

## **Managing Education Project in Nigeria: Conceptualization and Contemporary Issues**

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### **Abstract**

*Management is about prudent co-ordination and utilization of scarce resources for the attainment of set goals. Education projects are conceived to resolve specific problems in the implementation of education policies. There are reports of some education projects publicly funded not properly executed or abandoned in Nigeria. Hence, the public demand for accountability for the deployed resources. These concerns are therefore bases for the management of education projects. The concepts of project, management and project management in education were clarified. Some contemporary issues challenging the management of education project such as project overrun, politicization, lack of planned maintenance, project abandonment, weak monitoring and evaluation processes and poor execution of education projects were discussed. It was concluded that politics has over bearing on educational projects and for the progress of the country, politics must be re-examined and re-positioned to allow professional consideration in education project management. Suggestions include sincerity of purpose in project monitoring and evaluation so that practitioners should be straightforward in reporting reality in education project management in Nigeria.*

**Keywords:** Project, Project Management, Education Project Management, Project Overrun and Politicisation of Education Project.

### **Introduction**

Education resources being humans, materials, money and time are limited and therefore scarce. Hence there is the need for the prudent management of the scarce resources to achieve desire goals. The physical facilities on the other hand are required in the right quality and quantity for education business to be successfully conducted. It is not uncommon for some facilities required for processing education production functions to be unavailable, inadequate, obsolete, dilapidated or abandoned hence creating hindrances in the discharge of education businesses. Being a problem solving tool, education projects are conceived to resolve specific problems in the implementation of education policy. When therefore a project that supposed to add values to the education activities are abandoned, they may contribute significantly to

the inadequacies of teaching and research facilities in the Nigerian educational institutions (Alao, Jagboro, Opawole, & Kadiri 2019).

It is also common in our clime for budgeted public fund dedicated for some identified infrastructure to be underperforming or not even performing at all. There are reports of some education project which are paid for with public fund not executed or poorly executed or abandoned in Nigeria (Amzat, et.al, 2018), Education Sector Support Programme in Nigeria –ESSPIN, 2009). On the other hand, hiccups in the execution of education project may result in project overrun which in actuality amounts to wastage of scarce resources. Project overrun is not uncommon in public project execution in Nigeria and also elsewhere as established by researches (Ikechuckwu & Emoh, 2017, Vaardini, kartheyayini & Ezhilmathi 2016). There is a growing concern for accountability of public fund invested in education (Imakpokpomwan, 2021). Stakeholders want better co-ordinated efforts for improved performance of public fund. In like manner, the public is concerned about how budgeted funds are deployed for the benefit of education. Hence, the public demand for those entrusted with education fund and other resources to account for how well the deployed resources achieved their goals. These issues are therefore bases for managers of education to be concerned about project management in education. In this article, our goal is to clarify the concept of project management, highlight issues affecting the contemporary practice of project management in education and offer suggestions for improvement.

### **The Concept of Education Project Management**

Two key words Management and project stand out and attempt shall be made to clarify them. Management has been defined variously by many scholars. Suffice it to present Hitt, Middlemist & Mathis (1979) definition, which sees management as the integration and co-ordination of resources in order to move effectively toward desired

objectives. This definition recognizes the place of resources; which includes human and non-human elements galvanized toward attainment of set objectives. Ogunu (2000) viewed Management as the effective organization and utilization of the human and material resources in a particular system for the achievement of identified objectives. The place of humans; skilled and unskilled and material resources such as physical and fiscal resources cannot be over-emphasized in the management of education. From the foregoing, management is not a haphazard arrangement but co-ordinated efforts toward pre-defined target which is the purpose for which all the resources are assembled and directed. Imakpokpomwan (2021) asserted that management is the deliberate efforts made toward the provision and utilization of human, physical and fiscal materials for the actualization of stated organizational goal within set time frame. The essence of time is cardinal to management. Hence, managers define dead-lines, time-frame, time-line and the like associated with certain tasks. For example, if a goal is scored just a second after the referee has blown his final whistle for time up in a soccer game; such a goal is invalid and as good as not attempted. Same is the case with an examination which is expected to end at a specific time. If a project is not completed within the time schedule, it could lead to project overrun which may require additional resources before it could be completed. The inclusion of time in the definition of management is apt in all cases especially when we refer to project management. This is because a project is time bound; take-off time and end of activity. Let's take a book project for an illustration. A book project cannot be undertaken forever. It has to start some day and completed at a defined time frame.

