CHAPTER 4:
Impact of pedagogy versus andragogy in institutional teaching-learning: Evidence from the Faculty of Education, University of Zimbabwe

This chapter presents data that was obtained through in-depth interviews and questionnaires. The data reflects the lived experiences, perceptions and opinions of the professoriate **(n=10)** as derived from in-depth interviews. In line with the dominance and sequencing in mixed methods and exploratory sequential design, the data in this chapter provides quantitative perceptions of randomly selected lecturers, Masters and Undergraduate students from the Faculty of Education **(n=80)**. This is in line with the exploratory sequential design and the qualitative dominance over the quantitative strand. The quali-quanti sequencing ensured that the data is also presented in the form of tables and diagrams to complement the qualitative verbatim extracts. The verbatim quotations and statistical data are followed by analytical statements as informed by the 13 steps of mixed paradigm analysis by Onweugbuzie & Combs (2010) as well as Teddlie & Tashakkori, (2011) discussed in Chapter 3.

The analysis statements reflect the respondents/participants behind and broaden the understanding of the comparative impact of pedagogy versus andragogy in institutional teaching-learning. Whilst the interview guide was structured in thematic sections basing on the five research questions, the multiple realities of qualitative research saw new themes emerging as the researcher interacted with the participants. These themes formed the basis for data presentation, analysis and interpretation. This approach is supported by Neuendorf (2019) who argue that whilst the researcher may begin the analysis with tentative themes or templates (*a priori* codes), epistemologically, thematic analysis requires that these codes be flexible so that they can be modified as the analysis progresses. In line with research ethics explained in chapter 3, the participants are identified alphabetically where verbatim quotations were captured.

The data for the study was elicited from chairpersons and senior lecturers from the departments **(n=10)** through in-depth interviews while questionnaires were administered to lecturers and students **(n=80)**. Theme A sought the views and opinions of the professoriate on the tenets of teaching learning that must be addressed for an educational model to be considered effective and efficient. Theme B sought to bring to the fore the impact of learner needs versus Minimum Bodies of Knowledge (MBK) on developmentalism. Theme C sought to come up with an absolute model of institutional learning while Theme D looked at the arguments of the professoriate on the impact of Strategic Educational Directives (SEDs) such as

Education 5.0 on the models that are adopted by higher education institutions. Theme E focused on the perceptions of the professoriate and students on the impact of pedagogy and andragogy in institutional learning.

Table 4.1 Distribution of respondents by sex and academic qualifications **(n=90)**

Serial	Educational Level	Gender Male	Female	Sample Size	No of responses	Response rate %
1	Professors	01	01	02	02	100%
2	Doctors (PhD)	10	05	15	13	86.7%
3	Master's Degree	2	3	5	5	100%
4	Bachelor's Degree	1	2	3	3	100%
5	MSc Students	23	19	42	42	100%
6	Undergraduate Students	12	11	23	23	100%
7	Total Sample Size	49	41	90	88	97.8%

The response rate was 97.8% and satisfy Lincoln & Guba (1985)'s construct of transferability. This implies that due to the situational uniqueness of qualitative research which dominated the mixed paradigm, the findings can be transferred to similar educational contexts such as universities and colleges. The response rate of the randomized sample indicates a representative sample of those that are involved in the teaching-learning in institutional programmes. The multi-method data collection where 10 lecturers were purposively selected for interviewing and 80 respondents (lecturers and students) were randomly selected ensured credibility, dependability and confirmability of research findings as explained in chapter 3. However, the proportion of female respondents was 45.6% of the total sample which depicts the inequitable distribution of teaching and learning opportunities for women in institutions of higher learning.

Table 4.2 Distribution of the sample by Age **(n=90)**

Attributes (Age in yrs)	No of Responses	Percentages (%)
26-35yrs	17	18.89%
36-45yrs	28	31.1%
46-54yrs	27	30%
Above 55	18	20%
Total	**90**	**100%**

The above demographic data indicates that the respondents/ participants had relevant experience in the teaching-learning of adults and had an above articulation of the concepts of pedagogy and andragogy by virtue of their academic qualifications and age. It therefore goes without saying that all things being equal, the data obtained with respect to the impact of pedagogy and andragogy from the sample could be credible, dependable, confirmable and transferable to similar teaching-learning contexts.

The data obtained reflected the lived experiences of the professoriate as educationists, educational administrators, as adults and as learners in life-long learning. To this end, participant A had the following to say;

> *"… The purpose of education across the world is to develop the intellectual capacity of man so that he attends to the day-to-day problems effectively and efficiently. In other words, the aim is to perpetuate development, be it human, economic, environmental, social or political. This is only possible if the education system looks at what the society and the learner need. These needs must be harmonized to come up with a curriculum that is holistic. What the society needs must then be taught to the individual learners so that there is intellectual, moral, skills and attitudes capacitation consistent with the nature of life that a society aspires to achieve. However, during the process of learning, there are also individual needs which are so varied that they cannot be captured in the curriculum, but the omission of which can then affect comprehension and graduates' capacity. These need to be factored and addressed during the teaching process."*

The aspect of having an institutional model that leads to development is also shared by participant C who had this to say;

> *"…Every model of institutional learning must be in a position to address the fundamental ingredients of development. The society, the learners, the government and the institution providing the teaching are active players in the educational discourse, thus their needs must be addressed."*

In the same vein participant D had the following to say;

> *"…My experience has shown me that our education system lacks a strong practical application. However, a model must lead to development through addressing the needs of developmentalism."*

This line of argument by participants A, C and D is in tandem with Dambudzo (2015)'s argument that the effectiveness of university learning is determined by whether it promotes development or not. This is achieved through teaching that is problem based, collaborative, project driven, enquiry based and promoting critical thinking. To this same effect, participant B sentiments are closely related to those of participants A, C and D and argues that;

