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Aristotelian Empiricism and its Influence on Zimbabwe's Updated Curriculum 2015-2022

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Abstract: The writer is perturbed by the bigotry which seems to characterise the philosophical foundations of education in Zimbabwe. This intolerance is evident in the Curriculum Framework for Primary and Secondary Education for period 2015-2022 [known herein as Curriculum Framework 2015-2022 or Updated Curriculum or Government of Zimbabwe/GoZ (2015)] which declares Unhu/Ubuntu 'the' philosophy to egoistically inform education in a postcolonial Zimbabwe. The preceding sounds suicidal especially within the modern world order driven by the forces of globalisation. This reflection is informed by the eclectic approach to philosophy of education, an ideal which advocates for ideological syncretism. The inquiry was in the form of secondary research whose major and fundamental finding was that the Aristotelian empiricist philosophy abundantly permeates Zimbabwe's Curriculum Framework 2015-2022 in terms of instructional aims, curriculum content, pedagogics and the envisaged ideal teacher. This warrants the conclusion that the Aristotelian empiricist philosophy has the vast potential to inform education in a postcolonial and globalising Zimbabwe. The reflection, therefore, recommends curriculum designers to revisit the said curriculum framework and tailor-make it to appropriate ideas from Aristotelian empiricism with a view to complementing Unhu/Ubuntu in providing the philosophical foundations for education in a globalising Zimbabwe.

Keywords: Aristotle, Aristotelian influence, Curriculum Framework (Updated Curriculum) 2015-2022.

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INTRODUCTION AND BACKGROUND

Like Socratic-Platonic idealism, Aristotelian empiricism is regarded as antiquated and irrelevant in Zimbabwe's contemporary education. Implicitly, this finds substantiation in the Nziramasanga Commission Report (1999) which recognises *Unhu/Ubuntu* as the only worthwhile home-grown philosophy to inform education locally. As an extension of Nziramasanga (1999), the Curriculum Framework 2015-2022 decrees the *Unhu/Ubuntu* philosophy to egoistically inform the same thereby marginalising the exotic philosophies of education like Aristotelianism. Moreover, authorities such as Akinpelu (1981); Hummel (1999); Barker (2003); Ladikos (2010); & Stumpf & Fieser (2008), *inter-alia*, discuss the relevance of Aristotelian empiricism to education in generic. Hence, a contextual gap in knowledge is noted in these reflections since they seem not to be situated within the context of Zimbabwe's Curriculum Framework 2015-2022 - the object of contemplation herein. It is against this background that this article examines the influence of Aristotelian empiricism on the said framework in a search for the possibilities of hybridising indigenous and exotic philosophies of education. Such is a *sine qua non* of complete national development amidst the incessant and ever-intensifying global advances.

Problem Postulation

The writer is agitated by the inflexibility and intolerance which seem to characterise the philosophical foundations of education in Zimbabwe within a modern world order driven by the forces of globalisation. This ideological rigidity is evident in the Curriculum Framework 2015-2022, especially where this statutory document declares and decrees *Unhu/Ubuntu* 'the sole philosophical foundation of education' from Infant to Tertiary Education level. This, in itself, sounds non-accommodative of any other philosophies with the net result that *Unhu/Ubuntu* operates in solipsism. Such dogmatic adherence to a particular singular philosophy sounds harmful and atavistic because no philosophy contributes to all aspects of education especially in the current era of global dynamism. Hence, Zimbabwe needs an integral education for complete living and development. This calls for a synthesis of all good ideas and principles including those of an Aristotelian making - an undertaking definitive of the eclectic approach which seeks to harmonise the conflicting ideologies and blend them together to find unity in diversity.

Conceptual Framework

This reflection is informed by the eclectic approach to philosophy of education. According to Rivers (1981), this approach allows the absorption of the best but diverse viewpoints and using them for the purposes for which they are most appropriate. Thus, Ruth (2008) weighs in arguing that eclecticism is nothing but the fusion of knowledge from all sources, a

peculiar type of educational philosophy which combines all good ideas and principles from various philosophies. Hence, it is a conceptual framework that does not hold rigidly to a single paradigm or set of assumptions, but instead draws upon multiple theories, styles or ideas to gain complementary insights into a subject, or applies different theories in particular cases. As a 'compromise method', eclecticism is indicted for not offering any guidance pertaining to the basis and principles upon which aspects of different methods are selected and combined (Stern, 1983). Thus, eclectics are sometimes criticised for lack of consistency in their thinking.