Education project management has to be focused hence the need for a balance quadrant. A project balance quadrant specifically requires four elements which are time, scope, quality and cost to be closely monitored. It is obvious that absence, alteration or

withdrawer of any of the elements in the quadrant could affect or hinder the successful execution of the project. The resultant outcome could be cost or time overrun or worse still, abandonment of project. According to Williams (2008), ‘The balance quadrant demonstrates the interrelationship between the four aspects and how a change to one aspect will unbalance the other elements in the quadrant’. For instance, a change in the cost of the project say from 5million to 6million Naira, will affect at least one of the elements; the time the project will be delivered, the scope of the project or the quality of the project. If the scope of the work changes from a particular number of classrooms to another, it will also unbalance the quadrant. This means the time, the quality as well as the cost will be altered also. Thus, time management is cardinal to project management.

Turner (1998) defined a project as an endeavour in which human, material (machine) and financial resources are organised in a novel way, to undertake a unique scope of work, or given specification, within constraints of cost and time, so as to deliver beneficial change by quantitative and qualitative objectives. According to Nwadiani (2010), a project is an investment which involves the commitment of resources (human, material, fiscal and time) towards an activity within a specified time frame with the hope of yielding some benefits (economic and non-economic) now or later under uncertainties. In his contribution, Kerzner (2015) argued that ‘a project is any series of activities and tasks that have a specific objective to be completed within certain specifications; have a defined start and end date; have funding limits; consume money, people and equipment; and are multifunctional.’ The Danish Ministry of Foreign Affairs (2004) as quoted in UNESCO-IIEP (2010) defined a project as a planned undertaking designed to achieve certain specific objectives within a given budget and within a specified period of time. These definitions point to certain facts

about a project which is a team work (that is more than one person involved), time being very essential as well as the money necessary to procure all the needed inputs into the project hence it is an investment for a profitable venture. Thus, the scope of a project specifies its quality, quantity and financial involvement.

Project management in the view of Watt (2012) is the application of knowledge, skills, tools, and techniques applied to project activities in order to meet the project requirements. Cline, Guynes &, Simard (2010) opined that project management is the discipline of planning, organizing, and managing resources for the successful completion of specific project goals and objectives. Education project includes all forms of built and un-built environment of the school such as staff quarters, classrooms, library, laboratories, offices, toilet facilities, perimeter fences, workshops, assembly halls, playground, field, farms. UNESCO–IIEP (2010) classified education project as Physical projects (which includes infrastructure, construction, equipment and materials), curriculum and textbooks project (production/procurement of books, school manuals, teacher guides, educational aid, curriculum and textbook development and pilot projects), training projects (training of trainers and teachers in-service, pre-service and mentorship, training of head teachers and district supervisors) and management projects (capacity building in general – management of systems of education, development of information systems etc).

Badau (2017) defined Education projects management as the planning, organizing, directing and controlling of tasks with the rare resources of knowledge and people to attain stated result in the education system. Thus, Education project management could be seen as the application of management processes, procedures, principles in resolving certain temporary tasks designed to serve some identified specific needs in education sector.

### **Contemporary Issues Challenging Project Management in Education**

Education project management like every other aspect of management is prone to issues and challenges that may spring up at any stage of a project. Here are some contemporary issues affecting education project management:

**Project overrun:** Project overrun is certainly a contemporary issue in project management globally. Akinradewo, Aigbavboa & Akinradewo (2019) agreed that project cost overrun is a global phenomenon, and its effects always cause a rift between project management consultants, owners, and contractors. Project over-run is a factor of inability to complete the project within the estimated resources. It is of two dimensions viz; project cost overrun and project time overrun. Project cost overrun is the difference between the final actual cost of a construction project at completion and the contract amount, agreed by and between the client (project owner) and the contractor during signing of the contract (Ikechukwu, Emoh & Okorochoa, 2017, Olupitan, Ajator & Nzeneri, 2021). In terms of project time overrun, Memon, Rahman, Abdullah & Aziz (2011) asserted that Time overrun is any delay beyond the baseline construction schedule. Thus, it is the difference between the scheduled time for completion and the actual time of completion. Though many factors are responsible, they are issues that affect limited resources environment in which the education sector operates. It could also affect the lives of human beings utilizing the facilities because some schools are dilapidated structures hanging over the lives of students and staff which require urgent attention.

