship System practiced in Trinidad and Tobago throughout the 20th century. The Apprenticeship system was pervasive within the private sector companies.

The Apprenticeship System's philosophy like the Dual System is based on the premise that classroom training occurred within a training institution while organised skill competencies were learnt on-the-job; learning by observation and practice, under the mentorship of a master.

The Industrial Training Act, chapter 39:54 speaks to an apprentice; 'apprentice' means any boy or girl, being under the age of eighteen years, employed in or in connection with any trade or craft mentioned in the schedule, with the object or purpose of learning or acquiring any skill, dexterity, cunning process or method therein, and whether such a boy or girl is or is not bound to any master by contract or agreement. Item (g) P5 states, 'to arrange as far as possible the technical education of artisans and apprentices'

During the 1970's – 1990's, most companies terminated their apprenticeship training. The cessation of this training created a huge shortage of skilled craftsmen who were capable of entering the workforce; work ready. The technical institutes and comprehensive schools graduated technicians and craftsmen with TVET qualification; however, these graduates required training before they entered the world of work. Industries have hardly expected that the school will meet their needs in terms of quality and quantity employees. Thousands of school leavers have failed to get jobs, while companies were not able to find competent workers. (MIC Trainer study 2008; NTA Labour Market Survey)

Schools do not pay attention to industry changes; the gap between industry demands (needs) and the school graduates is getting wider and wider. It should not be expected that traditional subject based programmes would solve the problem.

Competency Based Education and Training (CBET) has been developed on the basis of behavioural science. DACUM (**D**eveloping **A** **C**urriculum) analysis technique has helped educators to develop the CBET programmes systematically.

William G. Perry Jr. (1982 P3) 'a competency based instruction greatly increases the likelihood of adequately preparing students for employment'. An occupational competency must include the objective of marketability; the skill must be of such a nature that the employer is willing to pay for its performance. The development of market skills is central to all fields of location – technical education. Consequently, CBET must be developed upon industrial performance criteria.

MIC has implemented the CBET concepts through its systematic approach that includes Analysis, Design, Development, Implementation and Evaluation (ADDIE) phases.

The role of DACUM in Curricula Development at MIC

A variety of approaches to Curricula Development exist. However, Thompson and Chapman believe that, ‘ it is unrealistic and arrogant to presume that academics alone can legitimately judge the worth of the profession – specific actions and are the most capable to make all decisions that affect learning’. MIC’s motto is “Training for Industry”, consequently, the Institution must select a method of developing it’s curriculum that is befitting of this motto. The rate of change of technology within the last two decades suggest that any institution that trains personnel who interface with technology must be able to build and review relevant curriculum at a fast rate. DACUM allows its user to develop and review curricular promptly and at a relatively low cost.

MIC's Approach to Curriculum and Quality

The concept of curriculum is not new, research has turned up several definitions and approaches to its development as there are definitions. Curriculum has its origin in the running chariot in Greece. Kerr defines curriculum as, "All the learning which is planned and guided by the school whether it is carried on in groups or individually inside or outside the school." (Kelly 1985:10)

This definition sits at the core of Technical Vocational Education and Training (TVET) where objectives are set, a plan drawn up, then applied and the outcomes are measured. It presumes the building of the Teaching/Learning and its outcomes from the demand side.

Ralph W. Taylor poses four (4) fundamental questions on Curriculum theory and practice;

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that is likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained?

The notion of training which is fundamentally different from education places emphases on outcomes (beginning with the end in mind) and the formulation of behavioural objectives.

Tyler in concurrence with Bobbit places relevance on behavioural objectives as a process to bring about significant changes in student's pattern of behaviour." (Tyler 1949:44)

We can see how the interests of Bobbit and Tyler are reflected in the Technical or productive approach to curriculum building postulated by Taba 1962:

Step 1: Diagnosis of need

Step 2: Formulation of objectives

Step 3: Selection of content

Step 4: Organization of content

Step 5: Selection of learning experiences

Step 6: Organization of learning experiences

Step 7: Definition of what to evaluate and the ways and means of doing it.

MIC's approach to curriculum development is based on the ADDIE principle:

A - Analyse

D - Develop

D - Design

I - Implement

E - Evaluate

DACUM (Developing A Curriculum) is the framework upon which the curriculum is established.

