



# Managing Technical and Vocational Education and Training (TVET) Programmes in a Challenging Economic Environment: Responses of Administrators of Selected TVET Colleges in Yaounde 3, Centre Region, Cameroon

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**ABSTRACT:** The study employed the survey research design for the collection of data from administrators of selected TVET colleges located in the administrative area of Yaounde 3, Centre Region of Cameroon. The study involved the collection of data concerning the management problems or challenges confronting administrators of TVET colleges and the strategies that could be used in resolving them. The population consisted of all the administrators who have responsibility for the success of the school programmes - this included the principals, vice-principals, chiefs of work, and head of departments. No sampling was taken as the entire population was used since it was not large. A five-point Likert scale structured questionnaire developed by the researcher was used for data collection. The instrument was administered personally by hand. Twenty-five (25) questionnaires were distributed and 20 were correctly completed and returned, representing a return rate of 80 %. The data was analysed using the median as the measure of central tendency, and the Inter-Quartile Range as the measure of spread. The mean was thought to be unsuitable for this analysis since a composite score for a group of items on the questionnaire was not what was computed; and because Likert-type scales largely generate ordinal data. The findings have revealed a range of problems TVET administrators face in the course of managing their programmes, and the strategies that could be used in resolving them. Three of the problems, amongst others, include: 1) programmes run below acceptable limits because of insufficient funds; 2) absence of training materials in most programmes for students' use; and 3) most machines are obsolete and out of use. Apart from identifying some of the management problems that TVET administrators encounter, some of the strategies that could be employed in resolving the problems were equally suggested. It was concluded that the manner in which the problems associated with the management of physical facilities, equipment and supplies; as well as of school finance and business management of TVET programmes are resolved could impinge on the success of the colleges.

**KEYWORDS:** Management Challenges/problems, TVET; Technical and Vocational Education and Training, Administrators, TVET colleges; school finance and business management, facilities and equipment

## INTRODUCTION

Whilst it is known that TVET 'enhances labour productivity, and ... has the potential to improve Cameroon's competitiveness ... the [TVET] sector has been neglected for more than a decade [in fact, for decades, leading to] ... a shortage of skilled workers in most of the technical, industrial and commercial sectors, [even as] the training system produces thousands of graduates [year in, year out] without real expertise' [1] (para. 2). Undoubtedly, the solution to achieving technological development through leveraging on the skills and knowledge of TVET graduates is not with the establishment of schools and programmes alone, but rather with the effective and efficient management of the schools and programmes that have been established – taking into consideration the prevailing economic challenges such as those in which most countries in sub-Saharan African (SSA) currently operate. This calls on TVET policy makers and school administrators to think outside the box in order to craft radical solutions to the many challenges facing their institutions.

The call becomes necessary because an institution may have an established administrative structure, with the role of each officer clearly spelt out, but still struggle to meet its target for the simple fact that they are not thinking outside the box, further highlighting the importance of adopting proactive management strategies by school administrators. Therefore, the manner in which TVET administrators respond to the challenges they face within the task areas of educational management, such as community



relations, finance and business management, staff and student personnel management, curriculum and instruction development, and physical facilities and equipment (Hoyle and Connor) [2] in the course of managing their programmes, could further impact on the quality of the graduates that are produced, and serve as the basis on which the success of their administration would be scrutinised. This means that, in order for TVET administrators to achieve their programme outcomes, they must try out other approaches to managing their programmes; which might incorporate alternative methods of sourcing for funds as well as for acquiring facilities, equipment and supplies – instead of relying on the traditional sources for all their needs.

In order for society to judge TVET fairly, TVET institutions should be seen as capable of contributing to the development of industrial and commercial infrastructure of their countries through the skills and knowledge that they offer to their citizens. However, society must play its part because it has been argued that investing in TVET is ‘the only way forward if’ any country desires ‘to develop [critical] infrastructures such as village electricity and road construction’ [3] (p. 1). Interestingly, many countries, especially in SSA, now see TVET, albeit to varying degrees, not as ‘a second-class education [that it was once thought of] compared to the mainstream academic branch, [rather] TVET is increasingly seen as the master key to poverty alleviation and social cohesion and a chance for countries to jump on the bandwagon of development and globalization’ [3] (p. 1).

As a result, some countries have set out to boost TVET offerings, through the introduction of pragmatic policies, with the hope that this will lead to a qualified pool of skilled workforce across the different occupations relevant to the local economy and to foreign investment. However it would appear a spanner is thrown in the works each time any effort is made to showcase TVET as a veritable tool of development - provoked by the three ‘plagues’ that have ‘bedevilled TVET over the years’, including ‘low social recognition, inadequate resources and poor teaching’ [4]. Thus, while China and other emerging economies are continuously reaping from their investment in TVET, SSA countries, including Cameroon, ‘are still struggling to create those indispensable bridges between education and the world of work’ [3] (p. 1).

Therefore ‘there remains a large challenge as [SSA] countries continue to observe a large gap in the demand and supply of technical and vocational skills, and industries often identify shortage of an adequately educated workforce as a major constraint to further growth and development’ 5 (para. 1); due largely to underinvestment leading to low ‘enrollment rates [as well as] low quality and relevance across most countries’ [5] (para. 2). Nevertheless, SSA countries, including Cameroon, should continue developing workable ‘policies that will lead to new [and effective] TVET strategies’ [3] (p. 1); in order to ‘create an economic environment that promotes the growth of enterprises and generally stimulates the economy’ because ‘when businesses develop and expand, additional labour-market demands for [TVET] emerge, and new job and further training opportunities are created to trace and light the path of industrialisation’ [6] (p. 17).

However, this depends on the level of infrastructure and facilities available in TVET institutions, as well as how administrators respond to the challenges they face. It is conventional knowledge that education and training of any kind require financial resources if specified learning outcomes are to be attained. Considering that ‘TVET by its very nature, structure and composition in terms of the occupational standards and curriculum, is expensive compared to general education’ [7] (p. 96) [cites UNESCO, 2017] TVET administrators are called upon to make very crucial decisions regarding how to better deliver on their planned objectives in order to provide the job market with the workers it needs. One of the decisions the administrators are likely to make relates to how they respond to the challenges they face within the context of physical facilities and finance; for it has been observed that ‘[e]ven if programs exist, often modern technologies have not been utilized to upgrade facilities and programmes ... [in order to] ‘respond to the demands of the labor market in close partnership with employers’ [8] (p. 1). It is true that

Finance is always a challenge at all levels of education, but TVET’s budget share is [thought to have always been] very low compared to the other levels. This may be related to the issue of awareness about the important role of TVET as [even] support from the industry is still low [9] (p. 12).