Akinradewo, Aigbavboa & Akinradewo (2019) studied the Millennium Development Goals (MDGs) project from 2006-2009 and established that cost overrun in the Nigerian construction industry is caused by factors relating to owner/consultant, environmental, political, economic, bidding, construction, contractor, design, resources

availability, technical/managerial, and legal factors. Cost overrun exists to the detriment of the project implementation. Projects executed in the education component of the MDGs included classrooms construction, toilet facilities, offices and other identified needs of selected schools in the education sector. Akinradewo, Aigbavboa & Akinradewo (2019), adopted the following equations for the analysis of the time and cost overrun:

Time overrun = actual project duration less estimated project duration

Cost overrun = actual project cost less estimated project cost

$$\% \text{cost overrun} = \frac{\text{cost overrun} \times 100}{\text{estimated project cost duration}}$$

$$\% \text{time overrun} = \frac{\text{time overrun}}{\text{estimated project duration}}$$

The study investigated 25 (MDGs) projects executed in Abuja between 2006-2009. They found that the projects had both cost and time overrun. The study revealed that the maximum percentage time and cost overrun are (58.33 & 48.89) while the minimum percentage time and cost overrun are (12.50 & 7.02). Cost overrun is also referred to as cost increase, cost escalation or budget overrun. Table 1 presents the causes of project time overrun in some countries.

**Table 1: Comparison of Causes of Time Overrun among Various Countries**  
**Major Causes**

Observation	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5
Malaysia	Cash flow and financial difficulties faced by contractors	Contractor's poor site management	Inadequate contractor experience	Shortage of site workers	Ineffective planning and scheduling by contractors
Vietnam	Poor site management and supervision	Poor project management assistance	Financial difficulties of owner	Financial difficulties of contractor	Design changes
Egypt	Financing by contractor during construction	Non-utilization of professional construction/contractual management	Delays in contractor's payment by owner	Preparation of shop drawings and material samples	Difficulty of coordination between various Parties
Saudi Arabia	Type of project bidding and award	Shortage of labours	Delay in payments by owner	Ineffective planning and scheduling of project by contractor	Change orders by owner during construction

Hong Kong	Poor site management and Supervision	Qualification and experience of project staff	Insufficient project staff	Insufficient labour	Improper E&M coordination and management
Ghana	Monthly payment difficulties	Poor contract management	Contractor's financial difficulties	Planning and scheduling deficiencies	Cash flow during construction

Source: Adopted from Memon, Rahman, Abdullahi & Aziz, 2011),

In the construction industry, one of the basic goals of practitioners is to achieve timely completion of projects within stipulated budget and required quality as each day of time overrun in the completion of any project has direct impact on the cost of the project (Memon, Rahman, Abdullah & Aziz, 2011). Unfortunately, this is not so and students and education workers may have to do without the facilities expected to serve them until they are completed.

### **Politicisation of school project**

In Nigeria, most public education projects are politically rather than professionally influenced. As observed by Ogunode, Atabauka & Ayoko (2023), University politicization implies the use of power and influence in the management of universities to suit the interest of political groups. Whether it is construction of classrooms, workshops, furniture or supply of technology equipment, there are elements of political consideration in their allocation and award of contracts. Education project contracts have become another weapon to galvanize political structure mostly without recourse neither to the community, the school management nor the students who are the end users. According to Iyorchii, Bua & Agbe (2015) the practice has given rise to shady approval of contracts and appointments given to men of incompetence just on the basis of their political alliance'. Under such an arrangement, little is given to professional consideration as project budget and funding formalities are exclusively the privilege of those at the corridors of power. Politicization of education project gives room to unethical practices, sacrificing merits for mundane considerations.