MIC has selected a method of Curriculum Development that supports its vision, “to be the key institutional driver in strengthening technological training in Trinidad and Tobago, regionally and internationally” and complementing its motto, “Training for Industry”. It is imperative that MIC's curricula describe in a broad sense what technologies exist and operate within the industry it seeks to serve. Such curricula should

define the purpose of the institution, describe the experiences to attain that purpose, effectively organize the experiences and evaluate whether those experiences are attained.

This approach would enhance quality.

The DACUM Method

The DACUM model established by Ohio State University, Centre on Education and Training for Employment allows users to develop curricula based on the needs of Industry.

The DACUM method is defined by ILO as an occupational analysis method aimed at the achievement of results that may be immediately applied to the development of Training curricula. It is a quick way to carryout occupational analysis at low cost. It uses the technique of team work, with teams formed by workers from industry who have experience in the occupation that is the object of the analysis. Eight to twelve expert workers guided by a trained facilitator are supposed to describe in a clear and precise way the knowledge and skill involved in the job position. The result is a ‘DACUM Chart.’”

The use of (SCID) Systematic Curriculum Instructional Design allows the facilitator to utilize the duties and tasks (Competencies and sub competencies) to determine the knowledge. Skills, including Mathematics, Science, Communication and attitude required for the occupation (curriculum) the performance criteria and evaluation tools are also established.

Curriculum Delivery and Industry

Intrinsic in the delivery of any curricular is the teaching-learning process. That is to say a curriculum cannot be successfully delivered if it is not successfully taught and learned. Having recognized the importance of these two criteria in effectively delivering a curriculum that is hinged on the needs of industry, MIC takes several measures to monitor and evaluate its system of delivery both internally and externally. The Institution believes that monitoring and evaluation must have some follow up/corrective activity if the system must work effectively.

Internal Verifiers, both Evaluative and Corrective

In the curriculum development process, the Institution's Industry Partners would have set jobs, duties and task that must be translated as fundamental elements of the curriculum that must be taught. Thus when a student/trainee receives a certificate from MIC it should indicate that they have learned certain skill that would make them 'labour market ready'. It is the primary responsibility of the instructing staff to make sure that these student/trainees learn these skills. In order to guarantee this, MIC has to monitor the teaching-learning process. To successfully accomplish this MIC has set up a number of internal verifying systems which are inclusive of appraisals, lesson plan reviews, performance surveys and examinations.

Annually Instructing Staff are appraised over that period. At the beginning of the appraisal, each instructor meets with their Program Coordinator for their respective Satellite Centre, to discuss what is expected of them in the following year. Included in

these yearly requirements is a list of objectives they must achieve in the teaching process, that are based on the curriculum and therefore on the requirements set by industry. After defining their objectives, the Coordinator and instructor agree on deliverables that would measure the achievement of these objectives over the period. During the course of the year the Coordinator constantly monitors the instructing staff to ensure that they do meet these deliverables. The Coordinator meets again with the instructors in the middle of the term to discuss observation with regards to achieving said variables and recommendation for fixing any short comings thus far. The Coordinator then continues his/her monitoring till the end of the year when both parties meet for a final time for the period, discuss the observations and score the instructor based on his ability to meet the deliverables.

Not only does the Coordinator score the instructors but he/she makes recommendations as to procedure in dealing with any shortcomings which are considered by administration. The Institution has set up several corrective mechanisms to adjust any problems with instructing staff that is having an effect on how well they deliver the curriculum. This would be discussed further in following paragraphs.

There are several methods the Coordinator and Program Manager must use to ensure that an appropriate appraisal is done with regards to instructor's performance. While observation is a useful form of qualitative analysis, is riddled with bias on the part of the observer and therefore some sort of quantitative analysis must be used. This is accomplished through the use of performance surveys. This survey is distributed to student/trainees and colleagues of the instructor and its questions are structured to allow for accurate measurement of performance rather than personal attributes.

Instructors are also required to submit their lessons plans to both Coordinators and senior instructors for inspection. These lessons plans are then evaluated to ensure that the instructors are teaching and testing what the student/trainee must learn as is required by the curriculum.

