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The Lecturer as a Researcher in a Tertiary Level TVET Institution

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Introduction

This article explores the issue of the lecturer as a researcher in the context of a tertiary level technical and vocational education and training (TVET) institution in Jamaica. Much of what is said, however, will find easy application to TVET institutions in small developing countries in the Commonwealth Caribbean and elsewhere.

The article first explores, broadly, the concept of research in education and its general application to the field of TVET. It then addresses a number of issues more specifically related to the lecturer as a researcher in a TVET institution.

Nature of Research

An open discussion on the usefulness of research is likely to invoke wide-ranging views that extend from implicit belief in the goodness of research as a way of advancing knowledge, to the sceptical dismissal of research as the mere idiosyncratic behaviours of a few people who are seeking to impose on the world complex ways of resolving simple problems. The sceptics and non-believers have left those of us commited to research, continually trying to explain in simple, hopefully persuasive, terms what we mean by research and its usefulness to human progress. In doing so, we frequently have to contend with often quoted cynical views of research, sometimes from persons who have devoted much of their life to this noble cause of research. This does not make the task any easier.

Consider, for example, the words of Dr. Marston Bates, a member of the scientific community, now deceased: "Research is the process of going up alleys to see if they are blind" (cited in Brown and Rodgers 2002, 3). Consider, also, the rather cynical statement of Thorstein Veblen, economist and social philosopher, made even earlier, that, "the outcome of any serious research can only be to make two questions grow where only one grew" (Veblen, 1919/1990).

A more reasoned and appropriate conceptualization of research is that it is "a human activity based on intellectual investigation and aimed at discovering, interpreting, and revising human knowledge on different aspects of the world" (University of Luxemborg, n.d.). More simply put, research is an organized and systematic way of finding answers to questions. It is organized in the sense that it is not spontaneous, but planned. It is systematic in the sense that there are clearly established procedures that are followed. It is designed to find answers to a research question, which itself is the raison d'être of research.

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In seeking to find answers to questions, we cannot ignore the value of tradition (the way things were done in the past), or common sense (what seems reasonable), or personal experience (the ability to generalize and predict based on past experience), or authority (the views of leading experts). However, the scientific approach to knowing must take primacy of place in this endeavour. The primacy of the scientific approach undergirds the concept of research as an organized and systematic way of finding answers to questions, as human activity based on intellectual investigation aimed at discovering, interpreting, and revising human knowledge.

While it is easy to understand and accept the existence of certain limitations in the use of tradition, common sense, and personal experience in finding answers to questions, it is often more challenging to do so when it comes to authority. Indeed, authority has an important place in helping to find answers to questions. It is, after all, a fast and relatively inexpensive way of geting information about something. Over the years, many of us have come to rely on such authority. The answer that we seek for many an issue encountered in the classroom or in everyday life may be provided by authorities in the field, that is, persons who have gained our respect for their knowledge and understanding of the related subject mater. As students of a discipline, indeed as experts ourselves, we often rely on the authority of other specialists to assist in elucidating a point, or in obtaining trustworthy information quickly and inexpensively, whether through personal communication or through books or articles writen by the authority.

Gay, Mills, and Airasian (2006, 4) caution against the limitations of relying on authority. To illustrate the point, they tell the story of Aristotle, the famous Greek scientist and philosopher, who one day caught a fly and carefully counted and recounted the legs after which he announced that flies have five legs. According to the story, because Aristotle was a learned scientist and philosopher, no one questioned this, and for years his findings were uncritically accepted. The problem is that the particular fly that Aristotle caught and examined had only five legs. This story illustrates well the limitations of relying solely on authority. Had reliance been placed on scientific inquiry instead, it would have been evident that something was wrong with Aristotle's statement about the fly. From such scientific research, it might well have been concluded that the learned scientist and philosopher had most unfortunately used a handicapped subject from which to make the generalization.

It is important to encourage a research orientation to learning throughout the education system, and in particular at the tertiary level. Research is an important way of knowing, of finding out, of giving accurate descriptions, of providing useful explanations, of applying knowledge to create change and improvements, and of predicting developments and changes.