METHODOLOGY

This reflection is in the form of literary criticism constitutive of secondary research, hence it appropriates ideas essentially from *Politics* and *Nicomachean Ethics* – Aristotle's treatises with substantive educational content. Sight of the title '*Politics*' is likely to evoke in the reader the belief that this is a treatise on governance yet this dialogue says a lot about education as portrayed through Aristotelian empiricism. Alongside *Politics* and *Nicomachean Ethics*, this write-up reflects upon the internet sources, journal articles and textbooks that discuss the Aristotelian philosophy of education, of course done within the context of Zimbabwe's Curriculum Framework 2015-2022.

Aristotelian Philosophy Summarised

Aristotle (circa 384-322 B.C.), the *privatdocent* affectionately nicknamed "master of those who know" (Hummel, 1999: 1), is Plato's student who turned out to be a copious writer on natural sciences, law, logic, politics, ethics, rhetoric and metaphysics, among others (Akinpelu, 1981; & Barker, 2003). As a prolific and bounteous writer, Aristotle is particularly considered to be the father of empiricism - a philosophy which birthed the scientific view of the world. Furthermore, it is worth reminiscing that the Aristotelian moral philosophy (ethics) was based on happiness, the mean, notion of purpose, notion of soul, *inter-alia*.

Stumpf (1975) submits that "the good [virtuous] man, according to Aristotle, is the man who is fulfilling his function as a man." This teleological viewpoint is confirmed by Ladikos (2010), who conceives Aristotle saying "the essential value of either an inanimate object or a living being (human, animal, plant) is to be determined with reference to the adequacy of its performance in the tasks for which it was designed." Such a mindset foreshadows the Aristotelian 'notion of purpose', a teleological ideal which accentuates that a human being who follows his true purpose is a good man. To Aristotle, therefore, the function of man *qua* man is the proper functioning of his soul, which implies a rational principle. Hence "the human good turns out to be activity of soul in

accordance with virtue" (Stumpf, 1975). Thus, Aristotelianism, which puts much store in intellectual and moral development, is an exhortation for man to be rational and righteous.

According to Stumpf (1975), the Aristotelian 'notion of soul' holds that the individual human must keep a proper balance between the *vegetative/nutritive* which takes in 'matter' (food) not 'form' because it is "the act of living"; the *animal/sensitive/appetitive* being that which takes in 'forms' not matter hence it is "both living and sensing"; and, the *rational* which has the power of scientific thought as it subsumes "living, sensing and thinking." The vegetative and animal souls constitute the irrational parts of soul. Hence, Aristotle exalts man "to act in accordance with Right Reason" (Stumpf, 1975), which, in itself, epitomises the rational control and guidance of the soul's irrational faculties. Thus, the irrational faculties should be subordinated to reason.

Aristotle principally maintains that a person should use his mind to avoid extremes. This constitutes the notion of the Golden Mean, which is virtue as "the realization of moderation in all things" (Barker, 2003). The appetitive part of the soul reacts to external factors like objects and persons through *concupiscent* and *irascible* passions (Stumpf, 1975). "Since the passions are capable of a wide range of action, all the way from too little to too much, a person must discover the proper meaning of excess and defect and thereby discover the appropriate mean" (Stumpf, 1975) – a compulsion hinged on the need for rational control of the passions. This Aristotelian recommendation is, however, complicated by the relativity of excess, defect or mean. Nevertheless, extreme or defect is vice whereas mean is virtue.

Aristotle argued that the 'chief good' in life is happiness which is achievable through developing a virtue and the moral man. Since the moral man employs all his capacities, 'physical' and 'mental', there are two functions of reason – the intellectual and the moral – giving rise to intellectual and moral virtues, respectively. To Aristotle, intellectual virtue constitutes philosophical wisdom and understanding and it owes its birth and growth to teaching and learning whereas moral virtue comes about as a result of habit (Stumpf, 1975; & Hummel, 1999). Thus, intellectual virtue is learnt whilst moral virtue is practiced through habituation. Morality becomes virtue only through action. This is endorsed by Barker (2003) whose argument is that:

Despite his concern with rational behaviour, Aristotle was nevertheless, a great believer in the instilling of virtuous habits in the young and, moreover, in instilling in them a knowledge of virtue itself. Intellectual insight, he declared, is not enough; virtuous behaviour is chiefly a matter of habit."