Although the above situation is as observed in Ethiopia - it is not expected to be different from what obtains in other SSA countries, including Cameroon - further calling on TVET administrators to adopt effective strategies to overcome this challenge.

This paper is inspired by my unpublished PhD dissertation, carried out at the University of Nigeria, Nsukka, which examined the responses of administrators of Colleges of Education (Technical) in Nigeria to the management challenges they face. It builds on some of the issues examined in that work, but investigated in a different context, especially taking into consideration the specificities of Cameroon within the context of the current global economic challenges affecting educational provision in many



countries such as those in SSA. Consequently, the paper looks at the challenges administrators of some TVET colleges in Cameroon encounter as they manage their programmes; and the responses or approaches they adopt to resolve these challenges. Two task areas of educational management are examined in this paper from amongst the five mentioned earlier. These include: school finance and business management; and physical facilities, supplies and equipment management. Overall, this paper is expected to contribute to a deeper understanding of how administrators of these colleges respond to the challenges they encounter, against the backdrop of the current challenging economic environment.

## STATEMENT OF THE PROBLEM

The challenges that confront administrators of TVET institutions in the management of their programmes are many and varied. Olaitan [10] delineates four major problems which include: low quality of entrants into TVET programmes; low level of funding; poor staffing situation; and inadequate training facilities and equipment. These problems, and more, hamper the effective production of skilled individuals in TVET programmes [11] [12]. The production of effective and efficient TVET personnel will depend to a great extent on the viability of the training programme, in terms of resource availability. The viability of the training programme will depend, in turn, on the way the programme is managed, thus emphasising the importance of the administrators in the success of any training endeavour.

Therefore, the success of TVET programmes in the colleges involved in this study (and perhaps in those not part of the study), will depend on how the administrators respond to the problems they face in the course of managing their colleges or programmes. The extent to which administrators of these TVET colleges solve the problems they encounter will determine how successful they are in their roles. If TVET colleges are not properly operated and administered, this will adversely affect the quality of trainees they produce, and of course such poorly produced trainees will be ineffective in the labour market with its concomitant effects. One way of improving the management of TVET programmes, therefore, is by identifying the problems or challenges that arise and finding out how administrators of the programmes go about resolving the problems - with a view to proffering workable solutions.

## RESEARCH QUESTIONS

This paper provided answers to the following four questions:

1. What challenges associated with school finance and business management are encountered by administrators of TVET colleges in Yaounde 3 - Efoulan sub-division, Mfoundi division of the Centre Region of Cameroon, as they manage TVET programmes?
2. What type of physical facilities, supplies and equipment-related challenges do administrators of TVET colleges in Yaounde 3 - Efoulan sub-division, Mfoundi division of the Centre Region of Cameroon, encounter as they manage TVET programmes?
3. What are the strategies that could be adopted by administrators of TVET colleges in Yaounde 3 - Efoulan sub-division, Mfoundi division of the Centre Region of Cameroon, in the resolution of management problems associated with school finance and business management?
4. What are the strategies that could be adopted by administrators of TVET colleges in Yaounde 3 - Efoulan sub-division, Mfoundi division of the Centre Region of Cameroon, in the resolution of management problems related to physical facilities, supplies and equipment management?

## LITERATURE REVIEW

This section discusses, in an integrated approach, the conceptual issues that underpin the arguments advanced in this paper, including the challenges which administrators of TVET colleges and programmes might encounter in the two task areas of educational management examined in this study, including examples of how these challenges can or have actually been resolved.

### **School Finance and Business Management in TVET Institutions/Programmes and Associated Challenges and Strategies for Resolving or Reducing Them**

School finance and business management 'are instrumental to the achievement of the major purpose of' TVET institutions which is the preparation of the future technical workforce through teaching and learning. According to Kimbrough and Nunnery [13]



...the curriculum and instructional program desired must be transmitted into the financial resources needed through budgeting. Money must be found to fund the program. After the money has been found, it must be allocated to realize the program desired and achieve equality of educational opportunities (p. 172).

In other words, 'services of personnel, the buildings, the equipment, the supplies, and other items necessary to the operation of a school must be paid for' [14]. Supporting Campbell et al. [14] assertion, and referring specifically to [TVET] programmes, Alli and Ogunyinka [15] note that '[TVET] programmes are capital intensive'; and that 'apart from the usual need for buildings, staff remuneration and supply of stationaries, which even general education subjects need, [TVET] programmes require funds for the purchase of new equipment, maintenance of machines and equipment, funding of students work experience programme [internships], regular supply of consumable materials, and for providing security needs for technical equipment, because of their expensive nature' (p. 5).

School finance and business management consists of a wide range of tasks or activities that are expected to be performed by TVET administrators and their collaborators as they manage their institutions or programmes – budget making being one of the important activities. These activities, 'whether they have to do with securing revenues or making expenditures, are instrumental, not primary, in character' [14] (p. 321). According to the authors, 'money is useful only as it is used to purchase a programme of teaching and learning' (p. 323). It will be useless, for instance, for the TVET administrators to stash money in the institution's coffers when programmes are in need of vital resources, simply because they want to prove how prudent they are in the management of funds. 'The primary concern in administering the budget should be to ensure that the result achieved by the school system' [or programmes] 'justify the financial outlay'; and not merely to keep 'expenditures in line with what the plan specifies' [16] (p. 323).

As chief executive of their institutions, school principals play a large part in finance and business management activities, such as budget making, securing revenue, and other related operations of their schools. However, to ensure the success of their instructional programmes, TVET administrators must ensure that other staff members occupying related administrative and instructional roles, such as the heads of department, chiefs of work, and the TVET teachers who actually operate the programmes have a part to play in budget making and other operations [17]. It can only be imagined how frustrated other staff members, who have a stake in the overall outcome of the school, can be if their instructional needs are not considered in budget making. Hence, Ezeji [17] regarded 'lack of staff involvement in planning the needs of the school and in implementing its programmes as sources of waste and frustration' (p. 151). As a result, the author suggested that TVET administrators should plan for the needs of the school and programmes by 'collecting inventories of such needs from their staff' to ensure that all 'the resources needed for effective [instruction] by staff are [not] omitted in the administrator's list' (p. 151). According to Ezeji, [17] if this is not done, staff 'may have to device other means for making their teaching both meaningful and effective' (p. 151).