In this regard, both pure research which aims to create or advance knowledge that may not be directly related to the resolution of a practical or technical problem, and applied research which aims to solve a particular, existing problem, should be encouraged. It is often difficult to draw a sharp line of distinction between research that is pure on the one hand, and applied research, on the other. In general, pure research is more concerned with the development or *refinement* of theory, while applied research emphasizes more the application of theory, to the resolution of a practical problem. This distinction between theory and practice is itself often blurred. One writer puts it thus: "In theory, there is no difference between theory and practice. But in practice there is" (cited by Stead, 2003, and atributed to the computer scientist/educator Jan L. A. van de Snepscheut). Despite the level of obfuscation regarding the difference between theory and practice which such statements may generate, it is generally accepted that there is a difference between pure research and applied research and that applied research has a more practical orientation. Although it may be argued, with some justification, that applied research should be the more important consideration for a TVET lecturer, both pure and applied research are important to creating advances in knowledge in TVET and are, therefore, equally important to a TVET lecturer. This is particularly so in the environment of a developing country such as

Jamaica, where the development of new theories are likely to contribute to the profitable reconceptualization of issues with which we are challenged, or help to provide alternative useful explanations about maters with which we are grappling. This is in relation to industry as much as it is in relation to the wider community.

Lecturers as Generators of Knowledge: An Imperative

In the information age in which we live, knowledge is an essential, high demand commodity. Knowledge generation is an important facility in the struggle to accelerate the development of small countries such as Jamaica and others in the Caribbean. It provides opportunities for increased participation in, and benefits from, the global economy. The interconnectedness of Information Communication Technology (ICT) is creating new opportunities for both knowledge generation and knowledge distribution, opportunities that are rapidly expanding sources of income into which developing countries can tap. Not only is new knowledge generated, but also old knowledge and information are being reinterpreted and repackaged to serve wider purposes. In order to take full advantage of these opportunities, it is necessary to ensure the ongoing "reskilling" of citizens by reorienting those capable of generating new knowledge to become major contributors in this enterprise and by equipping others with skills for the repackaging of knowledge and the distribution of information.

It should be noted that knowledge and information are not being used interchangeably. Even though the two terms are related, one may be distinguished from the other. *Knowledge* is the right *information* put into use in the right way at the right time, while information is merely the amalgamation of various data sets within a specific context (*Darwin Magazine* 2001). Information must be put to use in order to generate knowledge.

It is important that lecturers in a TVET tertiary institution become familiar with the new knowledge being generated in order to stay abreast of the leading-edge thinking in their field. What is more important, though, is the need for these lecturers to themselves become generators of new knowledge. Put another way, lecturers need to move beyond being mere consumers to being generators of knowledge. This will earn them increased respect from their peers both locally and internationally. The nature of the research will depend on the specialized discipline of a lecturer. However, a few examples that cut across several TVET disciplines may be readily identified for such leading-edge research. These include (a) improving energy efficiency and conservation in designing products and in delivering services; (b) establishment of viable partnerships with industry for research and product development; and (c) assuring coherence between TVET training and evolving industry demands. Lecturers need to equip students with new knowledge to respond to the unique circumstances of their environment in order to make the preparation of students more relevant to the circumstances in which they will live and work. Such knowledge must be generated through research undertaken by the lecturer. In the absence of such research, TVET lecturers are more likely to prepare students with generic knowledge in the field in which they would work, and without new and specialized expertise that will optimize their value to the employer or optimize their capacity to be an independent provider of relevant services.

Apart from helping to prepare the TVET graduate with valued skills, the research work undertaken by TVET lecturers is important in raising the profile of lecturers and enhancing the reputation of the institutions they serve. Such research work will, in turn, help to improve the value that the wider community places on TVET programmes. The research work of lecturers should be publicized in the local and international community to assure the widest possible recognition of their accomplishments. This can be done in a number of ways elaborated below.

Conferences

These can be organized by lecturers on a periodic basis. In a TVET institution that does not have a strong research orientation, these may be undertaken, initially, on an annual or biennial

basis, and increased in frequency as the research work of lecturers intensifies. These conferences may include presenters from other institutions but a central purpose would be to provide a forum for sharing the results of the research of TVET lecturers with a wide cross-section of persons, including fellow researchers in the national, regional and international community; managers and technical specialists from industry; policy makers; and administrators from relevant government services, and persons from the wider public with an interest in the area on which a conference focuses. Out of such conferences, there is also likely to be some media atention that will further highlight the work of a particular lecturer or lecturers and the TVET institution.

Seminars and Short Courses

These will provide an opportunity to upgrade the knowledge, skills and expertise of persons in industry, the government services, educational and training institutions, and others who could benefit from the knowledge generated by the research work of the TVET lecturer. The seminars and short courses can be packaged for delivery at specific times of the year with the duration in terms of contact hours clearly defined. The number of contact hours is particularly important for the short courses since some of these may be developed for partial or full credit that contributes to satisfying the requirements for certification offered by the TVET institution or programme.