Another internal verifier of the teaching process is the student/trainee logbook. Student/trainees are required to list in this book, the steps required to accomplish each task that they learn on a daily basis. These log books are monitored by the instructors and Coordinators as a means of determining two fundamental points- whether the instructors are teaching the requirements of the curriculum and whether the student/trainees are learning what is being taught.

Student/trainees are also required in all programs, to spend a significant portion of their training get hands on experience in the field. This industrial attachment is carried out through the Placement Unit. Placement Officers make links with companies and place student/trainees in positions based on their field of study. They then go through a period of training and are evaluated based on their performance. In this way, they get prepared for the industry prior to graduating and entering the labour market.

The final internal verifier is the continuous and summative examinations. Continuous examinations are given at the end of every module and at the end of each term and are meant to ensure that student/trainees keep abreast of what is being taught. Summative examinations are given at the end of the course and are used to determine whether the student/trainee has successfully learned what is required of the curriculum and can therefore perform the task required of them by the industry when they become part of the

labour market. It is only after passing these examinations; student/trainees are allowed to graduate from the program with a certificate verifying their accomplishments.

All summative examinations given are set through the Examinations Unit and not by any of the instructing staff. Thus all summative examinations are derived from the curricula and are based on the requirements of the labour market. Therefore, these examinations are set in such a way that they ensure that a student/trainee passing the exam does indeed have the skills necessary to work, at their passing level, in the labour market. The pass rate of the summative examinations is also used to evaluate the teaching process. Because of the fact that instructors do not have an input in the setting of summative examinations, the exams are reflective of the curriculum delivered over a period of time. They are therefore a good way to determine instructor performance. A consistent pass rate is also an indicator of instructor performance, especially in light of the fact that they cannot manipulate the examination to reflect in their favor.

After evaluation, there must be some method mending shortcomings in the teaching-learning process. MIC chooses to bridge these gaps through the installation of a Technical/Vocational Instructors/Teachers Training Unit. This Unit is responsible for carrying out courses in teacher training at MIC such as its Certificate Course in Instructor/Teacher Training and its Train the Trainer Course. The Unit instructs instructors in teaching learning styles and techniques, curriculum delivery, instructional design, basic guidance and counseling, general education, communication and other subjects that give them a plethora of information and techniques to more efficiently deliver the curriculum.

Another mechanism used to support the delivery of the curriculum is MIC current initiative to convert and develop course texts that are specific to the curriculum used at MIC. MIC has in the past, created text to be used in this way. As the industrial environment changes, however, so must the curriculum and therefore the learning material. As such, these books are currently being updated and books are being developed for areas that they were not developed before. The implications of such an initiative is that even the learning material will reflect the requirements of the industry, further strengthening the impact of the labour market on the teaching-learning process.

External Verifiers, both Evaluative and Corrective

While internal verifiers are necessary they work hand in hand with external verifiers for a thorough examination of the system, as a mean of efficiently monitoring it to determine whether it is meeting the requirements of industry. The Institution is of the belief, that a major indicator of whether the curriculum is delivered in such a way that it produces graduates that meets these requirements is their performance in the industry. MIC therefore carries out a Graduate Study in which it assesses Graduate performance using four survey instruments:

- Graduate Tracer Survey
- Graduate Opinion Survey
- Supervisor/Foreman Opinion Survey
- Interviewer's Opinion Survey

All four survey instruments are based on the Trinidad and Tobago National Vocational Qualifications Framework (TTNVQ). This Framework, created by the Accreditation Council for Trinidad and Tobago, consists of the Standards by which MIC determines its levels of training. As such these standards would inform what types of occupations and what occupational requirements are allocated to the different levels of training. It is through this document that MIC can determine what types of jobs, salaries, tenure, and the like should be expected by a graduate based on the level of training they receive. MIC also recognizes that industry readiness is not just being able to perform well at the task given; there are also personal attributes that affect this issue. Thus all four surveys attempt to measure other attributes such as communication skills, attitude, aptitude and physical appearance/tidiness.

With these premises in mind MIC uses the Graduate Traces Survey to follow up on past student/trainees to determine whether they are performing at the level they should and receiving the benefits allotted to persons who have graduated at their level of training. It also tells the Institution what kinds of employment is available to its graduates as well as what types of further education are needed.