Available literature appears to point to the fact that most school administrators place too much emphasis on keeping expenditure within limits to the detriment of the programmes. Adesina [16] argues that 'when emphasis is laid too much on the amount to be spent or keeping expenditure within limits, the value of the educational outcome is played down' (p. 322) - schools and programmes 'begin to patch up old and inefficient buildings, employ ineffective teachers, and begin to leave out certain aspects of the programmes, with the result that the educational system begins to crack' (p. 322). Instead, Adesina [16] suggests that efforts should be made to ensure that 'where needs, seen and unforeseen, are clearly identified and justified, money should be made available' (p. 324) – reason why the administrator should collect inventories of needs from their staff during budget making, to ensure that all the resources needed for effective instruction by staff are not missed out.

Another important activity area in school finance and business management which can help TVET administrators attain their instructional goals, and which is likely to be bedeviled by challenges, relates to securing revenue. It has been argued that to succeed in this area would require TVET administrators to think outside the box; that is, to use their ingenuity to find solutions to some of the financial challenges that they face. Interestingly, a number of non-traditional approaches have been suggested as likely sources from which financial support of schools operating in most developing nations can be derived. They include, amongst others, revenue from school activities, external aid, and support from local authorities, missionary bodies and associations [16]. Other sources, which themselves are not new – but which, nonetheless, are worth to try out include seeking of contributions from alumni and philanthropists; and encouraging schools in the rural areas to undertake agricultural activities [18].

After securing revenue the next thing is how expenditure activities are managed. Management of expenditure as an activity is not without challenges as the TVET administrator has to make purchases, manage supplies, carry out accounting and reporting,





and keep property inventory [14]. Mismanagement and misappropriation of funds in educational institutions has been found to be one challenge faced by TVET institutions within the task area of finance and business management. School systems have limited resources with which to pursue their objectives and using these resources efficiently is a key aim for their activities [19] (p. 17). Therefore, the onus lies on the administrator to ensure that the funds secured are judiciously used [20]. To achieve this, the TVET administrator has to check the budget using a budget control system. Such a system can be developed onsite to ensure 'that at least once a month the conditions of expenditures and revenues' are ascertained. This can help the TVET administrators to 'keep ... appropriate accounting for funds received and expended by the school system' thus ensuring ... that funds are spent in accordance with authorized budgetary statements' [13]. Furthermore, 'such a report can prove an indispensable aid to controlling bodies in their efforts to understand how the school or its programmes are' progressing [14]. They can use this information in making current administrative decisions and planning future activities to justify the high cost of TVET provision.

No rapid progress may be made in TVET in any nation in the absence of regular funding; in other words, if the goals of TVET programmes are to be achieved in their entirety, adequate funding is a prerequisite [15] [18]. Therefore, for TVET establishments to continue to attain their objectives in a challenging economic environment as currently experienced in SSA, including Cameroon, TVET administrators must strive to attract the barest minimum of funding from both government and non-government sources to ensure the continuous availability of funds for their programmes. Judging from Prosser's principles of vocational education, as cited in Okoro [21], it is apparent that there is a minimum of funding below which effective TVET cannot be given. According to Prosser, 'if the course does not permit of this minimum of per-capita cost, [TVET] should not be attempted'. Consequently, TVET programmes will function only in proportion as they are adequately funded.

Other likely challenges that the TVET administrators can face as they manage their programmes include the following [22]: i) 'over-reliance on government as a sole source for funds' (p. 4), which makes TVET institutions to 'be at the mercy of the national budget for [their] survival' (p. 4); ii) wastage and under-utilization of expensive educational facilities, tools, equipment, and staff - in TVET institutions where these items are available; iii) 'underinvestment of resources in [TVET]'. The consequences of the underinvestment of resources in TVET are apparent. The effect could be seen in the absence of sufficient equipment, facilities and supplies for students' use; also, a lot of plans to enhance the quality of TVET programmes in SSA countries, including Cameroon, have failed because of higher costs in executing the plans partly because financial resources are not provided in time [23].

One of the objectives of this paper is to determine the type of finance and business management-related challenges or problems faced by administrators of TVET colleges in Mfoundi division, Yaounde municipality; and the strategies adopted by the administrators to resolve the problems; in other words, administrators' responses to the challenges they face in the area of finance and business management in the course of running their colleges and programmes. Some of these strategies have been highlighted earlier while reporting on how some authors think the management challenges faced in schools could be resolved. More strategies are discussed hereafter. There have been recurrent debates in education, globally (some many decades old) on how to better deal with the increasing cost of TVET provision, especially in Africa where the annual budget for the sub-sector has remained indefensibly low. For instance, Ericson and Andrews [38] (p. 118) offered the following possibilities 'in connection with solving the problem of [increasing] costs [of TVET provision] and possible reductions':

- 1) '... purchase of good used machinery and equipment' – since 'much of the standard machinery changes very little in principle in a few years';
- 2) 'Solicit free materials and equipment from manufacturers and industrial firms'
- 3) 'Salvage materials (automobile parts, odd pieces of lumber from sawmills, 'packing boxes') to use for students' practical work;
- 4) Teaching 'students the value of material' thereby helping to stop waste in workshops;
- 5) Ensure that 'students make less pretentious articles' since a small practical piece which is produced 'using less material may, and often will, serve the same purpose educationally';
- 6) Engage students and staff to '[m]anufacture articles for the school ... [but this should] be done ... without exploiting students'; and
- 7) 'Apply for financial aid through [government] and through appeals to local industry'.

Although Ericson and Andrews [38] made these suggestions more than four decades ago, they remain as relevant today as when they were first made; especially to TVET in Africa which is experiencing severe financial challenges. Related to increasing costs



of TVET provision is the challenge of declining financial commitment to TVET institutions; that is, the problem of insufficient funds. Some strategies, centred mainly on the generation of revenue by the institutions being confronted by the problem of declining funding, have been suggested for resolving these problems. Educational institutions facing declining funding have been advised to adopt the following strategies: investing in real estates; soliciting for gifts; considering student fees; and engaging in laundry and dry cleaning services [39] [40] [41].

The question of students' fees, although not new, has remained a contentious one in some quarters. Not many people will want fees to be raised, or even introduced, yet they demand quality education to be offered to their wards. On the other hand, others think that most educational institutions have raised tuition too late. While supporting the need for extra-income sources for educational institutions, especially in the TVET system, Umbeck [39] argues that

...it would be neither prudent nor wise to stand by idly and wait for [government] funds to bail us out. Such grants, if and when they come, may arrive too late and almost certainly will not be adequate to meet the demands of an effective and significant educational program. It became imperative, therefore, that we undertake a search for new, nontraditional sources of revenue - in addition to, not in replacement of, traditional income-producing activities such as gifts, tuition, grants and others (p. 126).