Public Dialogue on Topical Issues

The nature of the research work being undertaken, the progress made with specific research undertakings, and the findings of research may be shared through the print and electronic media. The interest of the public in the work of the TVET institution, and the consequent public support that is likely to result for the work of the institution, may be further enhanced through participation of staff in discussions undertaken in the print and electronic media on topical issues. Such discussions will provide opportunities to bring to the atention of the wider public the research work of TVET lecturers that are relevant to important national and community issues under consideration. It will also provide the opportunity to lobby public support, including public funding, for the research work being done by TVET lecturers and institutions.

Publications

Lecturers should seek to publish their research in scholarly, peer-reviewed journals. This provides an opportunity for the lecturer to gain wide recognition of the work undertaken and the contribution being made to knowledge in the specialized field to which the research is related. Such publications would be of particular interest to specialists from both academia and industry and would contribute to improvements in the work of both. The publications would also inform and support the other activities mentioned above, namely conferences, seminars and short courses, and public dialogue on topical issues. Such publications may also open avenues for the provision of consultancy services in the national, regional and international community as the work of the lecturer becomes more widely known.

Given the rather specialized focus of the research envisaged, it would be best for these to be published in a journal that is devoted to TVET research. A review of available publications suggests that such specialized journals are limited and no regular publication has been identified in Jamaica nor in the Caribbean that responds to the type of research recommended. Consideration should, therefore, be given to the publication of a peer-reviewed journal of high quality that would provide an avenue for dissemination of TVET research on innovation and change in Jamaica and the rest of the Caribbean. Additionally, and also as a result of the aforementioned types of activities, the profile of the TVET lecturer and the institution would be raised and this would impact positively on the prospect of providing technical consultancy services to both government and industry, based on the acknowledged expertise of lecturers and the TVET institution that will result from the publicized research work. The technical services may include policy guidance to both industry and government in reshaping practice in industry and to govern- ment in improving effectiveness and

effciency of its regulatory functions.

The totality of these activities would, in turn, enhance the capacity of lecturers and of the TVET institution, to bid successfully for contracts to supply services as well as products, that were created or that can be created based on the research work undertaken. Such research and publication would also place lecturers and the TVET institution in a much beter position to obtain research grants from governments and from philanthropic and international organizations that are interested in advancing the work being undertaken by the TVET institution.

Clearly, there is much to be derived from enhancing the research work of lecturers of TVET institutions. It will bring an enhanced rep- utation and recognition, not only for the individual lecturers but also for the TVET institution. In addition, it will lead to the generation of income from consultancy services and research grants that can augment the earnings of both the individual lecturer and the TVET institution.

The Need for the Lecturer to Integrate Teaching and Research

The Hon. Julie Bishop, Minister of Education in Australia, at the opening address to the Higher Education Research and Develop- ment Society of Australasia on July 10, 2006 made the point: "Teach ing and learning and research are the fundamental, essential and enduring foundation of Australia's education system and ultimately of our social and economic gains as a nation" (Bishop, 2006, 2). What the Minister said about teaching (and the related learning), and research as the fundamental, essential and enduring blocks of the Australian Education system is equally true for education systems in general, including the education system of Jamaica and of other Caribbean countries.

In a tertiary TVET institution that is preparing students for careers in industry, including self-employment, good teaching is inextricably linked to research. Although communication skills, interest and respect for students are all important qualities of good teaching, the *sine qua non* of good teaching is knowledge of the subject mater. The TVET lecturer is not excluded from this requirement. TVET lecturers need to be expert in the subject mater that they teach. Such expert knowledge is often provided through some initial training in the discipline, often through a programme leading to a university degree or other professional technical qualification. Beyond the initial training, however, lecturers must hone their knowledge and skills, and deepen their expertise through continued research. Such research requires a comprehensive understanding of what is being done in the field in which the lecturers provide instruction. Lecturers need to become aware of the findings and the ongoing work of other specialists in their field. It is only by knowing what research has been done or is being done in their field that lecturers will be able make an assessment of the contribution that their own research endeavours may make in advancing knowledge in the field.