Thus, the Aristotelian moral formation of learners is attainable through straddling intellectual learning with habituation, as articulated in the *Nicomachean Ethics*, and without the rational element man has no moral capacity. Therefore, “education is the touchstone of Aristotelian ethics” (Hummel, 1999), because virtue, wisdom and happiness are acquired through it.

Aristotle taught that ideas cannot exist without matter but matter can exist without ideas. Thus, “Unlike Plato, however, his [Aristotle] interests lay more in the world of senses. He laid great emphasis upon reason but, for him, it was to be exercised equally in solving problems of both an observable and a metaphysical nature” (Barker, 2003). Hence, Aristotelian thought believes in analysing matter which is corporeal to come up with ideas which are ethereal in nature. Thus, Aristotle gets the idea by studying material whilst Plato gets material by studying ideas. Barker (2003) gives a further elaboration of Aristotelian empiricism, thus:

Whereas Plato concerned himself solely with the abstract idea, Aristotle dealt ever with the concrete embodiment of ideas – with the facts of nature, of history and of the soul of man. The search for truth, he said, had to proceed through the observation of phenomena and then be confirmed by reflection.

To Aristotle, therefore, it is the union of ideas and matter which gives reality although he ascribes primacy to matter. This is further confirmed by Ladikos (2010) whose understanding is that:

Though the form, as formal cause, plays a fundamental part in all of Aristotle’s thinking, it is not separate and does not exist separately. For Aristotle it is only in concrete individual objects that a form can have real existence. Concrete individual objects combine matter and form, and form cannot really exist apart from matter, nor is it possible to have matter fully removed from form.

Aristotle, thus, dismisses the dualistic approach embraced by his mentor Plato – that of treating ‘form’ and ‘matter’ as entities existing separately.

Aristotelian empiricism, as elucidated in the foregoing, “was at complete variance with the dialectic approach of Plato and Socrates” (Barker, 2003), because the dialectic ascribed primacy to Ideas or Forms which are metaphysical in nature. “This led Aristotle to formulate the twin principles of inductive and deductive reasoning, which, together, act as the complementary procedures of all scientific investigation” (Barker, 2003). Thus, Aristotle produced a system of logic, which, according to Stumpf and Fieser (2008), is code-named the Aristotelian logic.

Logic would enable man to be more consistent and effective in their search for the truth.

Aristotle further argues that man must not only search for the truth but they must also argue about the truth to which end Aristotle proffers syllogisms. Thus, “the syllogism represents the linking of propositions about essential properties in such a way that the conclusion necessarily follows” (Stumpf, 1975). The aforesaid essential properties undergird the primary premises or the Aristotelian *archai*, which, in essence, are the starting points for reasoning formed through induction. Deduction, which, in essence, is the drawing of conclusions, starts where induction ends. Hence, “the value of syllogistic reasoning depended for Aristotle upon the accuracy of the premises” (Stumpf, 1975). This is a cautionary submission stressing the need to authenticate the premises prior to drawing conclusions. The foregoing is endorsed by Barker (2003) who is of the conviction that “central to all Aristotle’s thinking is the syllogism – that form of reasoning whereby, given two propositions, a third follows as a necessary consequence from them.” Therefore, syllogisms can be used to establish the truth in many problems but not all. Thus, syllogisms need to be supplemented.

To Plato, knowledge is a natural endowment, whereas, Aristotle conceives knowledge as a product of sensory experience or sensory perception, not a natural endowment. Plato’s rationalism is called nativism-idealism since he stressed the fact that knowledge is innate or *A-priori*, whereas, Aristotle’s position has come to be called empiricism since it stresses the importance of sensory experiences or perception as the basis of all knowledge. This is endorsed by Stumpf (1975) who recounts, “our mind, says Aristotle, has a better knowledge of the things close to our senses than of things farther from our senses.” Thus knowledge, in the Aristotelian context, is *A-posteriori* meaning that it is acquired through sensory experience.

