Metaphysics and the Nigerian Polytechnic Education

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ABSTRACT
This research is intended to educate polytechnic students on the importance of metaphysical knowledge of reality. However, while reality is a composite of physical and metaphysical or spiritual and material dimensions, polytechnic education on the other hand, is lopsided, as it overemphasizes more of scientific knowledge of reality than metaphysical knowledge of reality. It should be emphasized that the metaphysical controls the physical; the spiritual rules the material. But with the domination of scientific knowledge of reality over the metaphysical knowledge of reality, the physical is made to dominate the metaphysical or the spiritual inclinations of man. This is the rationale why many polytechnic students and graduates develop more interest on materialism and secularism rather than spirituality and religiosity, hence, the alarming rate of the quest for materialism and secularism among students on campus which has resulted in such social vices as prostitution, cultism, theft, yahooism, ritualism, vuduism, robbery, exam malpractice, etc. It has also made students to relegate spiritual and religious activities such as prayer, worship, and fellowships to the background. The study adopted philosophical research methods of speculation, abstraction, rationalization, analysis, phenomenology, and prescription. The paper concludes that the study of metaphysics will enable polytechnic students and the entire society to know the real essence of man’s existence, the spiritual and religious foundations of human life and activities, fear of the unknown, moral excellence, duality of man and respect for human rights and dignity, and the realization of the goals and objectives of polytechnic education in Nigeria. The study recommends of metaphysics should be introduced and made compulsory in Nigerian polytechnics.

Keywords: metaphysics, polytechnic education, reality, materialism, scientific knowledge

INTRODUCTION
Ekarika (1986 p.1) made some observations on contemporary science education and scientific advancements. He observed that “Today more than ever, man has possessed a wider knowledge of scientific truths, and as everything indicates, he will make still a greater advancement in the future. He is so fascinated by the extraordinary progress he is making in science. This should be rightly so. For on examination, we note that in the sphere of Electronics, man has been led to discovery with invention of Radio and television. In Nuclear physics he has made strides in the splitting of atom and the harnessing of Atomic energy. In Mechanics we can only grasp with wonder at the construction of gigantic at the same time delicately perfect instruments (machines) he has made”. The observations of Ekarika are indeed very true, and of course, the establishment of polytechnics in Nigeria is predicated on the acquisition of technological and scientific knowledge to serve as catalyst for rapid technological and scientific advancement in Nigeria (cf 1998 National Policy on Education pp34-35). Ekarika (1986 p.1) also opined that “No matter what scientific discoveries have been made to date, and no matter how great may be those of the future, it is certain that man’s quest for knowledge cannot be restricted to the Sciences. For science only explains existing facts which fall under the observation of the senses (PHENOMENA) and hence are the object of experience…But this can only take us to very limited knowledge”. Overemphasis on the acquisition of scientific knowledge at the expense of metaphysical and spiritual knowledge of reality has created in polytechnic students the insatiable desire for materialism, and this drives them into such vices like prostitution, cultism, theft, yahooism, ritualism, vuduism, robbery, exam malpractice in the forms of impersonation and blocking. The objective of this paper is to introduce polytechnic students to
metaphysical knowledge which complements scientific knowledge, and this will afford them the opportunity to acquire holistic or balanced knowledge of reality. It is the intention of this study is educate polytechnic students and the entire society of the imperativeness of the study of metaphysics which imparts the understanding of the metaphysical and intangible realities that evokes spiritual and religious activities such as prayers, evangelism, and worship. These spiritual and religious activities propel students to conversion, moral excellence, charity, purity, self control, diligence, hard work, and discipline. To achieve this noble task, the paper embarks or well designed outline: definition of metaphysics, division of metaphysics, objects of metaphysics, definition of polytechnic education, goals and objectives of polytechnic education, metaphysics and polytechnic education, conclusion and recommendation.