Consider the often quoted words of one of the world's greatest researchers, the much revered physicist, Sir Isaac Newton, in a letter to a fellow scientist, Robert Hooke, writen in either 1675 or 1676: "If I have seen further than others, it is because I've stood on the shoulders of giants." Though there are other interpretations of what Newton intended (Merton, 1985), this quote is cited in this article in the context of its popular usage to imply not only the humility of one of the world's greatest scientists, but more importantly, to indicate that Newton recognized the need to stand on the work of others, that is, to benefit from the work of others, in seeking to advance the generation of knowledge. That is why the review of the literature is a critical part of reporting research in scholarly journals. The researcher must demonstrate an awareness of the critical works in the field researched and so define the contribution that his or her particular research is making. Thus, the activity of research itself inevitably forces the researcher to become aware of developments in the field researched and to improve his/her knowledge of the advances made in that field.

There are other ways in which the review of the published research work of others may

help the lecturer to refine his or her expertise to undertake and report the outcome of independent research. The research work of others provides good illustrations of how to go about conducting and reporting various types of research. Professor J. Elkins, Director of the Schonell Special Education Research Centre of the University of Queensland, in a June 1991 address to the Educational Research Forum of the Queensland Institute for Educational Research makes the point thus: "By way of confession, I want to state that I have learned more about research through reviewing articles for scholarly journals than any other activity" (Elkins, 1991, 2). Surely, the benefit to the TVET lecturer of reading scholarly research articles in his/her area of research interest should at least equal, if not surpass the level of benefit derived by Professor Elkins! The review of the work of others must be regarded as an important dimension of the work of the TVET lecturer as researcher.

This acquisition of knowledge through the pursuit of independent research activities provides the TVET teacher with leading-edge expertise that helps to prepare successive waves of students with the most recent information in their field of study. However, lack of research can lead to the presentation of the same sterile information to students year after year. In this later scenario students from successive years can emerge from their courses and programmes more and more removed from the leading-edge knowledge and skills in their field of study. This would be the obverse of what may be reasonably intended of a TVET institution. A lecturer who embraces his or her role as a researcher is not likely to do such disservice to his or her students. On the other hand, a lecturer who is not involved in research is likely to do a great disservice to the TVET training enterprise, to students and to employers who would expect, and justifiably so, that this year's student would benefit from this year's leading-edge thinking and that they will not be fed the same diet that those who did the same programme ten years ago received. Research is important for good teaching.

Research should drive the revision of the TVET curriculum. A lecturer engaged in research readily accepts the need for constant revision of the curriculum. His/her awareness of the new information, the new thinking, the new inventions and the new ways of addressing issues in his or her field are bound to lead to a desire to improve the curriculum to reflect today's realities so as to ensure that students are being properly prepared for the world in which they will live and work—and that is not yesterday's world.

The outcome of the lecturer's own research should find a place in the revised curriculum. Not only should it form the basis for conferences, seminars, public dialogue, publications and consultancy services, but it should also be integrated into the curriculum. Such integration should make the curriculum more relevant to the circumstances for which students are being prepared. It will help stu- dents to become more aware of important research work done by the TVET lecturer as well as the conference presentations, publications and consulting services of the lecture and how these enrich the curriculum. This will in turn foster a deeper respect for the lecturer and for the institution. Such enhanced respect is likely to manifest itself in the maintenance of stronger post-graduation contact by the student with the lecturer and the institution as important sources of assistance in addressing technical issues at the workplace. In other words, the graduates of the institution are more likely to see the lecturers and the institution as the first port of call for consultancy and related services, leading to improved earnings for the lecturer and the institution as previously described.

The TVET Lecturer and the Research Link with Industry

One of the most important tasks of the TVET lecturer should be to foster a close link with industry. This can be facilitated and strengthened through the research work undertaken by the lecturer. Students at a TVET institution are generally being prepared for employment in industry. Such preparation requires that the lecturer become, and remain, familiar with the current needs of industry and how these are

changing in response to changing demands in the national, regional and global economy. The mater of change in industry demands and practices is, itself, an important area of research that cannot be ignored by the TVET lecturer. The pursuit of such research requires a close working relationship with industry that will enable the lecturer to be familiar with developments and changes that are taking place in industry.