Aristotelian Aims of Education and Curriculum Framework 2015-2022

According to Akinpelu (1999), the role of Aristotelian *paideia* was, first, “to develop the child so that he may become the best adult of its type.” Thus, Aristotelian education was bent on character building as the desideratum for the ethical formation of neophytes. Second, “it was to promote the reasoning ability of the person since it is the best and highest element in man” (ibid). Aristotle, thus, viewed education as meant to promote logical thinking in the neophytes. Third, “it was to inculcate in all individuals the wisdom for practical living” (ibid). This is with a view to promoting virtue, harmonious living, stability and survival of society. Last and most importantly, “it was to foster in the individuals who were capable of it, the ability for intellectual and theoretical engagement” (ibid), thus, to churn out individuals who are academically polished.

Therefore, emphasis placed by the Curriculum Framework 2015-2022 on learner acquisition of ‘values - attitudes’, which is within Bloom’s affective domain of learning, seems to have philosophical underpinnings from Aristotelian empiricism whose programme of education is bent on character building and the ethical formation of neophytes. Moreover, the emphasis placed by the same curriculum framework on promoting the acquisition of ‘knowledge’, which reposes within Bloom’s cognitive domain, is seemingly underpinned by Aristotelian empiricism whose model of instruction is predisposed towards the promotion of logical and rational thinking.

Barker (2003) recounts that “education’s overriding purpose is the production of a rational man of virtue. Education, declared Aristotle, should enable an individual to guide his life by the law of reason.” Aristotelian education, thus, seeks to harmonise rationality with morality. Hence:

The highest function of man, he [Aristotle] said, is to be rational in thought and conduct; the highest function of the state is to direct society in such a way as to effect the greatest good of mankind. Achieving a harmonious and self-actualising existence on the basis of sound reasoning, he said, constitutes true virtue and this, for Aristotle, was the ultimate goal of education (Barker, 2003).

Beyond suggesting the straddling of rationality with morality, the foregoing quote demonstrates the close propinquity between education and ethics. Thus, the Aristotelian view is that education should seek to churn out the educated individual who is rational and righteous, a good citizen who is truly virtuous and happy. The close proximity between the intellectual and moral inclinations of instruction pervades the Curriculum Framework 2015-2022 from Infant Education to Advanced Level. This interrelatedness between the cognitive and affective thrusts of learning or between the education of the ‘head’ and that of the ‘heart’ is in line with the agenda for holistic education, which seems to be a manifestation of Aristotelian thought in Zimbabwe’s education system.

According to Akinpelu (1981), Aristotle reminisces “the important proviso that the mind of the child had already in potential form the full form of the adult which he was to become.” This recognises the child as a being full of potentialities. Hence, the aim of Aristotelian education becomes that of promoting self-realisation, which, in itself, constitutes the actualisation of the potentialities within the individual. The fact that the Curriculum Framework 2015-2022 stresses learner-centred approaches, where the teacher acts as a co-explorer and facilitator in knowledge discovery, demonstrates that Zimbabwe’s Updated Curriculum views learners as beings with potentialities that only need to be actualised. This concurs with the Aristotelian

‘actualisation of potentiality’ thesis, which is opposed to viewing learners in terms of the Lockean *Tabula Rasa*.

Aristotelian education also aims “to help the child realise the ideal pattern or the best of its kind, which is that of a full grown, happy adult” (Akinpelu, 1981). Thus, Aristotelian *paideia* is predisposed towards leading the child to ultimate happiness as the Supreme Good embedded in the doctrine of *Summum Bonum*, which, in itself, has Socratic-Platonic underpinnings. Aristotelian education, therefore, aims at achieving the ‘goodness of intellect’ and ‘goodness of character’, with the former being attainable through teaching and the latter by habituation. This is endorsed by Ladikos (2010) whose argument is that the Aristotelian final cause of education is “contemplation of the Highest Good.” Likewise, the Curriculum Framework 2015-2022 (GoZ, 2015) purports to be predisposed towards “producing a well-rounded learner capable of contributing meaningfully to the development of the country while leading a fulfilling and happy life” – a proclamation of Aristotelian inclinations.