The Graduate Opinion Survey is meant to determine whether the Graduates believe that they are industry ready. They give opinions on their training and how useful it was, their pre-employment period and their employment. The Institution uses this mechanism to determine whether we have prepared them, not just to meet the requirements of the Labour Market, but also for what they should expect from the labour market.

On a day to day basis it is the Supervisors and Foremen who are best able to observe the skills of a graduate and how well they apply them to situations. They have the greatest level of interaction with them from an authoritative perspective and would best be able to determine how well they fit in to the Industry environment. It is because of this the Supervisor/Foreman Survey was designed. This instrument is meant to determine graduate preparedness for industry in terms of how well they perform tasks, how well they interact with authority and equals, how well they communicate and other such criteria.

The Interviewer's Opinion Survey is instrumental in assessing MIC delivers industry ready employees. These persons are usually managers, owners of companies and HR Officers who would have a view on the program itself and the type of trainee they believe that that program produces. This instrument seeks to determine what employers are looking for in an employee and whether MIC meets their requirements through the training the Institution provides. We ask participants what they expect from a certain level of trainee based on the levels outlined by the TTNVQ and what kinds of benefits, tenures and positions they give based again on these levels. The instrument also seeks to determine whether MIC graduates are expected, by these persons, to be at the level of training that their Certification claims they are at.

The three latter survey instruments all measure not just MIC graduates but also graduates from other institutions and programs that deliver levels I, II and III courses. By measuring the performance of MIC graduates against that of other institutions MIC can get an accurate picture of the Labour Market and the expectation of employers. Added to

which, the other institutions would provide a bench mark by which MIC can truly judge its performance as relative to the performance of other programmes. Such evaluations, as that provided by the four instruments, can give MIC a holistic view of its curriculum delivery and an opportunity to gain much needed advice from members of industry on way to continuously upgrade the product it produces.

Labour Market Research Findings:

The following is a reflection of some of the kinds of statistics MIC has captured through its Graduate Feedback Survey Instruments.

The Institution asked supervisors and foremen which programme they believe provides more suitably trained employees as they would best be able to describe graduate performance. Majority of the interviewees chose the Level 2 and 3 programmes, NSDP, NESC and Master Craftsman. This is reflected in fig 1.0.

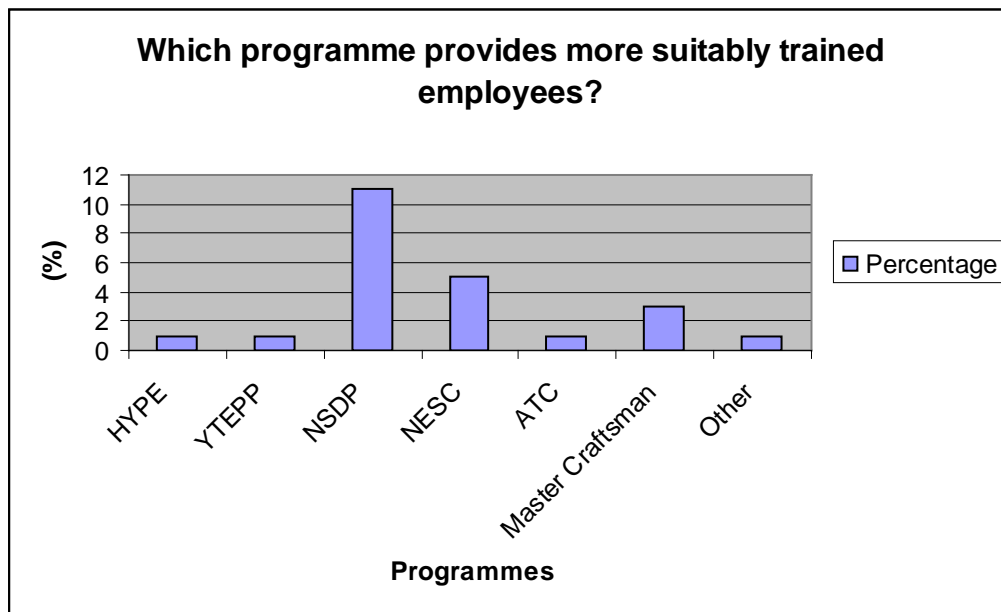


Fig. 1.0

Further we asked them how they felt about each individual MIC programme and whether they felt that the graduates' performance in the workplace adequately reflected their level of training. For the HYPE, NSDP, and Master Craftsman programmes and the customized programmes offered at the ATC, majority of the respondents said that they did. This information is reflected in figures 1.1 to 1.4.