The TVET lecturer needs to be industry qualified. He or she should have certification atesting to the acquisition of appropriate industry-related skills and appropriate number of years of experience working in a particular industry (Anderson and Kosarek, 1997). It is important, however, that the TVET lecturer be knowledgeable about what is happening in the particular industry for which the lecturer is preparing students. Such knowledge will provide additional insights to the lecturer for the proper preparation of students fit for the environment in which they will work. It requires the continual updating of the expertise of the lecturer, not only through formal study, but more importantly, through continued within-industry research. It requires the building of a close relationship with the industry. This requires more than creation of opportunities for students to have access to industry for the research and practicum associated with various courses offered by the TVET institution. It requires that lecturers develop and nurture a partnership with industry that builds confidence and trust which will enable them to undertake within-industry research. The industries themselves stand to benefit from the research undertaken in this partnership. In this regard, TVET lecturers should consider ways of helping industry with the research and development (R&D) that they must undertake to remain relevant and competitive in a changing global environment. This is an aspect of the applied research which is an important domain of research for TVET lecturers. R&D is aimed at the development of new products and processes or applications for survival and expansion of industry in a competitive environment. It involves the systematic pursuit of research to increase knowledge and the use of knowledge to create new products and new applications.

There is, however, a tendency within developing countries to give insufficient attention to R&D, compared with the more developed countries. A UNESCO Institute of Statistics (UIS) publication, *A Decade of Investment in Research and Development (R&D): 1990–2000*, concluded that: "Despite efforts to increase investments in R&D, expenditure remains very low in developing countries" (UIS, 2004, 3). In fact, in 2000, developing countries spent 0.9 per cent of their GDP on R&D while developed countries spent 2.3 per cent of their GDP on such activities. Closer home, North American countries spent 2.7 per cent of their GDP on R&D while countries of Latin America and the Caribbean spent 0.6 per cent (UIC 2004). Yet, R&D is crucial for the survival and development of several industrial enterprises in a world of rapid technological change.

Many firms may not be able to establish a separate R&D unit, despite the fact that they need the R&D services. Herein lies an opportunity for the TVET lecturer to work with specific firms in an industry to assist them in undertaking the necessary R&D. This can be done through a partnership arrangement with the respective TVET institution that may see some of the work undertaken or supervised on the site of one or more firms, while others could be undertaken within the TVET institution.

While industries in Jamaica and the Caribbean will benefit from the R&D work undertaken by their counterparts in more developed countries, the unique circumstances of the relatively small enterprises, judged by international standards, that exist in the small island states of the Caribbean may require special atention. A Canadian study, "The Importance of Research and Development for Innovation in Small and Large Canadian Manufacturing Firms", concludes that in small firms—defined generally as those with 50 employees or fewer—innovation was consistently the most important characteristic associated with success. The study further concludes: "Whether a firm possesses an R&D unit, its expenditure on R&D relative to total investment, and its R&D-to-sales ratio are all related to success (Baldwin, 1997, 31). R&D in small firms is critically associated with success."

The TVET lecturer needs to work with firms in industry to encourage them to invest part of their earnings in R&D. This is important for the survival and growth of many operations in industry and is an area in which the TVET lecturer as a researcher can provide technical expertise.

Further Research Issues for the TVET Lecturer

It may be untenable for a TVET institution in Jamaica to pursue research into all areas of concern in the TVET field. It is useful, therefore, to determine the areas of research around which the institution wishes to build a reputation, that is, how it wishes to be distinguished for its research work at home and in the wider regional and international community. In other words, it may wish to determine the areas for which it wishes to be known as a centre of excellence in TVET research. This would require consensus building among TVET lecturers in the institution since this would help to guide the focus of their research as lecturers of the institution.

In the previous section a critical area that may, in fact, be included in such a research agenda was discussed, that is, the R&D to support the development of new products, processes and applications in industry. Additional areas worthy of consideration for a TVET research agenda are discussed below.

Curriculum Development

The May 2001 Memorandum of Understanding between The HEART Trust/ National Training Agency (HEART Trust/NTA) and the University of Technology (both in Jamaica), identified a few areas for joint research activities, including curriculum development. As discussed earlier, curriculum development research is important to the TVET institution for the continual updating of curriculum. There is also the need for research aimed at strengthening the articulation between TVET and training programmes of the TVET institution with the secondary school preparation for technical and vocational education. This will lead to an easier transition from secondary education to the current and future training programmes of the TVET institution. It will also enable students in the secondary school system to see the nexus between their secondary education programmes and the programmes of the TVET institution and stimulate the interest of a larger proportion of students in pursuing the TVET offerings of these institutions. Such curriculum development research should also consider the articulation between post secondary programmes of TVET institutions and more advanced levels of certification offered at higher education institutions.

Referring to a tech prep programme in the USA which is designed, implicitly, for the first two years of tertiary education, Dare (2000) argues that "it is imperative to provide both academic and vocational courses that allow student to pursue post secondary education and work without limits to their opportunities" (p. 322). Kotamraju (2007) makes a related plea for increased secondary and post-secondary collaboration in career and technical education programmes, without which there will not be a smooth transition of secondary school students to college level.