Aristotle is also of the conviction that freedom is one of the ultimate goals of education since happiness is impossible without freedom (Hummel, 1999). In addition, Hummel (1999) writes:

Leisure, or *schole*, which should be the goal of education [Aristotelian], is the freedom to apply oneself to essential matters. It is this form of freedom that leads to wisdom: a life devoted to philosophy and contemplation, that is true happiness. Through leisure, which is an indication of freedom, education should lead to man’s ultimate goal, an intellectual life rooted in the mind.

Therefore, Aristotelianism accentuates the education of learners on the correct use of spare time with a view to enabling them to acquire wisdom, virtue and happiness. Thus, too much work, in itself, turns out to be adversative to the Aristotelian Golden Mean which is necessary for attaining the Supreme Good. Although the Curriculum Framework 2015-2022 claims to be predisposed towards “equipping learners with life skills for work and leisure,” it is jammed with a multiplicity of subjects, and it seems not to have a subject where it urges learners to use spare time for philosophical contemplation. Hence, it reneges on its leisure commitment.

“*Politics*” – one of Aristotle’s dialogues – “ends by citing three aims of education: the possible, the appropriate and the happy mean” (Hummel, 1999). The ‘possible’ speaks to learner potentialities. Hence, the Aristotelian ‘notion of soul’ intimates that the individual’s *vegetative* soul has the potential guarantee life of the body, the *animal* soul has the potential to

sense different 'Forms' correctly and the *rational* soul has the potential to engage in apt scientific thought as well as sound deliberation (Stumpf, 1975). Aristotelian education, therefore, seeks to actualise potentialities within the neophyte. The 'appropriate' denotes the moulding of 'good conduct' constitutive of 'virtue' as the form, the actual, the natural end or the final cause which Aristotle, as cited in Stumpf (1975), calls the 'Unmoved Mover' or *nous*. Lastly, the happy mean evokes the idea of having education promoting the famous Aristotelian mean. It is, therefore, observable that with its agenda for *Unhu/Ubuntu* and intellectual development, the Curriculum Framework 2015-2022 is inclined to churning out virtuous and educated individuals whose potentialities would have been actualised. The said framework also endeavours to achieve the Aristotelian Golden Mean by setting a premium on good citizenship, which, in itself, balances up rights with responsibilities and duties. This has philosophical underpinnings from Aristotelian empiricism.

Aristotelian Curriculum and Curriculum Framework 2015-2022

"Education must," Aristotle insisted, "be a state monopoly, and to attain its ends the state must ensure its education reflects the society it undertakes to preserve" (Barker, 2003). This implies that, like Plato, Aristotle views education as a responsibility of the state wherein the state uses education for reproduction of the society with a view to guaranteeing the continued survival of the same – which manifests the conservative element. Aristotelian thought also holds that schools should be public and that education must be one and the same for all (Hummel, 1999), which manifests the drive towards democratisation of education and equality of educational opportunity, respectively. In line with Aristotelian thought, the Curriculum Framework 2015-2022 is fundamentally an epitome of state-controlled and public education. Since the said framework puts primacy on the principles of inclusivity, equity and fairness, it, therefore, upholds the Aristotelian democratisation agenda and the equalisation of instructional opportunity.

To Barker (2003), the general pattern of Aristotle's proposals for education followed very similar lines to those of his mentor. For instance, Aristotle adopted the Platonic age-gradations and emphasis on continuing education (Hummel, 1999). The Curriculum Framework 2015-2022 seems to have taken a leaf from both the Platonic and Aristotelian age-gradations as witnessed by the conspicuity of the Infant, Junior and Secondary cycles of education in the said framework. The Curriculum Framework (GoZ, 2015) seems to also have adopted from Platonism and Aristotelianism the notion of continuing education, which it now refers to as "life-long learning."

Where Aristotle differed from Plato, however, was on the emphasis he gave to physical sciences and empirical investigation. Thus, the Aristotelian curriculum generally had an empiricist outlook as it set a premium on natural sciences. By the same token, Barker (2003) argues that "perhaps the greatest contribution made by Aristotle to the advancement of human thought lies in the fact that he bequeathed to the world the fundamental bases of scientific method." Hence, the fact that the Curriculum Framework 2015-2022 recognises the exigency of Science, Technology, Engineering and Mathematics [STEM], which, according to Chitate (2016), is instrumental in national industrialisation, demonstrates that the said framework has Aristotelian proclivities.