**Definition of Metaphysics**

Metaphysics, according to Philips (1957 p.157) considers immaterial beings that are not tangible or perceptible to the senses. Such immaterial entities or realities are spiritual and they transcend the realm of sensible experience and data. God, spirits, mind, souls, heaven, hell, angels, freedom, justice, etc, could be grouped into this category. Bittle (1939 p. 5) opines that the term metaphysics had only systematic value, and further states that Aristotle (384-322B.C) himself called this part of his philosophy the theological science because it led up to a consideration of God and His attributes, and that he (Aristotle) he styled it the first philosophy since it treats of first or fundamental causes which, in his opinion, furnished us with knowledge of prime importance.

This is the rationale why, to many philosophers, metaphysics as a discipline different from all other natural sciences because it goes beyond what is physical and projects into realities which are extra mental, hyperphysical, supersensible and immaterial. Following this line of definition of metaphysics, Philips (1957: 157) rightfully described metaphysics as that discipline or science which seeks to discover general ideas for he says “By metaphysics I mean the science which seeks to discover the general ideas which are indispensably relevant to the analysis of everything that happens”. These ideas are abstractions that are universal and applicable to all realities be it perceptible to the senses or not, whether physical or spiritual, whether necessary or contingent.

Concisely, Nyong (1996:6) described the nature of metaphysics as follows: “Metaphysics” literally means “beyond the things of nature”. This is a branch of philosophy that deals with the study of things which are abstract or highly speculative. These are essentially things that transcend the physical world that we already know. Metaphysics investigates many problems, all related to the general question: What is the nature of existence? What is reality? Can a universe be both one and many? What is time? What are the basic characteristics of existence? What is space? What is a fact? Is there God? Metaphysics is therefore the philosophic reflection on the nature of reality. It can be further divided into Ontology (the study of being), Cosmology which is the study of the universe or world, and the science of soul (human mind or soul). These are essentially things that transcend the physical world that we already know. Metaphysical subjects are issues like “being and existence”, “the nature of God”, “immortality”, “freedom of the human will”, and so on.

Some other philosophers like Blackburn (1996 p.240), Hornby (2005 p.925), Oroka (1990 p.5), and Kalusi (1996 p.6) see metaphysics as any enquiry that raises questions about reality that lie beyond the physical reality. Their definitions of metaphysics also reveal that some other subject matters of metaphysics include being, substance and accident, matter and form, causality, act and potency, essence and existence, space, place, time, and continuum, origin of the world, unity and diversity, etc.

From the above definitions it can be seen that metaphysics is a philosophical science that seeks to find out the ultimate causes of reality. It is the study of the ultimate causes and the first principle of all reality. Everything has ultimate causes, i.e. they are brought into existence or created by a being that has the power to create or cause into existence all things through creatio ex nihilo. When we talk of metaphysics, we deal with how things came into existence, the being responsible for their existence, the ultimate purpose of their existence, and their internal metaphysical composition. In other words, we are referring to their ultimate efficient, essential, formal, and final causes.
Division of Metaphysics

Metaphysics has two dimensions, namely, ontology and cosmology. Enuwosa (2000 ed pp.4-5), in his discussion on metaphysics says that metaphysics is further divided into two which are ontology and cosmology. Similarly, Nyong (1996 p.6) states that metaphysics can be divided into ontology and cosmology.

Ontology: Ontology is study of being or existence; it is the study of what is (presence), what is present or of what is common or universal to all realities whether spiritual of material, material or immaterial, corporeal or incorporeal, contingent or necessary. Ontology is the most abstract aspect of metaphysics. For Oroka (1990 p. 5), ontology is the study of BEING; the study of what there is. He added that ontology is interested in what is real. For Enuwosa (2000 ed p.4-5), Ekarika (1986 p.14), and Nyong (1996 p.6) ontology is the study of being. Kalusi (1996 p. 6) says that ontology studies “Being”. She proceeds further to state that it is concerned with the first principle of all being, that is, the uncaused cause. For her, it is the study of the Alpha and Omega of things, it is interested in what is real, and that it also wonders whether all the objects of our physical experience like mountains, plants, animals, etc are real or there is something ultimate beyond them. For Hornby (2005 p.1020) ontology is a branch of philosophy that deals with the nature of existence. Existence or being is the first principle, the principle that underlies all reality and this is the concern of ontology which is an aspect of metaphysics.

