IMPLICATIONS OF ARISTOTLE'S THEORY OF EDUCATION TO TECHNICAL EDUCATION AND TRAINING IN KENYA

Khisa Alfred Simiyu[i],
Cherryl Atieno,
Beatrice Bagada,
Erick Kangu Buhuru
Department of Educational Foundations,
Masinde Muliro University of Science and Technology,
Kenya

Abstract:

Since ancient civilizations, education and training has been regarded as the tool for individual and societal development. All developing nation thus have embraced education and training as part of state agenda in realizing better citizenry and societal growth. In Kenya various efforts in reforming Technical education and training in order to reorient training to the countries developmental agenda and empowering the youth for employability have been undertaken from time to time in order to review the relevance of education and training in Kenya. This paper attempts to analyze Aristotle's metaphysical, ethical and epistemological principles with the view to render salient ideas that contribute to the formulation of worthwhile theories of education in the context of Kenya's 21st century realities. In addition, Aristotle's views "experiential learning" and "lifelong learning" are analyzed. Consequently, it is evident that contemporary education in Kenya is inadequate in several ways. It is therefore recommended that education in Kenya should embrace a multidimensional orientation that ensures the physical development, mental development and moral development for realization of individual empowerment.

Keywords: Aristotle's theory, experiential learning, lifelong training

1. Introduction

Aristotle was born in Greece colony of Stagira and his father, Nichomachus was a physician to the king of Macedonia. As a pupil in "The Academy" as school set up by his teacher Plato, he spent 20 years learning and training the art of philosophy until Plato's death (Hummel, 1999). At the age of 49, 335 BC, Aristotle founded Lyceum, modeled on the foundations of Plato's Academy the school made its own contributions in the

---

[i] Correspondence: email khisaalfred@gmail.com, khisa.alfred@yahoo.com

development of knowledge. Aristotle authored several treatises and majorly, the politic highlighted his theory of knowledge, *Metaphysic* gave the ontological principles, and the *Nicomachean Ethic* gives his Ethical principles (Ladikos, 2010). They focus on giving practical applications of his thought in education system or curriculum. In addition, proposals of his subject content of physical education, reading, writing, music and drawing enrich and balance the content available for training towards mental and moral growth of the learners.

2. Technical Education and Training in Kenya

Globally Technical education and training has taken the form of training in technical colleges, universities of science and technology and youth polytechnics. Influenced by global delegation lie ILO, UNESCO and EFA, each country has adopted its own approach to orienting TVET towards skill development and solving societal problems. The demand driven training made Technical Education Programmes (TEP) technical courses to be replaces in 2013 by modular Courses that were blended with internship at every interval to have employers input in training and orientation of trainees in the labour market. There is also the idea of orienting TVET towards a competency-based curriculum, inclusivity by embracing women in the engineering course despite the low grades of entry, adopting new trends i.e., greening technology, production units and online training (Chege & Kariuki, 2016).

In Kenya, Technical education and training has only been popularized by the TVET Act 2013.The overemphasis of University education and low image of technical education as a reserve for exam failures has been an opinion dearly practiced during entry to tertiary institutions (Cheserek G.J and Mugalavai, 2012). With a great emphasis put on technical training to empower Kenyan youths for the market demand, there a high changes of training adopting market views and forgetting the foundational ideas of technical education and training towards mental training and character formation for employability and attaining of national goals. This study therefore is tasked to critically examine Aristotle's philosophical ideas, experiential learning, lifelong learning and their implication to contemporary education and training in Kenya.

3. Theoretical Framework

3.1 Conservative Theory
The term conservation is etymologically gotten from a Latin word "*Conservare"* meaning to protect from harm or loss. According to Nasongo & Musungu 2009 it is a set of assumptions facts and explanations describing political philosophies that favour tradition and gradual change for the attainment of development is it individual or societal. Tradition in this case refers to religious, cultural or nationally defined beliefs and customs. In addition, the conservative thought is associated with a conceptual defence of forms of life and experience that are threatened by transformation and upheavals Strand

(2019). Secondly it is drawn towards the concrete and the traditional in contrast with abstractions, ideologies describing certain aspirations. Finally, but not the least this theory seeks to warn against reforms and efforts at social change in part by emphasizing limit to rationality, reason and knowledge (Robin, 2017).

3.2 Pragmatic Theory

The word pragmatism etymologically is rooted from the Latin word *Pragma* meaning action. According to Kalolo (2015), pragmatic theory is oriented towards aligning educational thought to result, products or consequences. The experiential learning process can only be directed towards objects and the role of teacher as models guide and shape trainees towards bringing out the products by innovation manipulation and outdoor learning.