To Aristotle, "the curriculum is an essential means of the actualisation of the student's physical and spiritual potentialities" (Ladikos, 2010). Thus, courses can be designed to promote physical as well as spiritual development. The Aristotelian curriculum, therefore, included: vocational training, music, natural sciences, grammar, physical training, drawing, reading and writing, *inter-alia* (Barker, 2003). This is substantiated by Ladikos (2010) who submits that the Aristotelian intellectual curriculum included "biology, history, physics, theory of the heavens, theology, and First Philosophy" – First Philosophy being metaphysics. These subjects would be preceded in elementary education by reading and writing, drawing, gymnastic which advances the virtue of courage, and music which amuses, relaxes and cultivates the mind (Ladikos, 2010). Congruously, Akinpelu (1981) presents the Aristotelian view that "a complete life is that which combines the life of academic or intellectual studies with that of practical living." Hence, Aristotle bequeathed to humanity a long-standing categorization of disciplines into the theoretical, practical and technical – a predisposition towards holistic education. Notably, Aristotle recommends the teaching of Mathematics for higher education levels because it develops the power of deductive reasoning in man.

The Curriculum Framework 2015-2022 is fundamentally seized with the agenda for holistic education as demonstrated by its emphasis on the acquisition of 'knowledge', 'values' and 'skills' in line with Benjamin Bloom's cognitive, affective and psychomotor domains of learning and Booker Teliawerferro Washington's education of the head, the heart and the hand, respectively. These concur as well with the Aristotelian categorization of learning areas into the theoretical, practical and technical. The 'theoretical' is the intellectual-academic element of instruction, the 'practical' denotes practical living informed by ethics (ethical praxis) whereas the 'technical' depicts the vocational-physical aspect of education. Moreover, the fact that the framework in question exalts STEM demonstrates its inclination

towards promoting deductive reasoning, which also sounds Aristotelian in outlook.

Pertaining to Aristotle's envisaged 'noble' use of spare time, Ladikos (2010) argues that:

One becomes mindful to the fact that the modern and challenging problem of how school children may be guided to a worthy use of spare time has its ancient counterpart in Aristotle's 'gospel of leisure'. More than two Millenniums ago Aristotle was asserting that the highest education is intended to fit us for the right and noble use of leisure. Through reflection on life and leisure opportunities one can make prudent and wise choices that lead to an ethical life. It is Aristotle's contention that, since we cannot always work, if our education has not prepared us to use our spare time correctly, we are at risk to miss the golden mean.

This Aristotelian illustration of the Golden Mean concurs with the famous English adage 'more work, no play, makes Jack a dull boy'. Since life needs to be moderated with leisure, education should also orientate man to the dictates of leisure. The Aristotelian model of school, therefore, "proceeds sanely toward its objectives, a school where theory is not given precedence over practice, and where no single phase of child development receives emphasis to the detriment of others. Virtue becomes an exercise of such traits as are destroyed by excess or deficiency and preserved by the mean" (Ladikos, 2010). Aristotle, thus, accentuates the attainment of Supreme Good through equilibrium between theory and practice as well as equal emphasis on all instructional cycles (Infant, elementary, secondary and tertiary), not any one of them.

The Curriculum Framework 2015-2022 (GoZ, 2015) purports to be predisposed towards "equipping learners with life skills for work and leisure." This has Aristotelian tendencies although in its practical implementation the said framework turns out to renege on its leisure commitment. Furthermore, the framework in question purports to bring the theoretical-academic and practical-vocational components of instruction into equilibrium, in line with the Aristotelian Golden Mean. This finds testimony in the conspicuity of the Design and Technology Modules amidst the Academic Modules as portrayed in the learning areas' diagram in GoZ (2015). Above all, the Curriculum Framework 2015-2022 places emphasis on all the instructional cycles not any one of them, which again conforms to the Aristotelian principles predicated on the Golden Mean.

On the Aristotelian statutory subjects and electives, Collins, cited in Ladikos (2010), "points out that curriculum courses which are meant to contribute to the development of the student's essential

characteristics would be compulsory courses, whereas those courses relevant to the accidental traits of students would be electives." Essential characteristics of man are fundamentally metaphysical, *id est*, they constitute knowledge at the highest level of abstraction. Hence they include, for instance, rationality, virtue and mortality of man, among others. Thus, from an Aristotelian point of view, learning areas or courses within the humanities, mathematics and natural sciences which seem to climb higher to the essential characteristics of man should be made compulsory whereas those which seem to be limited to the accidental physical characteristics of man could be designated as electives. Within Zimbabwe's Updated Curriculum, Maths and Science, for instance, have been designated as statutory subjects because in Aristotelian terms they contribute to the development of deductive thought as one of students' essential characteristics.