Cosmology: Cosmology also known as philosophy of nature is the second aspect of metaphysics, and according to Blackburn (1996 p.85), cosmology is the study of the origin and structure of the universe. Mercier (1953 p. 45) defines cosmology as the philosophic study of the inorganic world. He further explains that this concise definition embodies, on one hand, the material object or subject-matter which cosmology proposes to study-the inorganic world; on the other, the formal object or the special aspect under which it regards it- the philosophic point of view. The material object of study as we know refers to scope of study of the subject matter while the formal object refers to the methodology employed in the study of the subject matter. Ekarika (1986 p. 15) postulates that the complex of finite beings, the world itself or physical nature is the subject of cosmology. He also adds that what we explained in metaphysics as potency and act takes on a new terminology in cosmology, namely, substantial matter and form, and that the substance of anything is that which constitutes the thing in what it is. Kalusi (1996, p.7) says that cosmology is concerned with the study of the cosmos or universe, that it is interested in the origin, components and purpose of the universe or the world as a whole, and that it asks whether everything can be traced to a cause; and if so, how; and what? Hornby (2005 p.330)) defines cosmology as the scientific study of the universe and its origin and development. Other philosophers such as Oroka (1990 p.5), Nyong (1996 p. 6), and Enuwosa (2000 ed p.5) describe cosmology as the study of the origin, nature, and purpose of the universe. Mercier (1953 p. 47) says that cosmology comprises three parts, the respective objects of which are: (a) The origin of the inorganic world or its first efficient cause; (b) its intrinsic constitution or its ultimate constitutive causes; (c) its destinies or its final cause.

Objects of Metaphysics

The objects of any discipline or science refer to its subject matter (scope of study) and the angle (methods) the discipline or science employs in studying its subject matter. The subject matter of a discipline is known as the material object of that discipline while the methodology it employs is its formal object. According to Enomah (1997 p. 27), the objects of metaphysics are those things which metaphysics studies and the angle which it employs in studying them. He goes on to state that metaphysics therefore, like other disciplines or sciences has its own objects, and that like any other disciplines metaphysics has both material and formal objects.

Material Object of Metaphysics: The material object of metaphysics which refers to the subject matter of metaphysics is already reflected in definition of metaphysics discussed earlier on in this study. From the definitions metaphysics studies all aspects of reality namely, tangible and intangible realities (cf Ekarika, 1986 p.14). Metaphysics also studies being or existence. Being or existence is an element that pervades all things; a universal denominator for all things that exist - corporal or incorporeal (cf Philips 1957 p.157, Bobik 1965 p.57, Gardeil 1958 p.6). Metaphysics studies every thing in relation to its unity.
and diversity. Unity refers to existence or being- the act of presence which is intrinsic all existents-spiritual or physical.