In reality, the issue of extra-income sources ought to be re-examined by TVET institutions in SSA as it promises to provide an avenue for cash-strapped institutions to, at least, use in plugging some of the gaping funding holes that have been difficult to fill. These funding holes have stood as bugbears to the development of the TVET sub-sector as it strives to meet the demands for an effective, efficient and significant educational programme that the society has placed upon it. On this premise, therefore, TVET institutions in SSA are urged 'to search about for ways and means, other than the time-honoured traditional sources, to assure the funding that present and future programmes will inescapably demand' 39 (p. 126). More revenue generating suggestions have been put forward as likely strategies for mitigating the impact of insufficient funds on TVET institutions and programmes. They include, amongst others, the following:

- 1) Leasing the TVET laboratory or workshop to some industrial manufacturers and businessmen for their own use to raise funds and help solve the problem of wastage and underutilization of equipment [34].
- 2) Productive work (Bello [42], Obande [43], Zahraden [44]) (or the direct contract approach) - to use the institution's resources to carry out jobs for the government, school or any other entity which could have been contracted out to private contractors.
- 3) Partially commercialize services and workshop equipment and tools for profit [34].
- 4) Recognizing eminent personalities with certificates during specially organised events for their contribution to the development of their communities, and appealing to them to generously donate to any TVET programme of their choosing [26].
- 5) Organising exhibition week or open days; and founders' day. During all these events, appeals are made for support to the school programmes.

Yet another strategy that is examined here is that which could be used in solving the problem of mismanagement of funds - a cankerworm in most school management settings. According to Moffat, [45] the audit can be used to check a programme from flopping for financial reasons - by ensuring that the funds meant for the programme are not mismanaged. Moffat [45] points out that for institutions that are funded by government grants 'the agencies that oversee these funds establish detail rules and regulations to assure that funds are used solely for a specific purpose or objective' (p. 38). According to the author, mismanagement of a programme funded through these sources could violate the agency's requirements and thus lead to withdrawal of financial support. Programme audit, as noted by Moffat [45], has the exclusive function of looking for actual or potential problems in the operation in order for administrators to make the necessary corrections and adjustments while the programme is in operation. An important characteristic of an effective programme audit system is that it must be conducted by an internal member of staff who is not responsible for the programme's success; and must be continual throughout the school year.

Discussed above are a few strategies which school administrators, including those in TVET institutions could employ in resolving challenges that they may face in the course of managing their programmes. The question now is, if the TVET administrators involved in this study actually face these types of problems and are aware of these strategies, would they consider



them as workable strategies to be adopted; or, perhaps, they would prefer to adopt different strategies? This study will shed more light on this preoccupation.

## **Physical Facilities, Supplies and Equipment Management in TVET Programmes and Associated Challenges and Strategies for Resolving or Reducing Them**

The management of facilities, supplies, and equipment has become one of the largest of 'the nonacademic support functions of' educational institutions [24]. According to Middleton [24], '[t]he size of the facilities inventory, the cost of its acquisition, maintenance, and operation; and its technical complexity are all growing at a rapid rate' (para. 1). Underlying the importance of each of these facilities management functional areas are the substantial financial needs of facilities acquisition, maintenance, and operation [24]. Clearly, it is in these functional areas that TVET administrators are likely to encounter challenges.

Physical facilities, supplies and equipment are the bedrock of TVET programmes. It would be absurd, for instance, to construct laboratories or workshops without providing them with the necessary equipment, given that skills are not acquired in isolation of tools, facilities, supplies and equipment. This calls for the adequate presence and use of these items in order to help TVET graduates to acquire the skills and knowledge required to be competitive in the labour market [25]. However, it has been noted that most students come in contact with any type of machines, tools, and equipment only during internships (student work experience schemes) or only in their first job roles [26]. Yet it has been argued that 'effective [TVET] can only be given where the training jobs are carried out in the same way with the same operations, the same tools and the same machines as in the occupation itself' (Prosser and Quigley 1949, as cited in Okoro [21]). In other words, 'the closer the learning environment resembles that of actual occupational environment, the easier it will be for transfer of learning to take place' [27]. It is apparent that the environment in which many TVET trainees are being trained, especially in Cameroon - where some schools are created and become operational without a single equipment, or even trained teachers [28] - cannot ensure the achievement of functional educational objectives such as guaranteeing the production of efficient and effective workers at the end of their training; and trainees who go through such TVET systems are hardly ever employable [29].

Consequently, in order for a learning environment to be deemed fit for skill acquisition there must be adequate presence of physical facilities, tools, and equipment of good quality and quantity since teaching and learning in TVET emphasizes more of practical than theoretical work [30]. In spite of this realisation, there are obvious challenges on the way to attaining this goal. According to Oríkpe [25], TVET is capital - intensive, and institutions offering TVET programmes are most often hard up financially, hence they cannot have access to most of the required facilities; not only that, the few that are available are often out of use due to lack of maintenance [31]. This brings to the fore a critical element in the management of TVET programmes which is the importance of inculcating maintenance culture amongst trainees and personnel [32]. Without proper maintenance of the available facilities and equipment the goals of TVET can hardly be attained.

Another area of activity for the TVET administrators, and for which they could encounter problems, relates to the purchasing, storage, and distribution of supplies and equipment [13]. According to Kimbrough and Nunnery [13], instructional programmes cannot survive without instructional supplies, but they need to be accessible when available. Therefore, when these items are received by the administrator, they must be efficiently and equitably distributed as needed by maintaining an inventory of what is available for distribution [13], thus ensuring that all the training programmes are involved in the process [17] [13].

Under-utilization of facilities and equipment is yet another likely problem that TVET institutions and programmes - that are equipped with such items may be confronted with. According to UNESCO [33], under-utilization of educational facilities and equipment is another area of great concern in TVET programmes. UNESCO [33] expressed worries that most TVET programmes close their workshops in the afternoon when the normal days' work ends, thereby rendering the equipment idle. This practice has hardly stopped especially for institutions that are lucky enough to have these facilities and equipment. UNESCO [33] argued that such workshops or laboratories should have remained opened in the evening and during weekends so that profitable jobs could be carried out by members of the community. The modality for achieving the above was for an arrangement to be made such that students work in shifts: regular students using the equipment in the morning hours, people from outside the school (such as local artisans and industrial workers) using the laboratories in the evening - to earn the school or department some revenue [34].

The arguments presented in the preceding paragraphs seem to indicate that TVET colleges, overall, are experiencing



challenges within the area of physical facilities, supplies and equipment management. But what specific challenges do the administrators of the colleges involved in this study actually encounter in the day-to-day operation of their programmes; and how might they respond to these challenges? A number of authors have suggested different strategies which educational institutions or programmes, including TVET institutions and programmes can use in resolving the challenges they encounter in the course of managing their programmes. In suggesting strategies for mitigating maintenance challenges, Oni and Igwe [35] call for proactive action in training of qualified personnel by both industry and relevant agencies; and ensuring the quick release of resources for repairs by those concerned. They also called for the evolvement of a prudent management and maintenance system in schools.