**Lack of Planned Maintenance of school project:** Planned maintenance prolongs the life-span of school facilities. Good management practice commences at the conception of a project as the maintenance elements are well defined at this stage. Policy is put in place to ensure the smooth maintenance of the project at completion. This includes the personnel and other resources required to maintain the school project in order to prolong its life span. When such mechanism for maintenance is not well defined, the politician at completion of the projects would verbally call on the community to take charge of the project as their own. Imakpokpomwan (2016) questioned such modality aptly:

The axiom is that public school facilities located in a community is owned by them. Does the community see it that way when their needs were not assessed before imposing a project on them, or when an unknown person surfaces as a contractor to a specific project he executes superficially without recourse to the quality desired by the community? Is it really owned by the community when the cost of construction or procurement was never disclosed to them? Or nobody was identified to receive complain when the quality of work was unsatisfactory. How is it theirs when their sons and daughters qualified are never patronized but someone from God knows place. How is it their property when there is no policy defining their contribution in the entire life span of the project? (Imakpokpomwan 2016:501)

A good management practice expects the definition of the maintenance structure be on ground at completion of the project. Maybe the project would require a committee, or specialized personnel to keep the completed project in good shape, planned maintenance requires that it should be so specified along with its funding process. In the absence of policy provision for maintenance committee, personnel or fund, it becomes impossible for school managers to follow good management practices in effecting maintenance. It is therefore common for education project executed with public fund to dilapidate in no time and degenerate to disuse without any visible efforts to arrest its degeneration through maintenance.

**Abandonment of education project:** Abandoned projects dot the landscape of the education sector in Nigeria. Alao, Jagboro, Opawole & Kadiri (2019) alluded to a total

of N12 trillion reported by the Chartered Institute of Project Management of Nigeria' (CIPMN) committee to have been spent on 56,000 abandoned government projects across the country. They also quoted the Needs Assessment of Nigerian Public Universities' committee reported in 2012, that 163 of the 701 uncompleted tertiary education institutions projects had been abandoned.

What though is an abandoned project? According to Aimiehiefe (2022), an abandoned building project means any building project that is unusable, uninhabitable, non-functional, and uncompleted. The same work defined it as the act of discontinuing any activities on a development project within a time frame of the contract agreement and with no intention of returning back to the development (Aimiehiefe 2022). Thus, a project left in an unfinished state may hinder full benefit to end users. Atamewan (2021) quoted in Aimiehiefe (2022) asserted that abandoned building projects are components of failed projects that have not been completed to enable their expected users to get complete satisfaction. Contracts for a specific project could have been awarded, implementation may have started but yet not completed within the stipulated time could degenerate into the state of abandonment. Abandoned project could remain in the uncompleted state for long, while others may last for years and yet others for decades until actions are taken to resuscitate them.

End-users are deprived of the full benefits of the project as well as postponing the resolution of the issues the project was designed to address. That aside, there are other negative effects of abandoned school projects. In a study, it was reported that 'the environmental effects of abandoned building projects in Edo State, Nigeria, include threat to community security, harboring of hoodlums, increase in societal menace and becoming hotspot for rapists, hotspot for drug abuse, temporary store for stolen goods, increase in fear of robbery among citizens, social vices are experienced by the entire

neighbourhood where there is an abandoned building project, slums are rampant in abandoned building project environments (Aimiehief, 2022). Consequently, unintended users take possession illegally to perpetuate social vices that are injurious to societal peace and progress. Thus, abandoned school projects inhibit the students and staff from benefitting from its usage while they could become victim of social vices on the other hand.

**Community alienation:** Aghenta (1995) reported that community contributed financially to the building of school projects done around the 1940s to the 1970s. In most cases, the lands for the education projects were donated free of charge. In some instances, the community built and donated schools to the government. At that time, the community felt carried along by the government. Such community contributions to education may not be too easy to come by these days because the planning and execution of school projects have become a top bottom affair where the politicians aggregate the needs of the community rather than embarking on the real need assessment of the people they purportedly serve. Sometimes, the people can't decipher prudence in government officers behavior nor can they factum the direction of a government that appears to have lost focus in all aspects except to increase the economic woes of its citizenries.