Aristotelian Pedagogics and Curriculum Framework 2015-2022

"The mind," argues Aristotle, "begins as an empty tablet" (Stumpf, 1975). This Aristotelian empiricist mindset is confirmed by Akinpelu (1981) who submits that "for Aristotle, the mind of the child was like raw clay ready to be moulded into the fully rational adult." Hence, the foregoing Aristotelian thesis poses as a forerunner to the Lockean *Tabula Rasa* concept of viewing the child's mind as a blank slate waiting for inscriptions of knowledge upon it – knowledge gained through experience with the environment. In this context, the environment is the learner's corporeal world. Such an epistemological standpoint demonstrates Aristotle's inclination towards experiential learning, which John Dewey refers to as problem-solving or experientialism. Notably, the Curriculum Framework 2015-2022 (GoZ, 2015) incorporates 'inquiry-based learning' as "an approach that aims at nurturing thinking, reflection and problem-solving among learners." Thus, inquiry-based learning subsumes discovery learning, which, in itself, "involves problem solving situations where learners tap from their past experiences and prior or existing knowledge to discover facts and new knowledge" (GoZ, 2015). Therefore, learners learn through interaction with the material environment and this seems to have Aristotelian empiricist underpinnings.

The Aristotelian method of learning is "to seek new light from what is already known and observed, proceeding to the unknown by means of induction and syllogism" (Ladikos, 2010). This is a lucid expression of the Aristotelian concentric model within which instruction radiates from the core (the known) to the periphery (the unknown). Aristotle, thus, recommends *epagoge* or the 'inductive methods of teaching' and 'learning by demonstration' (Hummel, 1999). The former proceeds on the basis of particular cases and the latter on universal principles. In this epagogic pedagogy, demonstrative learning or deduction which

unpacks the causes of things or universals builds on induction which yields a host of experiences or particulars. The Curriculum Framework 2015-2022 (GoZ, 2015), therefore, seems to adopt the Aristotelian concentric model of learning, as entrenched in *epagoge*, where it maintains that “learning is designed to focus from lower to higher levels of cognition.” In this case, the lower levels of cognition are inductive whereas the higher levels of the same are deductive.

Moreover, the Aristotelian inductive logic portrays truth as subjective and multiparadigmatic. This sets a premium on the interactive instructional methodologies like, for instance, debate, which promote diversity in thought and multiple realities. In line with this Aristotelian kind of thought, the Curriculum Framework 2015-2022 (GoZ, 2015) adopts the “interactive pedagogy,” which accentuates classroom interaction and participation. Aristotle also had a deep concern for the objective element, as evidenced by his great intellectual curiosity and his careful observations (Ladikos, 2010). Therefore, to him, truth reveals itself objectively in the facts of nature, which intimates the importance of scientific experimentation as the deductive instructional methodology. The STEM rhetoric peddled by the Curriculum Framework 2015-2022, therefore, seems to be informed by the Aristotelian deductive pedagogy. Moreover, Aristotle places emphasis “upon the concrete embodiment of ideas as against the conceptualism and the universals of Plato” (Ladikos, 2010). This is the epicentre of Aristotelian empiricism which puts primacy on matter not ideas. Hence, the said framework (GoZ, 2015) accentuates “active, hands-on learning opportunities for learners,” which calls for the physical manipulation of objects in the educative process.

Aristotle recognised the importance of the teacher’s role in guiding the child’s intellectual and moral development. However, he emphasised that this was not enough. Hence, he argues that, in order to acquire practical wisdom, “the child must also be involved in the action; he must practice what he has learned repeatedly until it becomes part of him” (Aristotle, cited in Akinpelu, 1981). Aristotle, thus, exalts heuristic learning. Hence, he proclaims, in his dialogue *Nichomachean Ethics*, that “we become just by doing just acts; temperate by doing temperate acts; brave by doing brave acts..., States of character are formed by doing corresponding acts” (Akinpelu, 1981). This Aristotelian method of habituation is key to moral education or education for character building and civic virtue. Consequently, “it is not enough to tell a child what he should know or do, but the teacher needs to make him do the good act repeatedly until he cultivates the habit of doing it naturally” (Akinpelu, 1981). Habituation, thus, does not mean automatic and monotonous repetition, but active learning (Hummel, 1999). The fact that the Curriculum Framework 2015-2022 stresses the participatory and heuristic

instructional methodology demonstrates the same curriculum’s compatibility with the Aristotelian habituation thesis.