On their part, Okorie and Ezeji [36] suggest that administrators should start by making judicious use of available materials and other resources; and for TVET institutions to improvise local alternatives to imported materials and technical equipment with a view to ultimately nationalising their production. Similarly, Orikpe [25] argues that school management could engage external experts who will be responsible for servicing and carrying out some type of maintenance work on the equipment; while students are trained to be able to identify danger signals when using equipment, and to promptly report their observations to the appropriate authority. The author further called for the occasional organisation of workshops or seminars for TVET teachers on effective equipment and facilities management, including how to carry out minor repairs.

Regarding the problem of inadequate workshop tools and equipment for training in TVET institutions, Ibe [26] suggests that concerned TVET institutions and programmes should seek help from neighbouring institutions to make use of their tools and machines, or make contacts with private individuals (who are in possession of these facilities) in the locality to assist; and for obsolete equipment to be updated through the use of up-to-date spare parts. The author further suggests that practical pieces produced by final year students of the institution could be used to equip workshops; and that fresh students could be asked to bring with them one valuable equipment or workshop tool upon admission, which they will then surrender to the school upon graduation. It should be emphasised that all these efforts will come to naught if the issue of wastage is not effectively tackled. Commenting on the problem of wastage of available materials and the inefficient use of scarce resources such as classrooms, laboratories, and equipment in schools, Farrant [37] suggests that school administrators should 'delegate responsibility' for the supervision of materials and other scarce resources to other staff members, and for the time-table to be planned 'round those resources that are scarce'.

## METHODOLOGY

The study employed the survey research design for the collection of data from administrators of randomly selected TVET colleges located in the administrative area of Yaounde 3 - Efoulan sub-division, Mfoundi division, Centre Region, Cameroon. The population consisted of all the administrators who have responsibility for the success of the instructional programmes in the selected colleges; this includes the principals and vice-principals, chiefs of work, and heads of departments. No sampling was taken as the entire population was used since it was not large.

### Instrument for Data Collection

A five-point Likert scale structured questionnaire developed by the researcher after the review of available literature was used for data collection. It contained 12 potential management problems which TVET administrators could be confronted with as they manage their programmes, within two task areas of educational management - school finance and business management, and physical facilities, supplies and equipment management. In addition, the instrument contained a total of 41 suggested strategies that TVET administrators could adopt in responding to the 12 potential management challenges or problems that they might face. The questionnaire was divided into two parts. Part I was background information, such as the name of institution, and status of the participant in the college. Part II was divided into four sections as follows: Section A1 dealt with finance and business management problems or challenges that could be encountered by administrators of TVET colleges. Section A2 focused on the strategies that could be adopted in solving or reducing the identified finance and business management problems. Furthermore, Section B1 sought to find out the type of physical facilities, supplies and equipment management challenges that could be faced by administrators of TVET programmes in the randomly selected colleges; and Section B2 focused on the strategies that could be adopted in solving or reducing the problems they may likely face.

In sections A1 and B1 which dealt with management problems, participants were required to indicate the extent to which they agree or disagree with the statements provided, as actual problems that they face in their programmes, using the following scale: SA = Strongly Agree; A = Agree; U = Undecided; D = Disagree; SD = Strongly Disagree. Similarly, in sections A2 and B2





which dealt with the strategies that could be adopted by administrators to solve or reduce the problems they experience, participants were required to indicate the extent to which they agree or disagree that the problems they have indicated that they experience could be solved or reduced using the strategies provided, on the same scale as shown above.

**Method of Data Collection and Analysis**

The instrument was administered personally through contacts with the participants. In total, 25 questionnaires were distributed and 20 were correctly completed and returned, representing an overall return rate of 80 %. The data collected ‘was analysed using the median as the measure of central tendency, and the Inter-Quartile Range (IQR) as the measure of spread/dispersion’ [46] (p. 70). In order to determine the challenges or problems which TVET administrators face and the strategies that could be used to resolve them, the following decisions were taken:

[A]ny IQR equal to or larger than 2 was considered large, and suggests that participants are somewhat or extremely polarised in their opinion on a particular item. In this respect, the exact IQR were reported in order to show the degree to which the opinions are polarised. On the other hand, a small IQR (of a value 0 or 1) was taken as indication of consensus amongst the participants for the questionnaire item under consideration. An IQR was judged small or big in relation to its associated median, lower quartile and upper quartile (Q1 and Q3) values [46] (p. 70).

The mean was thought to be unsuitable for this analysis because a ‘composite score for a group of items’ on the questionnaire is not what was computed, instead individual items were analysed. The choice of median was further informed by the fact that ‘Likert-type scales largely generate ordinal data, and “means and standard deviations” will be misleading as they ‘have unclear meanings when applied to Likert scale responses’ [47] (p. 541). It was equally argued that if the responses of participants ‘were to cluster at either “high or low extremes, the mean may appear to be the neutral or middle response [which] may not fairly characterise the data” [47] (p. 541). The response options in the questionnaire were converted into numbers as follows: Strongly Agree= 5; Agree= 4; Undecided= 3; Disagree= 2; and Strongly Disagree= 1

**RESULTS**

**Answering of Research Questions**

Four research questions were posed for this study and were answered accordingly. The medians and IQRs generated from the responses of the participants that participated in this study are presented in tables 1 to 4.

**Research Question 1**

What challenges associated with school finance and business management are encountered by administrators of TVET colleges in Yaounde 3 - Efoulan sub-division, Mfoundi division of the Centre Region of Cameroon, as they manage TVET programmes?

**Table 1: Problems Associated with School Finance and Business Management Encountered by TVET Administrators**

S/N	PROBLEM/CHALLENGE	MEDIAN	Q1	Q3	IQR
1.	Some Heads of Departments (HODs) do not spend funds allocated for their programmes in accordance with authorised budgetary heads.	3	2	4	2*
2.	Programmes run below acceptable limits because of insufficient funds, especially for practical work.	4	4	5	1**
3.	†High cost of running training programmes.	4	2	5	3*
4.	Inadequate funding of colleges by the government – the yearly subvention is increasingly becoming insufficient.	4	4	5	1
5.	Poor administration (operation) of budget meant for the colleges by the central/regional delegation of technical and vocational education.	3	2	3.5	1.5



6.	Most training departments (programmes) do not meet deadlines in supplying their needs for use in preparing the budget for the college to be forwarded to the central delegation in Yaounde, or to regional delegations.	4	3	4	1
7.	Late disbursement of yearly subvention (funds) to the colleges	4	4	4	0**

\*\* All items with IQR of ‘0’ or ‘1’ denote consensus in opinion.