Metaphysics deals with spiritual, incorporeal realities and their attributes. Such realities include God, substance and accident, matter and form, society, goodness, truth, beauty, causality, act and potency, the human soul, the phenomenon of death, life after death, place, space, time, continuum, freedom, change and permanence, essence and existence. For instance in the words of Turner (The Catholic Encyclopedia 1913 ed Vol 15) quoted from Enomah (1997 p.17), metaphysics “…deals with things, which are both separate from matter and immovable. In this connexion, the Scholastics (e.g St. Thomas) distinguished two kinds of immaterial (a) immaterial quoad esse or immaterial being, such as God and the human soul, which exist without matter; (b) immaterial quoad conceptum, or concepts, such as substance, cause, quality, into the comprehension of which matter does not enter.” Kalusi (1996 p.6) states that such concepts as soul, mind, spirit, heaven, hell, etc., fall within the scope of metaphysics. This is the reason that metaphysics is considered as superior to the empirical sciences since its object of study transcends what is natural, physical and what is common to or pervades all of reality. This is in consonance with the assertion of Ekarika (1986 p.14) that “…metaphysics is the science of “prime cause” from which all the causes down to the phenomenon trace their being. The name Metaphysics is really given to those works of Aristotle (the greatest philosopher of all times) but which came after his first Works – PHYSICS, and thus treats the knowledge of the Supreme Cause of Being up to the FIRST UNCAUSED BEING who is God, the final Cause of all things, the Being who is EXISTENCE HIMSELF (IPSUM ESSE-HE WHO IS: Exd 3:14). Thus metaphysics is that branch of science after physics ABOVE add SUPERIOR TO IT treating beyond mere sensible add experimental data of knowledge-man, nature and spiritual beings.”

Formal Object of Metaphysics

As already stated, the formal object of metaphysics refers to the angle or the methods metaphysics employs in studying its material objects (scope of study). Like all other branches of philosophy, metaphysics employs philosophical methods such as speculation, analysis, abstraction, reason, and phenomenology. Metaphysics also employs logical methods of inductive and deductive in its investigation. Bittle (1939 p.9), regards induction and deduction as metaphysical methods when he says that “The metaphysician therefore, accepts the facts proposed by science, if they are unquestionably proved, he also uses the inductive method as his implement of investigation…Thus, truth and knowledge are increased through the deductive method. Metaphysics therefore uses both induction and deductive as its methods.” In deductive method, metaphysics analyzes related propositions or premises and from the analysis deduces an idea that is inherent or drawn from given premises. In this regard the truthfulness and the validity of the argument are necessary. The conclusion must necessarily follow from the premises. In the inductive methodology, metaphysics investigates few premises and then from them arrive at a reasoning or idea that could be applied to a wide range of simple materials or propositions. From the above discussion, the formal object of metaphysics is the angle from which it investigates being (contingent or necessary). Three characteristics of the formal object of metaphysics can be deduced applying the assertion of Celestine Bittle here. The first concerns the a priori, in which assuming certain self-evident postulants, premises, propositions, maxims, or definitions to be true .proceeds deductively to draw conclusions implicated in those assumptions. Secondly, the subjective a posteriori method, in which from an examination of the phenomena of consciousness builds up empirically, that is, deductively, conclusions based on those phenomena. Thirdly, the objective a posteriori method which builds on the facts of experience in general in the same way as the subjective method build on the facts of introspection.

Polytechnic Education

*The New International Webster’s Comprehensive Dictionary of the English Language* (2010) defines ‘Polytechnic’ as a word which has its origin from Greek word “polytechnos” where ‘poli’ means ‘many’ and ‘techné’ means ‘arts’. Polytechnics and institutes of technology have a teaching competences and organisational history. They are elite technological universities concentrating on applied science and
engineering and are also known as formal designations for a vocational education. Polytechnics among amongst other things, provide:

i. ordinary and higher education as a result of their original and historical role as intermediate technical education institutions; and

ii. provide people with applied learning opportunities, equipping them with marketable knowledge and skills that business and industry need to grow. It is a post-secondary institution for technical education and skills training.

**Objectives of Polytechnic Education**

Olasehinde (2005) opined that the first Polytechnic came into being in the 1960s as a result of the upgrading of the then existing technical colleges and today, our Polytechnics offer courses leading not only to the National Diploma (ND) Certificate but also to the Higher National Diploma (HND) and other Higher Certificates. The primary focus of Polytechnics is the production of middle level man power and there is no doubt that the technical education given in the Polytechnics is critical to our rise to economic and political success. According to Hornby (2005 p.1005), the word “objective” with its synonyms “aim” and “goal” refers to “something that you are trying to achieve”, and according to the National Policy on Education (p.34), some of the goals of Polytechnic Education include the following:

1. provide full-time or part-time courses of instruction and training in engineering other technologies, applied science and management leading to the production of trained manpower;
2. provide the technological knowledge and skills necessary for agricultural, industrial, commercial and economic development of Nigeria.
3. give training and impart the necessary skills for the production of technicians, technologists and other skilled personnel who shall be enterprising and self-reliant;
4. train people who can apply scientific knowledge to solve environmental problems for the convenience of man; and
5. give exposure on professional studies in the technologies.