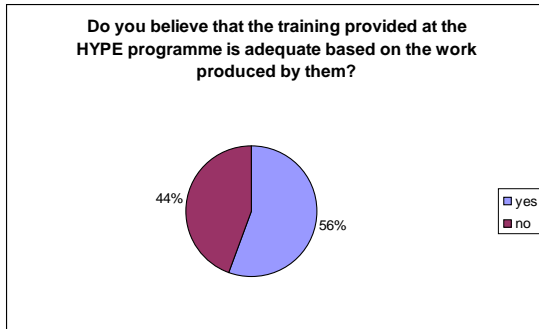


Fig 1.1

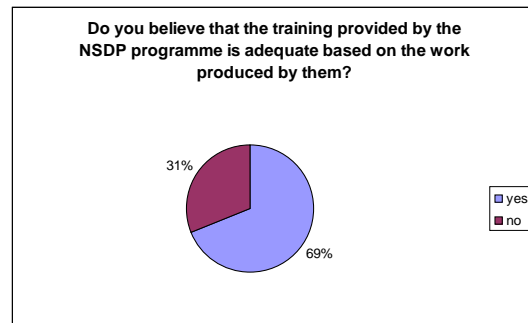


Fig 1.2

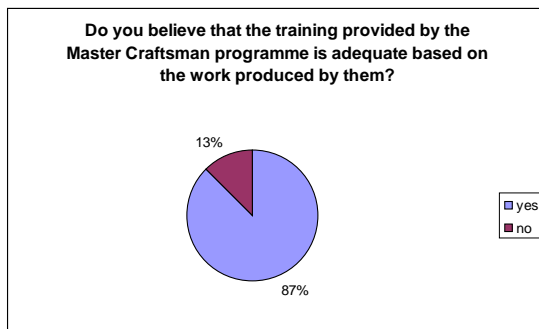


Fig 1.3

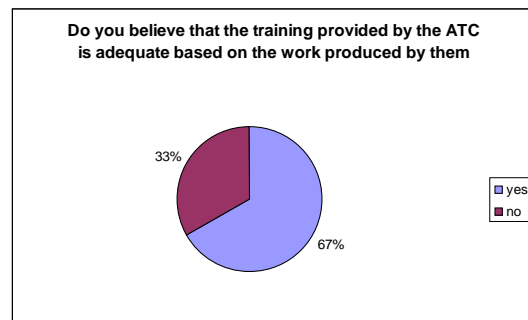


Fig 1.4

We asked members of the Human Resource departments of our Industry Partners, Manager and business owners- all persons who would be involved in the interview process- what level of training they believed the HYPE programme fell under based on the TTNVQ. One third of the respondents were not familiar with the programme, one third believed it to be level I training and one third believed it to level II training. The HYPE programme is actually a level I course. This information is reflected in Fig 1.5

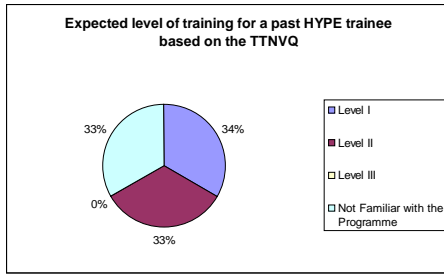


Fig1.5

We also asked them what types of tenure and remuneration would be given to a HYPE graduate. Majority of the respondents who were familiar with the programme stated that they would give them temporary employment and pay them less than \$2500.00 monthly. This information is reflected in Figures 1.6 and 1.7.