\*All items with IQR of ‘2’ and above denote polarisation in opinion.

†Considered a challenge or problem, but opinion polarised

Table 1 shows that the finance and business management problems or challenges which participants have unanimously agreed to (as indicated by the value of the interquartile range and the median score) that they encounter as they manage their TVET programmes include the following (statements abridged to maximise space): ‘Programmes run below acceptable limits because of insufficient funds ...’ [Median = 4; IQR=1]; †‘High cost of running training programmes’ [Median= 4; IQR=3]; ‘Inadequate funding of colleges by the government ...’ [Median=4; IQR=1]; ‘Most training departments (programmes) do not meet deadlines in supplying their needs for use in preparing the budget for the college ...’ [Median=4; IQR=1]; ‘Late disbursement of yearly subvention (funds) to the colleges’ [Median=4; IQR=0].

**Research Question 2**

What type of physical facilities, supplies and equipment-related challenges do administrators of TVET colleges in Yaounde 3 - Efoulan sub-division, Mfoundi division of the Centre Region of Cameroon, encounter as they manage TVET programmes?

**Table 2: Physical Facilities, Supplies and Equipment-Related Problems Encountered by TVET Administrators**

N=20

S/N	PROBLEM/CHALLENGE	MEDIAN	Q1	Q3	IQR
8.	Absence of training materials (such as wood, metal, building lime, and electrical accessories) in most programmes for students’ use.	4	3	4	1**
9.	†Acute shortage of machines and equipment (such as computers and tools) for training purposes.	4	2	4	2*
10.	Most machines are obsolete and out of use.	4	4	4	0**
11.	Wastage of available training material such as wood, metal, bricks and blocks, cables, etc. by students.	3	3	3	0
12.	Non-maintenance of available machines and equipment for effective teaching by authority concerned.	3	2	4	2

\*\* All items with IQR of ‘0’ or ‘1’ denote consensus in opinion.

\*All items with IQR of ‘2’ and above denote polarisation in opinion.

†Considered a challenge or problem, but opinion polarised

As shown in Table 2, the physical facilities, supplies and equipment-related problems or challenges which participants have unanimously agreed to (as indicated by the value of the interquartile range and the median score) that they encounter as they manage their TVET programmes include the following (statements abridged to maximise space): ‘Absence of training materials ... in most programmes for students’ use’ [Median = 4; IQR= 1]; ‘Acute shortage of machines and equipment ... for training purposes’ [Median = 4; IQR=2]; ‘Most machines are obsolete and out of use’ [Median=4; IQR=0].



**Research Question 3**

What are the strategies that could be adopted by administrators of TVET colleges in Yaounde 3 - Efoulan sub-division, Mfoundi division of the Centre Region of Cameroon, in the resolution of management problems associated with school finance and business management?

**Table 3: Strategies that could be adopted by TVET Administrators in Solving School Finance and Business Management Problems that they encounter**

N=20					
S/N	PROBLEM & STRATEGY	MEDIAN	Q1	Q3	IQR
<b>1.</b>	<b>Some Heads of Departments (HODs) do not spend funds (money) allocated for their programmes in accordance with authorised budgetary heads.</b>				
(a)	Use internal audit programme to check expenditure	4	4	4	0**
(b)	Enforce the keeping of appropriate accounting for funds received and expended by various programmes.	4	3	4	1**
(c)	They should be denied any subsequent release of funds until they properly account for previous funds	3	2	4	2*
<b>2.</b>	<b>Programmes run below acceptable limits because of insufficient funds, especially for practical work</b>				
(a)	Ensure that it is only where needs are clearly defined and justified that money is made available.	4	4	4	0
<b>3.</b>	<b>High cost of running training programmes</b>				
(a)	Purchase fairly used machinery for the programmes/ or order for the production of local ones.	4	2.5	4	1.5
(b)	Solicit free materials and equipment from local or foreign manufacturers and firms for instructional use.	4	3	5	2*
(c)	Salvage materials (off-cuts from sawmills, scrap metal, etc.) from local or foreign businesses for instructional purpose.	4	3	4	1
(d)	Enforce, through strict control, the stoppage of waste in workshops and laboratories.	4	4	5	1
(e)	Require students to provide their own material and tools for practical work.	3.5	2	4	2
<b>4.</b>	<b>Inadequate funding of colleges by government – the yearly subvention is increasingly becoming insufficient</b>				
(a)	Provide consultancy services to generate revenue.	4	4	5	1
(b)	Seek assistance from Parent Teacher Association.	4	4	4.5	0.5
(c)	Solicit for gifts from philanthropists, religious bodies, etc.	4	3	4	1
(d)	Invest in school shops, farms, etc. to generate revenue.	4	4	4	0
(e)	Organise fee paid classes for roadside technicians.	3	2	3	1
(f)	Require students to pay special equipment levy and other laboratory fees.	2	2	4	2
(g)	Partially commercialise services and available laboratory equipment and machines to generate revenue for the college programmes.	4	4	4	0



(h)	Lease available laboratory/workshop equipment.	4	3	4	1
(i)	Organise exhibitions during which items produced by the college are sold and appeals for support made to the public.	5	5	5	0
(j)	Request for more funds from the relevant department.	4	4	5	1
<b>5.</b>	<b>Poor administration (operation) of budget meant for the colleges by the central/regional delegation of technical and vocational education</b>				
(a)	Keep competent administration informed of the situation.	4.5	4	5	1
(b)	Plan to meet with the regional or the divisional delegate and persuasively present your case.	4	3.5	4.5	1
<b>6.</b>	<b>Most training departments (programmes) do not meet deadlines in supplying their needs for the college to use in preparing the budget for onward submission to the national delegation in Yaounde, or to regional delegations</b>				
(a)	Have the programmes plan their needs more carefully and make periodic checks so as to detect problems early enough.	4.5	4	5	1
(b)	Assign competent staff either in or out of the college to prepare the budget	2.5	2	4	2
<b>7.</b>	<b>Late disbursement of yearly subvention (funds) to the colleges</b>				
(a)	Continue with the programmes at the current level until funds are disbursed by the government	3.5	3	4	1
(b)	Source for funding elsewhere while waiting for funds to be disbursed by the government	4	4	4	0

**\*\* All items with IQR of '0' or '1' denote consensus in opinion.**

**\*All items with IQR of '2' and above denote polarisation in opinion.**

Table 3 reveals the strategies (indicated by the value of the interquartile range and the median scores) that could be adopted by TVET administrators in resolving the School Finance and Business Management Problems that they encounter as they manage their programmes. As shown in the Table, participants unanimously agreed that to solve the problem in which 'programmes run below acceptable limits because of insufficient funds', TVET administrators should 'ensure that it is only where needs are clearly defined and justified that money is made available'; for the problem of 'high cost of running training programmes', the following strategies were suggested: 'purchase fairly used machinery for the programmes/ or order for the production of local ones'; 'salvage materials from local or foreign businesses for instructional purpose; and 'enforce, through strict control, the stoppage of waste in workshops and laboratories'.