More so, while commenting on the importance of GNS Courses in the polytechnic system, Osuji (1989) cited in Olasehinde (2005) says:”” The General Studies program… triggered a change in the history of Nigeria. It was the second wave that changed our perception of the world, our development, our lives and so our history… GNS courses like psychology, philosoph, sociology, etc help bringing about individuals that are morally upright and mental balanced as well as provide needed communicate competence to undergraduates in the polytechnic education.

**Metaphysics and Polytechnic Education**

Metaphysics, as it has been defined studies realities which are not perceptible to the sensory faculties of man, realities which exist but incorporeal or spiritual. Metaphysics, therefore studies such realities as God, the humane soul, mind, spirit, heaven, hell, substance and accident, matter and form, society, goodness, truth, beauty, causality, act and potency, the phenomenon of death, life after death, space, time, continuum, change and permanence, essence and existence. The acquisition of the metaphysical knowledge of these realities which are beyond natural and physical experience of man will unequivocally evoke, inculcate, and instill in polytechnic students the following knowledge and attributes.

1. **Origin and Goal of Man:** The study of metaphysic helps polytechnic students to understand the origin of man. It enables students to know that man was created by God and a product of evolution. God created man in his own image and likeness, and for a purpose, and the purpose of man is God himself. Metaphysics enable polytechnic students to discover the modalities of achieving this goal (God) The implies that man’s life and actions cannot be reduced to mere instincts but should emanate from reason and manifest God’s plan for his existence rather than being variance, incompatible with or opposed to it.

2. **Spiritual and Religious Foundation of Human Life and Activities**

The creation of man by God has spiritual implications. It implies that man is naturally spiritual and religious since his creator is a spirit and who he created man in his resemblance. Being
ontologically spiritual, man is expected to be spiritually and religiously functional. This spiritual and religious functionality of man involves such exercises as prayer, sacrifice, and worship of God in order to align himself with motive of his spiritual creator (God), and to exhibit the spiritual character deposited in him the his creator. The study of metaphysics by students inspires them to engage in spiritual and religious activities. In addition, the spirituality of polytechnic students also makes them to realize that all their activities such as social, educational, occupational, vocational, marital, and political financial should be spiritually and religiously motivated, channeled, and executed to enable them achieve their spiritual benefits in this life and in the next.

3. **Fear of the Unknown**: The study of metaphysics instills in polytechnic students the fear of the unknown since it brings to their the minds the knowledge of the existence of non physical or spiritual realities such as God, angels, spirits, devil, demons, heaven, hell, life after death, etc. which human sensory faculties cannot comprehend. Some of these are realities one will eventually encounter after his mortal earthly life. Metaphysical knowledge of the spiritual realities enables students to contemplate them in order to understand their attributes and to discern what must be done to encounter or avoid any of them at the end of his physical life. The fear of the unknown motivates students to constantly contemplate and discern the meaning and goal of human existence.

4. **Moral Excellence**: The fear of the unknown which is a fallout or outcome of the study of metaphysics evokes moral consciousness in polytechnic students. The unknown worlds are characteristically eternal. This means that they have no end, and inevitably, one must possess and encounter any of them depending on the status of ones moral life in the physical world. While those who exhibit moral excellence in the physical world will possess eternal happiness (heaven), those are morally reckless, irresponsible, and imperfect will possess eternal sorrow (hell). This understanding enables polytechnic students to be morally conscious and responsible. It helps them to lead lives of moral perfection and excellence. It also helps the to imbibe the culture and virtues of hard work, honesty, prudence, wisdom, self control, purity, modesty, respect, patriotism, responsibility, discipline, decency, etc. which will eventually earn them everlasting happiness in the life after death. In order to achieve the above mentioned virtues, polytechnic students will consciously and unconsciously avoid vices such theft, exam malpractice, cultism, immorality, prostitution, indecency, laziness, etc which will plunge them into eternal damnation, punishment, pain, and sorrow in the life after death.