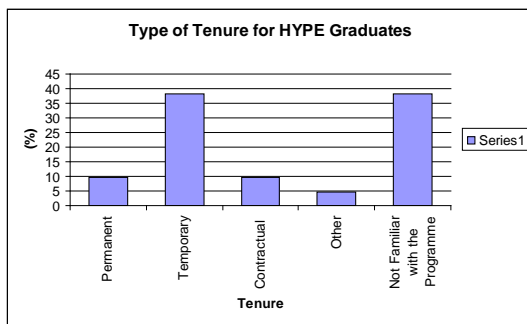


Fig 1.6

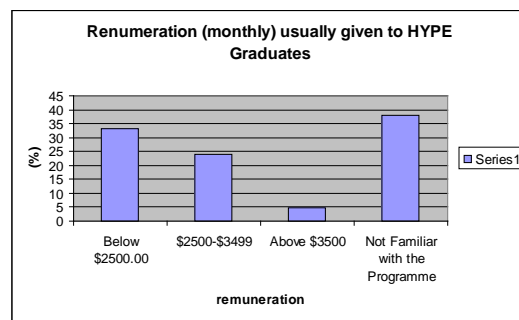


Fig 1.7

Further, we asked them what level of training, they thought the NSDP programme was. Majority of the respondents were correct in the assumption that it was a level II programme. This information is reflected in Fig 1.8

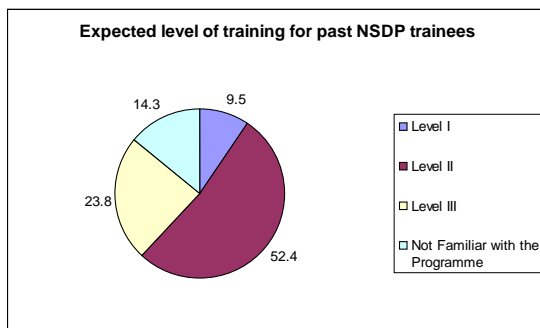


Fig 1.8

We then inquired as to what type of tenure and remuneration is usually given to an NSDP graduate. Majority of the respondents stated permanent with a monthly remuneration of above \$3,500.00. This information is reflected in Figures 1.9 and 2.0.

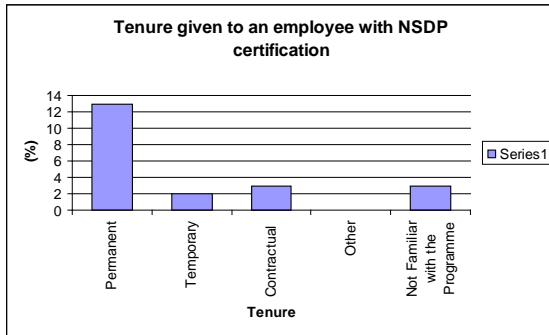


Fig 1.9

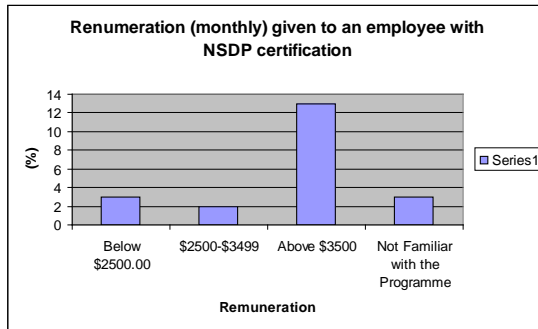


Fig 2.0

When asked what level of training, based on the TTNVQ, they felt the Master Craftsman programme was, Majority of the respondents stated level III. The Master Craftsman programme is a level III programme based on the TTNVQ classification. This information is reflected in Fig 2.1.

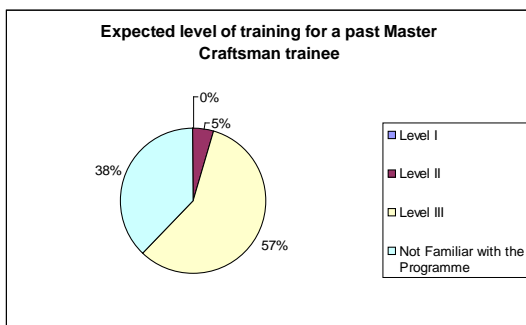


Fig 2.1

The respondents were then asked what types of tenure and remuneration is usually given to a prospective employee with Master Craftsman certification, majority of them stated

that they are given permanent tenure with above \$3,500.00 monthly salary. This information is reflected in Figures 2.2 and 2.3.