Pragmatism as a theory of truth adopts outdoor methods of learning to drive use ideas and manipulation to achieve the objectives. Thus, use of questions as experiments on various ways of finding solutions in our thought since no object has inherent validity or importance, the significance lay in its practical consequence and the empirical investigation on its usefulness is the best justification of the truth of any idea.

According to Kalolo (2015), pragmatic theory can traverse both qualitative and quantitative research because of its logical orientation and thus is not rigidly empirical or rigidly idealistic. No emphasis is laid on procure, rules, the methods and goals. Specific attention is placed on practicability of the ideas being tried within an outdoor activity.

3.3 Aristotle Philosophy

3.3.1 Metaphysics

Aristotle in the study of being identified a discipline for the study of the first principles and this was metaphysics. The study of being qua being involves principle to grasp it. Act and potency as highlighted by Aristotle is the principle that analyses the states of being "actuality" and "potency" to be for Aristotle is second to its existence. There exists a substance called a human being before the being attains Humanness(beingness).there are essences and accidents in the identification of "*Ousia*".

3.3.2 Causality

According to Aristotle, there exist causes that bring beings to existence. They include material (the chemical composition), formal (the shape or size of the object), efficient cause (this is the agent bringing to existence the form on the object) and the final cause (the end product of the process of becoming). The number of causes cannot be infinite since the regression has to reach a first cause of all causes and Aristotle terms "*unmoved mover*" as the first cause.

3.3.3 Epistemology

Aristotle describes man as a rational being thus by nature man desires to know. His analogous use of the term to "know" has six meaning: sensation, memory, experience, art, science and wisdom. Whereas senses knowledge is seen as crude its primary in availing sense of touch, taste, seeing, smell and hearing to the mind, wisdom on the other

end become the pure knowledge that is gained through the search for knowledge for its own sake.

3.4 Ethics

Aristotle prioritizes man in his ethics than the state as done by his predecessor Plato. Man as a rational being desires to know, must aim for the "good" and that is virtue. Virtues are attributes that are acquired over time through emulation of virtuous people. The core business of the habituation process is to acquire virtue for self-actualization. The individual creates a vision for his own life by emulating the virtuous not following rules and trying to produce products. Being a practical avenue, it required amble time for one to graduate with virtue. The golden mean was to be observed to avoid extremes and practice in relation to other objects.

4. Experiential Learning and Lifelong Learning

4.1 Experiential Learning

According to Aristotle, nature of education was for the whole population where the elite became leaders and while other subjects to obey the laws of the state. The idea of educating the whole population was founded on the assumption that education is the foundation of thriving development of the state and thus the state had to control the education system. In understanding the proposed modes of learning by Aristotle, it is of great importance to highlight the level of training given by Aristotle. According to Maina (2008), there exist six stages, but 4th and 5th merged together.

Stage 1: at infancy all children were to receive habit training only involved in bodily movement and especially exposing them in the cold to harden for military functions in future.

Stage 2: limited to age 5yrs, children were introduced to physical training, storytelling, and music and prevented from exposure to harmful objects.

Stage 3: 5-7yrs of age children were to continue practicing music and storytelling under the watch and care of their older siblings.

Stage 4 and 5: 7yrs to puberty basic subjects were taught to the children such as gymnastics, reading, writing, music and drawing.

Stage 6: from age 21 till death; learning was through interaction and exposure to mathematics, politics, aesthetics, music, poetry, rhetoric, physics, biology and internship of 15 years.

There is agreement on the stage with Suleiman (2001); however, his stage 6 start at age 25 to puberty. What is critical in this stage are the trace of technical education towards experiential learning and lifelong learning.

First and foremost, the aim of education is explicit, and the development of a morally sound patriotic citizen was central in the stages. Self-realization rather than state goals was central in the training process.

Secondly, the subject content was well stated at each level among them music and drawing that require practice, emulation, outdoor learning experiences in order to grasp the essences and patterns.

Thirdly the methods of teaching and learning included role modeling by older sibling, tutors, society, exposure to internship in political career, war and even tasks to accomplish.

Wonder as the beginning of knowledge generated the starting point of deviating from the norm, accepting reality as given and questioning the existing status quo. Problem solving approach, research, philosophizing and argumentation took the centre stage of convincing society and relevant authorities of the integrity of knowledge acquired.

4.2 Lifelong Training

This is a view holding the assumption that knowledge acquired can be used in the society and there is room for improving it through in-service training or on job training. According to Aristotle, continuous learning was to be carried out as from stage 6. The young adults were exposed to the internship for 15 years and after in this, continuous learning was to be undertaken till death. Training in virtue was through emulation and observation of the virtuous executing activities to copy or emulate was to take time. In addition, finding virtuous individuals could also proof a challenge and one had to take some time.

Adult education involved engaging in state activities for example obeying the laws for the citizen and the leaders leading the state towards justice society.