The curriculum research on the articulation between TVET programmes in secondary school and higher education programmes should help in the systems-wide alignment of programmes so that students are able to move smoothly from secondary school, through the programmes of TVET tertiary institutions and into programmes of higher education that culminate in advanced technical degrees or similar advanced professional certification. This should help to remove any lingering perception that TVET programmes are aimed only at poor students (Gaunt and Palmer, 2005). Hopefully, such research would help students, policy makers and the wider public to give to TVET the seriousness of atention that the Japanese have long given it (Yamamoto, 1995). We could then look forward to atracting more of the best and the brightest to TVET with the prospect of even more extensive innovations in TVET to accelerate national development.

Gender Issues

The issue of gender in post-secondary institutions is a mater of ongoing concern and research. The University of the West Indies (UWI), Mona, for example, reported that for the 2007/2008 academic year some 82 per cent of students on the campus were female—a matter about which serious concerns have been expressed (Seaga, 2007). This gender imbalance has serious implications for the socialization of the student on campus and for the professions, and workforce in general, into which the UWI student will graduate.

This large gender imbalance in favour of females is unlikely to be true of a TVET institution. Nevertheless, it is necessary to examine programmes that seem to have a gender bias or gender barriers and to seek resolutions that will encourage more gender equitable access to, and retention in, these programmes.

The matter of gender distribution of staff also warrants atention since the gender distribution of staff might well be sending signals that affect entry into particular programmes. It would be worth taking steps to avert in TVET institutions, the type of gender disparities that exist among staff of our primary and secondary schools. In those instances, it is the male teachers that are disproportionately small and the impact of this on the education system is only now being properly examined. The TVET institution must research the gender issues in order to take timely preventive and corrective measures where necessary. This is an important area of research for the TVET lecturer.

Labour Market Assessment

Labour market assessment would focus on the extent to which current TVET programmes are satisfying local needs and contributing to the pool of skills required by the Caribbean Single Market. Labour market research was, in fact, one of the three areas of research identified in the aforementioned Memorandum of Understanding between the HEART Trust/NTA and the University of Technology. In designing and delivering TVET programmes, it is critical that the needs of the labour market be assessed (Hamm and Mundhenk, 1995; Zinser and Lawrenz, 2004). This type of research should help to shed light on the seeming paradox of the existence of joblessness, concurrent with a shortage of skilled labour in many critical areas in Jamaica and the rest of the region. Did we train for yesterday's jobs? Are high school graduates simply not trainable? Or are we simply making incorrect projections of manpower needs? These are issues worthy of research by the TVET lecturer.

Other Issues

Other issues worthy of being placed on the TVET research agenda include:

i. **Sustainable development practices.** The aim would be to identify and correct practices that are detrimental to sustainable economic and social development.

ii. **Options for using distance technology.** Such technology may be used for widening access to TVET programmes through distance education, as well as to provide other related services to the national, regional and international community.

Summary and Conclusion

This article sought to examine the nature of research as a scientific, systematic and organized way of finding answers to research questions and has suggested that both pure and applied research are important areas of endeavour for the TVET lecturer.

The article pointed to the importance of the TVET lecturer becoming more than a consumer of knowledge. It suggests that the TVET lecturer should become, as well, a generator of knowledge. This requires the TVET lecturer to embrace research as an important aspect of his or her vocation. The article identified ways in which the knowledge generated by lecturers may be shared and how this would redound to the benefit of lecturers and the TVET institution.

The benefits of integrating teaching and research were discussed as well as how this will enhance the preparation of students for the environment in which they will work and live, by enriching the curriculum and student perception of the lecturer as a high quality expert in the field in which instruction is provided. Also examined was the need for the TVET lecturer as a researcher to strengthen the relationship with industry, and the need for collaboration with industry and the opportunities for the TVET lecturer to assist in the much needed R&D that will aid the development of new products, processes and applications for the survival and expansion of industry.

Finally, the article identified a few additional areas that may be included in a TVET research agenda, including curriculum development and alignment across levels of education and training, and the benefits that will be derived from such research in raising the profile of importance of TVET for accelerated national development. It identified, for possible inclusion in the research agenda, issues related to labour market research that will help to deal with matters such as the coexistence of joblessness in Jamaica and the Caribbean with the demand for skilled labour as well as issues of gender, sustainable development practices, use of distance training technology and curriculum development, which are all critical to the future work of the development and expansion of TVET training programmes in Jamaica and the rest of the Caribbean.

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