**Weak monitoring and evaluation procedure:** The implementation of the processes and procedure for monitoring and evaluating education project in Nigeria is weak. Some projects are commissioned on paper whereas, in actual facts the work is still in progress or not even started at all. Some projects are poorly executed yet they are certified okay by the authorities or their agents. Amzat (2018) investigated Universal Basic Education (UBE) projects across four states in Nigeria and found that some school projects end up not being done even when the full financial involvement had

been settled. For instance, two school projects worth N35 million and N25 million respectively were awarded to two different companies owned by the same politician. While the schools management stated that the contractor had not done any work in the site for two years up to the time of the investigation but the politician claimed that the projects were not abandoned and they would soon return to site. On the contrary, the records in the UBEC office showed that ‘the projects were completed and handed over’ (Amzat 2018). Little wonder why education projects suffer in Nigeria even though huge sum of money had been paid for them.

**Poor quality of school project execution:** School project such as furniture and classrooms are poorly executed which shortened their life span. For example, this writer narrowly escaped death when the PVC ceiling in a newly built lecture theatre collapsed on him during lecture in February, 2020. The facility was in its second academic session of usage. Education Sector support programme in Nigeria (ESSPIN 2009:1) Observed that

One of the main reasons for the current chronic situation is that the Education Sector, particularly infrastructure, suffered from an approximately 20 year period of neglect during the military regime. The situation has been exacerbated by the fact that most of the buildings that have been constructed in recent years are also of very poor quality. They have been badly built because of poor procurement practices, poor management of construction, poor workmanship, the use of poor quality materials, a lack of supervision during construction and political interference (ESSPIN 2009:1).

Poor quality work actually makes public school project a laughing stock in Nigeria. It is difficult to get the support of the Parents Teachers Association (PTA) who was neither consulted during the project conception nor during implementation to now assume the ownership role. It is difficult to own a project whose contractor was appointed from nowhere only to show up for a school construction project which he executes without inputs of the community who in instances are only on-lookers because the project is in their domain.

## **Conclusion**

The paper has attempted the clarification of main concepts in educational project management. It also discussed some contemporary issues that challenge the smooth implementation of educational projects in the country. Politics appear to have been a major influencer on education project management in the country. And if the issues must be resolved for the progress of the country, politics must be re-examined and re-positioned to allow professional consideration in education project management.

### **Suggestions**

Some suggestions are here made for the improvement in education projects management.

- (1). To minimize the incidents of education project overrun, proprietors should embrace the time honoured axiom: to bit what one could chew at a time. The preparation of a project should include all the elements required for a project from start to finish. They should be documented and placed in a wallet before the bidding process. For each project, the agreed sum should be in an account while release of fund should be in phases based on percentage of approved project execution. For example if the pre-implementation stage would cover certain percentage as specified in the Bill of Quantity (BOQ), that percentage sum should be released. Once such stage is done, payment for the next phase/stage as agreed is handled. If the contractor fails to fulfill its part of the bargain, he should be responsible for payment of the wastage incurred. There is no economic wisdom in starting many education projects at a time but unable to finish none or only few because of paucity of resources required to complete them.
2. Sincerity of purpose should be the watch word for the Monitoring and Evaluation practitioners. When a project was not properly executed, it should be so stated for those concerned to take the appropriate actions to redeem the project.
3. Nigeria politicians seem to be in their own world. While they exhibit exuberance, the environments in which the public educational facilities are placed are in poor state.

There should be deliberate efforts to address project failures for the benefit of the end users.

4. The best way to satisfy a people is to fulfill their need. Before embarking on a project for the people, there should be needs assessment and policy in place to carry them along at every stage of education project management. By so doing, the projects at every stage would be theirs.

### References

- Aghenta J. A. (1995). The financing of Education in Nigeria. In E. T. Ehiemetalor (Ed), *Data management in schools and other issues*. NERA, 205-214.
- Aimenhiefe, M., (2022) Environmental Effects of Abandoned Building Projects in Edo State, Nigeria. *Direct Research Journal of Public Health and Environmental Technology* 7(5), Pp. 68-74.
- Akinradewo O, Aigbavboa C & Akinradewo O (2019). Revisiting Causative Factors of Project Cost Overrun in Building Construction Projects in Nigeria. *Materials Science and Engineering* **640** 1-6. Doi:10.1088/1757-899X/640/1/012002
- Alao, O., Jagboro, G., Opawole, A. & Kadiri, D. (2019). Assessment of resuscitation strategies of abandoned projects: A case study of public tertiary education institutions' buildings in Osun State, Nigeria. *Acta Structilia*, 26(1), 167-200.
- Amzat, A (2018). How contractors fleece Governments in UBEC school project contracts. *The Guardian*, May 1
- Atamewan, E.E. (2021). Abandonment of Housing Projects in Nigeria: Appraisal of the Environmental and Socio-Economic Implications. *European Journal of Environment and Earth Sciences*, 1(4), 1-6.
- Badau K, M., (2017). Project Management in Education: Tools and Techniques. *Lap Lambert Academy Publishing*.