5. Implications of Aristotle Experiential Learning and Lifelong Training to Contemporary Training in Kenya

The themes of experiential learning and lifelong learning underscore Aristotle's vision of ideal education in the Greek states. These are still relevant in the contemporary education in Kenya today. For instance, the inclusion of technical subjects especially Technical Drawing, wood technology etc. in the curriculum expose learners to hands on work through practice. This is highlighted in the Kamunge report (1988) that specified out the aligning of education and training towards skill development thus making education relevant and useful to the trainees. Technical education reforms have not been explicitly implemented because of inherited in the general 8.4.4 curriculum.

Technical education and training in Kenya have gained some strength after the gazettement of the TVET Act 2013. This has led to the acknowledgement of the existing formal and non-formal training institutions and ability to access empowerment of trainees towards realizing MDGs, Kenya Vision 2030 and currently the Big 4 agenda (Cheserek and Mugalavai, 2012). Some policy reforms recommended addition of technical subjects such as Technical Drawing, Music, Agriculture, Woodwork, Building Technology etc. however this has increased the subject content in the primary and

secondary level and thus making the 8.4.4 curriculum book oriented rather than skill oriented (Andafu & Simatwa, 2014). Therefore, we can talk of general technical education done at primary and secondary level, specialized training done at tertiary level and informal training done in *Jua kali* sector.

All these forms have greatly contributed to skill development of individual trainees for societal realization of set goals. From a policy perspective the Gachathi Commission (1976) apart from insisting on the human capital, the knowledge trainees got was to help in the realization of national unity, technical skill development and societal growth. Kamunge commission (1988) brought out clearly the roadmap towards a TVET oriented curriculum for adopting training curriculum for individual empowerment, skill development and societal growth. This set the pace for orienting training, lesson preparation and teaching approaches towards having set objectives and goals in order to attain consequences of the training process. It is through the Odhiambo Commission (2011) that the gaps of 8.4.4 curriculum were evaluated and some changes recommended for sustaining the technical subjects in primary and secondary education and aligning the system to Kenya constitution (Muricho,P.,& Chang'ach,J., 2013).

According to Aristotle, the state must control education through funding, evaluation and setting up of places of learning; the government has equally improved the status of Technical institutions through capitation and HELB (Higher Education Loan Board) that has increased access and enrollment to Technical colleges to those students with financial challenges and disability. In addition to preparation of curriculum and populating the very colleges through a central placement organization (Kenya Universities and colleges central placement service).placement services have been seen as a prevention to social cohesion and integration to the Kenyan learners to attain national unity and other national values.

Curriculum composition has adopted use of project works, technical drawing and skill practical lessons to incorporate intellectual formation and hands on. Despite the challenge of infrastructure, learning institutions in Kenya are training skilled manpower for the world market. Exhibitions and trade fairs have exposed trainees to innovation and outdoor learning activities of fabricating items to solve societal problems.

Institutions setting out production units have engaged the human resource within the institution to put into use the available machines for sustainability and future innovations. These have been opportunities for learners outdoor learning and implementation of acquired theoretical knowledge within a learning environment.

The internship concept insisted by Aristotle was to be for 15 years however the education and training internship takes six (6) months after every module and thus students are exposed to the factory set up for employers to have their input in the training process. Exposure of trainees to industrial attachment has continued in preparation of trainees for orientation for the upcoming tasks in the labour market.

According to Aristotle, lifelong learning was to occur after the student has gone through the set education system. Evaluation and attainment of actualization was to be examined when the individual become virtuous in his political and social life. This

ideology is based on the assumption that learning is a continuous process that cannot be stopped at a stage. The incorporation of adult education programs, capacity building programs, driving lessons, competency based training in specific trade has facilitated adults to access education and training in Kenya.

It has been noted that the inclusion of technical subjects in the curriculum of Technical training has greatly reduced content for the humanities and social sciences which play a crucial role in instilling the knowledge for the good. Purposive learning can only be guided by a knowledgeable mind and creative in nature. In addition, the overemphasis of cognitive dimension and examinations has kept on sidelining outdoor learning and strict observance to habits that lead to virtue.

6. Conclusion and Recommendations

It has been noted that the Aristotelian ideas on experiential learning and lifelong learning as still relevant to our contemporary education and training in technical training institutions today in Kenya. However underlying challenges as inherited throughout the system have become an impediment to making milestones in outdoor learning and training in virtue.

To overcome such challenges there is need to establish distinct theories that guide education and training theory and practice to facilitate individual growth and societal growth. The ideal envisioned in outdoor learning bring out innovation, creative thinking and application of knowledge. The teacher trainee inter subjective relationship facilitates the gap of an authoritarian master to a role model who at the same time instill virtue to the trainee.