Regarding the problem of 'inadequate funding of colleges by government...', TVET administrators could adopt the following strategies: 'provide consultancy services to generate revenue'; 'seek assistance from Parent Teacher Association'; 'solicit for gifts from philanthropists, religious bodies, etc.'; 'partially commercialise services and available laboratory equipment and machines to generate revenue for the college programmes'; 'lease available laboratory/workshop equipment'; 'organise exhibitions during which items produced by the college are sold and appeals for support made to the public'; 'request for more funds from the relevant department'; and 'invest in school shops, farms, etc. to generate revenue'.

Relating to the problem in which 'most training departments (programmes) do not meet deadlines in supplying their needs for the college to use in preparing the budget ...' it was suggested that the programmes should 'plan their needs more carefully and make periodic checks so as to detect problems early enough'. Concerning the problem of 'late disbursement of yearly subvention





to colleges’, it was suggested that TVET administrators could ‘source for funding elsewhere while waiting for funds to be disbursed by the government’; or ‘continue with the programmes at the current level until funds are disbursed by the government’.

**Research Question 4**

What are the strategies that could be adopted by administrators of TVET colleges in Yaounde 3 - Efoulan sub-division, Mfoundi division of the Centre Region of Cameroon, in the resolution of management problems related to physical facilities, supplies and equipment management?

**Table 4: Strategies that could be adopted by TVET Administrators in Solving Physical Facilities, Supplies and Equipment Management Problems that they encounter**

S/N	PROBLEM & STRATEGY	MEDIAN	Q1	Q3	IQR
<b>8.</b>	<b>Absence of training materials (such as wood, metal, building lime, and electrical accessories) in most</b>				
(a)	Solicit consumable materials (wood off-cuts, scrap metal, etc.) from local and foreign manufacturers and	4	4	4	0
(b)	Require students to provide the materials and tools they need for practical work.	2.5	2	3	1
(c)	Make appeals to individuals, local and international organisations for the donation of training materials.	4	4	5	1
<b>9.</b>	<b>Acute shortage of machines and equipment (such as computers and tools) for training purposes</b>				
(a)	Make arrangement with local and foreign industries and businesses in the area to help with their facilities.	4	4	4	0
(b)	Take students to neighbouring institutions to make use of their machines and equipment (i.e. pair well-resourced with lower-resourced schools)	3	2.5	4	1.5
(c)	Require new students to bring along some specified tools and light equipment on admission.	4	3	4	1
<b>10.</b>	<b>Most machines are obsolete and out of use</b>				
(a)	Make arrangement with local and foreign firms and businesses, in the locality, to help the college with their	4	4	4	0
(b)	Take students to well-equipped neighbouring institutions to make use of their machines and equipment (i.e. pair well-resourced with lower-	4	2	4	2
<b>11.</b>	<b>Wastage of available training material such as wood, metal, bricks and blocks, cables, etc. by students</b>				
(a)	Delegate responsibility for the supervision and monitoring of the use of materials and equipment to a particular staff member or student.	4	4	5	1
(b)	Any student culpable (caught wasting material knowingly) should be made to replace the material wasted, and the parent or guardian informed	5	4	5	1
<b>12.</b>	<b>Non-maintenance of available machines and equipment for effective teaching by authority concerned</b>				



(a)	Hire a repairperson or request the relevant department to provide experts for servicing and carrying out maintenance work on the equipment and machines.	4	4	5	1
(b)	Teach students to recognise danger signals when using machines and report promptly.	5	4	5	1
(c)	Draw up a maintenance schedule and involve competent staff members in the maintenance of machines and equipment.	5	4	5	1
(d)	Ensure effective training of personnel and students who make use of the machines and equipment.	4	4	5	1
(e)	Ensure quick release of resources for repairs	5	4	5	1
(f)	Integrate machine maintenance needs in planning (budgeting) for the needs of the college as a whole.	5	4	5	1
(g)	Assign maintenance responsibilities to specific staff	5	4	5	1

**\*\* All items with IQR of '0' or '1' denote consensus in opinion.**

**\*All items with IQR of '2' and above denote polarisation in opinion.**

Table 4 shows the strategies (indicated by the value of the interquartile range and the median scores) that could be adopted by TVET administrators in resolving the physical facilities, supplies and equipment management problems that they encounter as they manage their programmes. As shown in Table 4, participants unanimously agreed that the problem of the 'absence of training materials ...in most programmes for students' use' could be solved or reduced by adopting the following strategies: 'solicit consumable materials from local and foreign manufacturers and businesses'; 'make appeals to individuals, local and international organisations for the donation of training materials'.

Regarding the problem of the 'acute shortage of machines and equipment (such as computers and tools) for training purposes', the participants suggested that TVET colleges could adopt the following strategies: 'make arrangement with local and foreign industries and businesses in the area to help with their facilities'; 'require new students to bring along some specified tools and light equipment on admission'. The next problem or challenge encountered by TVET administrators as shown in Table 4 was that 'most machines are obsolete and out of use'; and the strategy suggested to resolve this problem was for TVET colleges to: 'make arrangement with local and foreign firms and businesses, in the locality, to help the college with their facilities to support students' practical work'.

## DISCUSSION

Finance and business management, along with physical facilities, supplies and equipment management constitute two task areas of educational management whose importance to TVET cannot be overemphasized. TVET programmes are capital intensive as they require funds for the purchase of new equipment, maintenance of machines and equipment, and the regular supply of consumable materials. This can present a real challenge to those managing the programmes. So, it is not unsurprising that TVET administrators of the target colleges studied are going through all the challenges revealed in this study. Tables 1 and 2 reveal the challenges or problems that administrators of TVET colleges and programmes encounter in the day-to-day running of their programmes.