Aristotelian Teacher and Curriculum Framework 2015-2022

Aristotle is said to have mentioned nothing about the teacher *per-se* such that all the author currently has are inferences. In the intellectual and practical-moral formation of neophytes, “the teacher was as it were, the creative agent who moulds the child’s life in accordance with the ideal pattern and the ideal virtues of man” (Akinpelu, 1981). Aristotelian thought, thus, deems it incumbent upon the teacher to guide the learner on their way to becoming good in thought and conduct, *id est*, on their way to *Summum Bonum* – the Supreme Good as the *sine qua non* of happiness. This is endorsed by Ladikos (2010) who is of the conviction that the training of the learner’s mind and the moulding of the individual’s character greatly demands “a competent teacher whose good character can be imparted on the student.” This implores the teacher to be knowledgeable and role model. On the ideal of role model, Ladikos (2010) concludes that:

If character is indeed transmitted largely through role modelling, and the teachers of today did not have the benefit of a character education programme or simply lack outstanding virtue, then the students of today will lack adequate role models to follow and consequently this will lead to moral disorder.

Since the Curriculum Framework 2015-2022 (GoZ, 2015) puts primacy on values as entrenched in the *Unhu/Ubuntu* philosophy, it, therefore, exhorts teachers to uphold the same values so that they become role models to learners - much in accordance with Aristotelian thought.

In addition, Aristotle notes that the teaching activity of the educator would help the child to realise the potentialities lying latent in him (Akinpelu, 1981: 34). This is confirmed by Ladikos (2010) whose conception of the Aristotelian philosophy of education implies that “no person can learn for another person and that the role of the teacher is to help the learner fulfil his potential.” Aristotle, thus, adopts the Socratic-Platonic ‘self-realisation’ principle, which, according to James (2009), is rooted in the Egyptian Mystery Teachings, which, in themselves, amplified the ‘man know thyself’ precept. The fact that the Curriculum Framework 2015-2022 (GoZ, 2015) views teachers as the “facilitators-moderators-mentors” substantiates the Aristotelian position that learners are beings with potentialities which need to be actualised through the educators’ guidance.

Critiquing the Aristotelian Philosophy of Education

According to Hummel (1999), the envisaged Aristotelian provision of education seems to have been

differentiated and stratified with the so-called citizens, *id est*, adult males, receiving quality intellectual education. Aristotle prescribed some sort of diluted vocational training for the manufacturers or tradesmen in recognition of the importance of a good apprenticeship for the proper practice of a trade. Females were not regarded as full citizens and hence received debased education which was centered fundamentally on beauty, greatness, chastity and a liking for work without greed. Worse still, slaves, who were not regarded as complete human beings, were given inferior education which was only enough for them to operate in their liberal occupations. The Framework 2015-2022 (GoZ, 2015), whose generic principles include “inclusivity, equity and fairness,” therefore, deviates from the seemingly stratified and prejudicial Aristotelian system of instruction. However, this does not serve to dismiss the relevance of Aristotelianism to education in Zimbabwe.

CONCLUSION AND RECOMMENDATION

Nowadays, the importance of the Aristotelian approach to teaching is becoming not only interesting but also quite useful. Notwithstanding a few points of divergence between Aristotelianism and the Curriculum Framework 2015-2022, the former has been discovered to permeate the latter in terms of the aims of education, curriculum structure, instructional methodology and the envisaged ideal teacher. Therefore, Aristotelian empiricism is not as outdated and irrelevant as purported earlier. This reflection, thus, recommends the architects of Curriculum Framework 2015-2022 to adopt ideas from Aristotelian empiricism with a view to complementing *Unhu/Ubuntu* in providing the philosophical foundations for education in a globalising Zimbabwe. This serves to guarantee complete living and all-round development.

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