Cline, M., Guynes, C. S. & Simard K (2010) ACE Project As A Project Management Tool. *American Journal of Business Education*, 3(6) 63 – 68.

Education Sector Support Programme in Nigeria (ESSPIN 2009). School infrastructure and maintenance. Doc No: ESSPIN 032 [https://www.esspin.org/reports/.../67-file-1266228690-school\\_infrastr.pdf](https://www.esspin.org/reports/.../67-file-1266228690-school_infrastr.pdf).

Hitt, M. A., Middlemist R. D. & Mathis R. L. (1979) *Effective Management*. West Publishing.

Ikechukwu, A. C., Emoh, F. I., & Okorochoa, A. K., (2017). Causes and effects of cost overrun in public building construction projects delivery in Imo State, Nigeria. *IOSR Journal of Business and Management* 19(7), 13-20.

Imakpokpomwan M. I. (2015). Politics of school infrastructural facilities management in universal basic education programme in Edo State. In N. M. Abraham, D. O. Durosaro, M. Nwadiani, G. G. Kpee, J. E. Okon and I. A. Odiba (ed) *Politics of Education and National Development in Nigeria*. NAEAP 497-506

Imakpokpomwan M. I. (2021). Project budgeting and financing. In Mon Nwadiani, J., K., Adeyemi, B., O., Ogonor, V., O. and H. O. Alonge (ed) *Educational Management Digest*. Department of Educational Management, University of Benin, 190-203

Iyorhii, D., C., Bua F., T., & Agbe J., I. (2015). Impact of politics on the implementation of educational policies and programmes in Nigeria: implication for national development. In N. M. Abraham, D. O. Durosaro, M. Nwadiani, G. G. Kpee, J. E. Okon & I. A. Odiba (ed) *Politics of Education and National Development in Nigeria*. NAEAP, 306-314

Memon, A., H., Rahman, I., A., Abdullah, M., R., Aziz, A., A., A. (2011). *Journal of Surveying, Construction & Property* 2(1) 54-66.

<https://www.researchgate.net/publication/256662745>

MFA (Ministry of Foreign Affairs), Denmark. (2004). *Annexe 1: list of key concepts*.

Copenhagen.

Nwadiani, M. (2011). Accountability in education. In M. Nwadiani (ed) Educational management for sub- Sahara Africa. *NSEP & Monose Amalgamates* 214-226

Ogunode, N., S., Atabauka, I., S., & Ayoko, V., O., (2023). University education politicization in Nigeria: Implications and ways forward. *International Journal on Integrated Education* 6(1) 1-11

<https://journals.researchparks.org/index.php/IJIE> e-1

Ogunu M. A. (2000). Introduction to Educational Management. *Mabogun Publishers*.

Olupitan, A.L, Ajator U.O. and Nzeneri, O.P. (2021) . The Critical Causes and Effects of Cost Overruns in Public Sector Construction Projects in Port Harcourt, Nigeria. *International Journal of Scientific and Research Publications*, 11(10) 304 – 316. [www.ijsrp.org](http://www.ijsrp.org)

Turner, J. R. (1998). The handbook of project-based management: improving the process for achieving strategic objectives. London, McGraw Hill.

UNESCO-IIEP (2010). A guidebook for planning education in emergencies and reconstruction. International Institute for Educational Planning, Paris.

[www.iiep.unesco.org](http://www.iiep.unesco.org)

Vaardini, U., S., Karthiyayini, S., & Ezhilmathi, P. (2016). Study on cost overruns in construction projects – A review. *International Journal of Applied Engineering Research* 11(3) 356-363. <http://www.ripublication.com/ijaer.htm>

Watt, A (nd). Project Management. Open textbooks for Hong Kong.

<http://creativecommons.org/licenses/by-sa/4.0/>

Williams, M. (2008). The principles of project management. SitePoint.

<https://www.sitepoint.com/principlesofmanagement>