The TVET administrator has responsibility in a wide range of areas as they manage their programmes. And these tasks must be carried out in synergy across the various training departments if they must realise their missions. One of such tasks is budget making which requires collaborative efforts from a wide range of individuals in the school. But in a situation where some departments do not meet deadlines in supplying their needs for the college to use in preparing the budget as identified in this study these missions cannot be realised. A similar problem was highlighted decades earlier by Ezeji [17], who argued that failure by training departments to supply their needs for the preparation of the budget of the school can put staff in the affected programmes in an uncomfortable situation where they are forced to device other means for making their teaching both meaningful and effective.



Still within the context of budget making it would appear administrators of the target colleges indulge in the practice whereby undue emphasis is laid on keeping expenditure within limits, in the course of executing the budget - a practice Adesina [16] advised against. As Adesina [16] has suggested, instead of trying to keep expenditure within limits, administrators should ensure that 'where needs, seen and unforeseen, are clearly identified and justified, money should be made available.'

According to Adesina [16], when administrators try to keep expenditure within limits, 'the value of the educational outcome is played down, which leads to programmes patching up old and inefficient buildings, employ ineffective teachers, and begin to leave out certain aspects of the programmes, with the result that the educational system begins to crack'. Another challenge that participants encountered as they managed their programmes had to do with the late disbursement of yearly subvention from the state. This has grave consequences for the success of the colleges and programmes. To ensure the realisation of curriculum plans there is need for timely availability of funds. According to Duran [23], when subventions come in late the plans put in place to enhance the quality of programmes will fail. Added to the problem of subventions coming in late is the problem of cost of running TVET colleges and programmes. It can be argued that because of the specialised nature of TVET provision, the cost of running programmes can be high. But it would appear not all participants that participated in this study agree, as some did not think this is a problem they encounter as they manage their programmes, as their opinions were polarised on this item as the result of this study show (see Table 1, especially the median score and IQR for item 3).

It is hard to say why this is the case, considering that a number of TVET researchers and educators seem to acknowledge the high cost of TVET provision. For instance, Mulenga et al. [7] (p. 96), argue that 'TVET by its very nature, structure and composition in terms of the occupational standards and curriculum, is expensive compared to general education.' In the same vein, Alli and Ogunyinka [15] note that 'apart from the usual need for buildings, staff remuneration and supply of stationaries, [TVET] programmes require funds for the purchase of new equipment, maintenance of machines and equipment, funding of students work experience programme, [and] regular supply of consumable materials ...' One probable reason for the polarisation in opinion could be because the colleges that participated in this study are all within the proximity of the supervisory ministries and agencies, so individual colleges' access to extra budgetary resources may vary, depending on their negotiating powers.

The findings equally show that the colleges are inadequately funded by the government. This is hardly surprising because, as Ibe [26], Ighedo [11], Olaitan [12] observed, low level of funding; poor staffing situation, and inadequate training facilities and equipment are critical issues in TVET institutions. The situation has hardly changed to this day, which hampers the effective production of skilled individuals in TVET programmes [11] [12]. According to Bowen and Wei [4], inadequate resources and poor teaching is one of the three plagues that continue to bedevil the TVET system over the years. TVET institutions cannot attain their goals in the absence of physical facilities and equipment. However, there are indications that colleges studied are confronted with the absence of training materials and machines for students' use; a situation which forces them to train students with obsolete machines, some of which barely worked. According to Orikpe [25], because of the capital intensive nature of TVET programmes, 'institutions offering TVET programmes are often hard up financially' leading to the absence of critical infrastructure for effective training - to the extent that some trainees come in contact with any type of machines, tools and equipment only during internship, or in their first job roles [26].

Participants in this study have expressed their views on the strategies they think can be adopted to resolve some of the management challenges that TVET administrators face in the course of managing their programmes. Some of the identified strategies appear to corroborate the ideas put forward by a number of authors in resolving various management challenges in education, including in TVET. Some of the identified strategies relate to: how to mitigate the impact of insufficient funds on TVET programmes (Ibe [26]; Okeke and Oranu [34]); the approaches that can be adopted in resolving the problem of high cost of TVET provision (Ericson and Andrews [38]); and how to tackle the problem of declining funding experienced by institutions (Umbeck [39]; Anoa [40]; Olaitan, [41]), amongst others. It is worth noting that some of the identified strategies can be implemented without recourse to any financial commitment (important to cash-strapped programmes) - as it may simply require the establishment of a cordial relationship with some benefactor in the local community who is imbued with a philanthropic mindset. For example, money may not be required in order to salvage materials from local or foreign businesses for instructional purpose, in order to respond to the challenge of the High cost of running TVET programmes.



## CONCLUSION

The financial needs of TVET institutions and programmes, both at the secondary and the tertiary levels have expanded significantly in many countries in sub-Saharan Africa, because of societal expectations that these institutions will perform an increasing range of critical functions, as foundations for knowledge and skills development; and because TVET is an expensive endeavour which requires major funding both for capital works and current operations. This can impact significantly on the type of instructional machines, equipment and supplies that can be made available for training purposes. It is within the context of this preoccupation that this study was designed to help understand how administrators of TVET colleges and programmes will respond to the management challenges or problems they face in the two task areas of educational management, which include school finance and business management; and physical facilities, equipment and supplies management.

The study has not only identified some of the problems that TVET administrators of the target colleges face as they manage their institutions and programmes – which can undermine the attainment of their objectives - but it has equally identified some of the strategies that could be used to resolve the problems that have been identified. This is significant because it has been argued that defects in programme delivery in the field of education, including TVET, are easy to point out than it is to proffer solutions to them [48]. So, the identification of the challenges faced by TVET administrators in the selected colleges, as well as the strategies that can be adopted to resolve them pushes the frontiers of knowledge in the domain of TVET management a step further; and puts in place a resource (toolkit) from which administrators can draw to resolve the problems that they may face. It is argued that if the strategies identified in this study are adopted by TVET administrators in the target colleges in solving the problems they encounter, the objectives they have set out for their instructional programmes could be achieved. Also, administrators of other TVET colleges not involved in this study could still benefit from its findings by applying the identified strategies.

The findings of this study have implications, not only for TVET administrators who participated in this study, who it is hoped would adopt the suggested strategies (after having been made aware of them) in solving or reducing the impact of some of the problems they face; but also for officials of the relevant government ministries charged with the coordination and supervision of all aspects of TVET programmes in Cameroon. The management problems or challenges identified as being experienced by administrators of TVET colleges in Mfoudi sub-division of Yaounde municipality, as they manage their programmes, and the strategies that could be adopted in solving the problems could help the officials in better understanding the challenges that the administrators they are expected to supervise are facing. This could enable them to approach their tasks in a more pragmatic way, in collaboration with the relevant government structures, to support the colleges in achieving their objectives of producing qualified technical personnel and thus contributing to the attainment of the vision 2035 strategic goals.

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