5. **Duality of Man and Respect for Human Rights and Dignity**: Knowledge of metaphysics inculcates in polytechnic students the awareness of the indisputable fact that man is made of body and soul. This knowledge of the dual nature of the human person enables students to differentiate man (rational being) from animals (brutes). Although man belongs to the genus of animal, his specie is different from other species or categories of animals. Man is a psycho somatic, that is, he is endowed with reason. The psycho somatic nature of man makes him morally responsible for his actions, particularly those acts of man that are voluntary or that emanate from his will or volition. The psycho somatic nature of man necessarily bestows on him human dignity. The duality of man is the foundation of fundamental human rights and dignity. Hence, the fundamental rights of man cannot be violated or alienated. While violation of the fundamental rights and dignity of man necessarily amounts to total collapse of the society, the respect for the fundamental rights of man unequivocally leads to mutual and peaceful coexistence, rapid and geometrical development of all facets the society.

6. **The Realization of the Goals and Objectives of Polytechnic Education in Nigeria**: In order to achieve the laudable objectives of polytechnic education in Nigeria, the knowledge of metaphysics by polytechnic students is a *conditio sine quanon*. This is due to the fact that the study of metaphysics leads to knowledge of spiritual realities. The understanding of spiritual realities fosters in students moral, spiritual, social, political, and religious commitments and responsibilities. These laudable commitments in turn inculcate in students virtues such as
honesty, justice, transparency, selflessness, prudence, hard work, trustworthiness, simplicity,
diligence, discipline, wisdom, sacrifice, patriotism, and leadership qualities. Without these
necessary virtues exemplified in the life polytechnic students and polytechnic graduates, the
realization of the objectives of polytechnic education in Nigeria will be a mirage.

CONCLUSION
Reality does not consist only of tangible or physical existents perceptible to human sensory faculties but
also made of intangible or spiritual beings which are intelligible and can only be grasped by the human
mind. Reality therefore consists of both material and immaterial dimensions. Hence the knowledge of
only physical beings is an incomplete knowledge of reality, and has negative moral, social, economic,
political implications. The knowledge of intangible dimension of reality is acquired through the study of
metaphysics since metaphysics is the study of intangible realities, that is, knowledge of realities beyond
physical objects. The study and the understanding of the incorporeal realities such as God, the humane
soul, mind, spirit, heaven, hell, being, substance and accident, matter and form, society, goodness, truth,
beauty, causality, act and potency, the phenomenon of death, life after death, place, space, time,
continuum, change and permanence, essence and existence cannot be overemphasized as it inculcates in
the minds of polytechnic students the fear of the unknown, origin and goal of man, moral excellence,
spiritual and religious foundation all human life and activities, duality of man and respect for human
rights and dignity, and the realization of the goals and objectives of polytechnic education in Nigeria.

RECOMMENDATIONS
In consideration and appreciation of the overwhelming values of the study of metaphysics to polytechnic
students, the researcher makes the following recommendations:

a. the study of metaphysics should be introduced and made compulsory in all polytechnics in
   Nigeria;

b. qualified lecturers should be employed to teach metaphysics in polytechnics;

c. conferences and seminar on the values of metaphysics should be organized in polytechnic
   institutions;

d. chaplaincies should be established in polytechnics since their object of spiritual and religious
   activities and objects are metaphysical in nature (cf Delta State Polytechnic, Ozoro, Nigeria
   p.17); and

e. polytechnics should occasionally organize communal or interdenominational prayers, worship,
   fellowships, and even seminars for all staff and students.

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