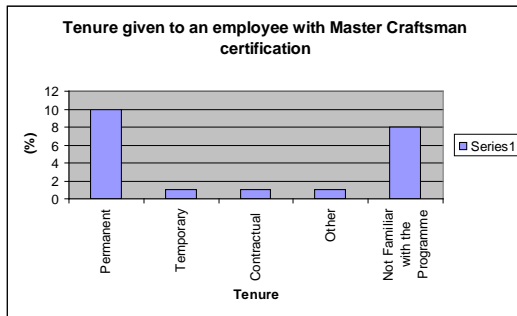


Fig 2.2

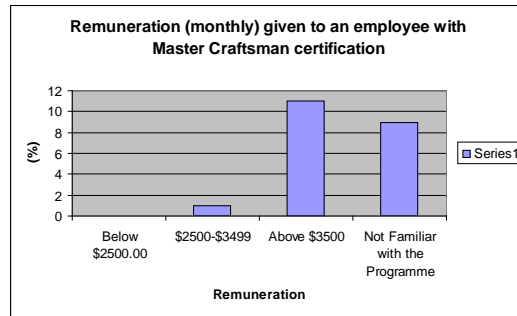


Fig 2.3

A number of Graduates from different MIC programmes were asked what their current tenure was. Majority of them stated that they were permanently employed. This is reflected in Fig 2.4.

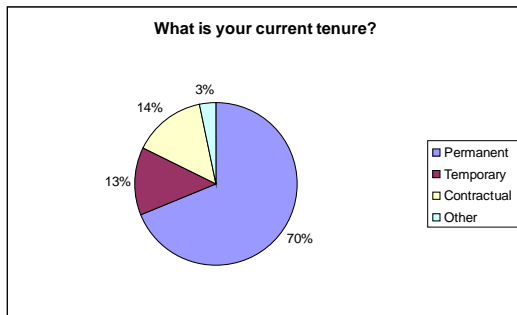


Fig 2.4

When these respondents were asked how they rated their term of employment, majority gave it a rating of average, good and excellent. Further, when asked if the salaries they now receive are what they expected to get based on their qualifications, majority of them stated that their expectations were met. However there were a significant number of them also stating that their current salary is below expectation. This information is reflected in Figures 2.5 and 2.6.



Fig 2.5



Fig 2.6

Conclusion

MIC begins its process of curriculum delivery with inputs from the labour force/industry through the use of the project oriented DACUM method. The Institution continuously tests its system to ensure that the requirements of said industry are being met. Further, mechanisms are put in place to eliminate any shortcomings in the system. Finally MIC evaluates the performance of its Graduates to guarantee that they are indeed meeting the requirements of the workforce. This 'ongoing process of building and sustaining relationships' is carried out in a manner that continuously 'assesses, anticipates and fulfils the stated and implied needs' of the industry, thereby producing quality Technical/Vocational Education and Training that meets the needs of the Trinidad and Tobago Labour Market.

References

- Bobbitt, F. *The Curriculum*, Boston: Houghton Mifflin (1918)
- Bobbitt, F. *How to Make a Curriculum*, Boston: Houghton Mifflin (1928)
- Carr, W. & Kemmis, S. *Becoming Critical. Education, knowledge and action research*, Lewes: Falmer Press
- Government of Trinidad and Tobago *Laws of Trinidad and Tobago: Industrial Training Act* Trinidad and Tobago (1980)
- Norton, Robert E. *DACUM Handbook*, Columbus: Center on Education and Training for Employment (1997)
- Metal Industries Company Limited – *Graduate Feedback Survey Instrument Test Report*, Trinidad: MIC (2008)
- Metal Industries Company Limited – *Training Division Quality Manual Version 1.0* Trinidad: MIC (2008).
- Perry, William G. Jr. *How to develop competency – based vocational education* Ann Arbor: Prakken Publications, Inc. (1982)
- Taba, H. *Curriculum Development: Theory and Practice*, New York: Harcourt Brace and World (1962)
- Tyler, R.W. *Basic Principles of Curriculum and Instruction*, Chicago: University of Chicago Press (1949)