It is also clear in Aristotle's education and training the relevance of internship; an orientation given to trainees after formal learning to adhere to the practice of the norms held the place of work. Such principle brings on board new ideas that inform the innovative mind to incorporate new knowledge in practice. May be this may be the tenable basis for implementing competency training for attaining Kenya vision 2030.

Conflict of Interest Statement

There is no conflict of interest in the publication of this work neither has the work been re submitted to any other journal publisher for processing. We hereby declare the paper free of any conflict of interest for publication.

About the Authors

Khisa Alfred Simiyu is a senior lecturer and Technical Education Trainer, Holder of BED (Building Construction), BA (Philosophy), Diploma (Project Management) and Diploma (Philosophy and Religious studies) with special interest in the study of "being qua being" interrogating, axiological, metaphysical and epistemological assumptions in educational theory and practices, religion, ethics in construction project, technical education and training and the search for self (authenticity). Also a post graduate student at the

Department of Educational Foundations, Masinde Muliro University of Science and Technology, Kenya.

Cherryl Atieno, with special interest in philosophy, aesthetics, she discerns it in running beauty and fashion shop. Also, a post graduate student at the Department of Educational Foundations, Masinde Muliro University of Science and Technology, Kenya.

Beatrice Bagada, a senior principal employed by Teacher Service Commission with an objective of empowering the girl child in Kenya with special interest in philosophy of education. Also, a post graduate student at the Department of Educational Foundations, Masinde Muliro University of Science and Technology, Kenya.

Erick Kangu Buhuru, a senior High school Science Teacher employed by Teacher Service Commission with a special interest in philosophy of education. Also, a post graduate student at the Department of Educational Foundations, Masinde Muliro University of Science and Technology, Kenya.

References

Andafu, E., & Simatwa, E. (2014). A Critique of the Kenyan system of education in view of the Freirian Concept of education: A philosophical perspective. *International Research Journals, 5*(8), 331-347.

Chege, P., & Kariuki, J. (2016). Increasing Women Access in TVET Through ODL programme: A case of Thika Technical Training Institute in Kiambu County, Kenya.

Cheserek G. J. and Mugalavai, V. (2012). Challenges and Reforms Facing Kenyan Education System in the 21st Century: Integrating the Principles of Vision 2030 and constitution 2010. *Journal of Emerging Trends in Educational Research and Policy Studies*, 471-478 Vol.3 No.4.

Collins, P. M. (1990). Aristotle and the Philosophy of Intellectual education. *The Irish Journal of Education*, 62-88.

Hummel, C. (1999). Aristotle (384-322 B.C.). *UNESCO: International Bureau of Education*, vol. 23, no. 1/2, p. 39-51.

Kalolo, F. (2015). The Drive Towards application of pragmatic perspective in Educational Research: Opportunities and Challenges. *Journal of Studies in Education, 5*(1), 150-171.

Kerre, B. (2011). Technologically-Driven Education for Industrial Growth. *Journal of Kenya Institute of Management, 3*(1), 28-58.

Ladikos, A. (2010). Aristotle on intellectual and character formation. *Phronimon*, Vol 11 No 2 69-83.

Maina, J. (2008). *The Rudiments of Philosophy of Education.* Pankshin: Eureka Academic Foundations.

Mulenga, D. C. (2001). Mwalimu Julius Nyerere: a critical review of his contributions to adult education and postcolonialism. *International Journal of Lifelong Education*, 446-470 Vol 20 No. 6.

Muricho, P., & Chang'ach, J. (2013). Education Reforms in Kenya for Innovation. *International Journal of Humanities and Social Science, 3*(9), 123-145.

Nasongo, J., & Musungu, L. (2009). The Implications of Nyerere's theory of education to contemporary education in Kenya. *Educational Research and Reviews, 4*(4), 111-116.

Nyasani, J. (2010). *Philosophy of Development, An African Perspective: Reflections on why Africa may never develop on the Western Model.* Nairobi: Consolata Institute of Philosophy.

Robin, C. (2017). *The Reactionary Mind: Conservatism from Edmund Burke to Donald Trump.* New York: Oxford University Press.

Strand, M. (2019). Practice theory and conservative thought. *History of the Human Sciences*, Vol 32 issue 5 108-134.

Sulaiman, S. (2001). *Understanding Philosophy of Education.* Kano: SA marib.

Vo Van Dung., D. T. (2016). Aristotle's Educational Ideas. *European Journal of Education Studies*, Volume 2│Issue 9│ 119-126.

Yakaboski T., &. K. (2011). The Kenyan School Systems' Impact on Public Higher Education Access: Examination of Growth, Access, and Challenges. *Journal of International Education and Leadership*, Volume 1 Issue 1; 2161-7252.

Yoder, S. D. (2016). Pragmatism, Pedagogy, and Community Service Learning. *Michigan Journal of Community Service Learning*, 5-15.