> *"… A model must provide and ensure that the graduates that are produced under the model are functional and are not obsolete. Education should be responsive to individual and societal problems. It must provide for innovation and not stagnation. The society and the people must progress quantitatively and qualitatively. Whilst theorisation is unavoidable, the theories must be put into practice. Learners, the society and government must see the value of leaning through development."*

Participant B's line of thinking that an ideal model must be responsive to individual and societal needs as well as being practical is neither new nor far-fetched as it is supported by Knowles *et al.* (2012) who talk of a model that allows application of theory to the real world. Merriam (2002) argues that learning should not be all about theorisation and mindless idealism. It should aim at addressing practical and real-world situations and these must be brought into the classroom through simulations, role plays, group discussions, field projects, skills practice and case studies etc. (Wankel & DeFillip, 2003). The importance of having an education system that produces functional graduates is further buttressed by the criticism offered by Mahmoudi *et al.* (2014) who argue that some universities have continued to produce dysfunctional graduates, products of Silencing Education who are mere conformist of the industrial discourse. This is supported by Bryson (2013) who argues that despite the diverse and multiplicity nature of adult learners in universities, the emphasis on design and delivery has basically remained on uniformity and conformity rather than multiformity making the education progressively regressive (Garuth, 2014). The implication of all this is that in addition to satisfying curriculum needs, the institutional model must address the learner and societal needs and must contribute to development through application of theory into practice.

Along with the same argument of an ideal model having to satisfy developmental needs of a society, participant E had this to say;

> *"…The effectiveness of an educational model hinges on its ability to satisfy the aspirations of the community through production of functional graduates. Therefore, if the model ensures that the educational and developmental needs of the community are addressed by whatever means, it becomes effective and efficient."*

The argument by respondent E above of an educational model meeting the national aspirations of development is supported by Mohammed *et al.* (2018) in the Nigerian context and Addae (2016) in the context of South Africa and Ghana who argue that developmentalism of a nation hinges on an effective education system whose curriculum is reflective of the national and societal aspirations.

The thrust of participants B and E is on the functionality of graduates in the developmental discourse. According to Adewale (2014) cited in Agbowuro *et al.* (2017), functional education entails a holistic and educational experience that is directed on the identification of situational problems, gathering of information to make decisions in a global environment of challenges and realities of life. It is also concerned with enhancing graduates and end users to gain knowledge, skills, and attitudes to utilise new concepts as a vehicle for meaningful development and sustainability (Adewale, 2014). Functional education should produce graduates who can manufacture raw materials, machines, invent new designs and tools needed for local and international markets and subsequently transform the nation from

consumption to a manufacturing status as argued in Rostow (1960)'s fifth stage of development (Udoh & Akpan, 2014).

The functionality of an education model is also supported by Waghid (2010a) cited in Zembere (2018) who argues that the teaching model in universities should advance democratic teaching learning processes. It should also promote the students' autonomy in thinking and participating in the design and delivery of instruction. The professoriate and students must actively participate in the teaching learning process as change agents (Subba, 2014). In the context of Brundiers & Redman (2010), classroom activities, the curriculum and the methodology must be linked to the realities of the world. There should be extension of the learning organisation to the learning community through Community Engagement (CE) (Kearney & Zuber-Skerrit, 2012). The above argument is supported by participant F who had the following to say;

> *"…. It is important that for a model to be effective, it should be able to harness theory into practice."*

Participant I had the following to say;

> *"… For a model to be effective, there are system factors such as the national curriculum demands, the institutional factors such as facilities, clientele analysis and the classroom factors such as varied methodology that must be achieved. Over and above, the societal and learner needs should be addressed through both theory and practicality of concepts."*

Participant F also acknowledges the importance of addressing the system, school and classroom factors as follows;

> *"…The model at strategic level or national level should be informed by a pragmatic philosophy. It must always be informed by the dictates of the government, the learner and societal needs. This should be augmented by a comprehensive needs analysis and curriculum development involving all stakeholders. These stakeholders include the learners, the society, the government, the captains of industry and the institutions. The institutions should provide the best physical and human resource complement where the latter should play a pivotal role In ensuring comprehension through relevant methodologies."*

This line of argument by participants I and F resonates well with the literature provided by Schreens (2015) on educational effectiveness. The argument is that an effective model is one that combines system level, classroom level and school level factors. Chan (2010) emphasises the importance of classroom activities, school level factors in which he argued that institutional education can be effective and efficient when the varied methodologies are complemented by conducive physical and psychological environment of mutual respect and reciprocity. In the context of the Society for Research on Educational Effectiveness (SREE) (2011), the model should give direction on the purpose of education, how it is to be provided, in what circumstances, for whom and how these practices and policies would positively or negatively impact on the overall education outcome. This should be captured in a nation's education philosophy as argued by participant F. The implication thereof is

that there are certain requirements beyond the institution that must be addressed by the model. These are considered system factors and include such aspects as pragmatic philosophy, minimum bodies of knowledge, pragmatic educational directives such Education 5.0. The model must ensure that the classroom factors ensure comprehension and real-life application of concepts rather than theorization. This real-life application of concepts can be achieved through varied methodologies and a conducive learning environment of mutual respect. As part of addressing the school level factors, the model also ought to have a constant review of learner needs and regular community engagement as part of environmental scan to obtain current societal needs.

In line with criterion 3 (data types to be analysed) explained in Chapter 3, all the 78 respondents indicated on the questionnaires that an educational model would need to address the learner needs both in the classroom and off the classroom through their participation during the design and delivery. It should also address the demands of the society through transforming theory into practice, producing goods and services and should produce graduates who are innovative. This argument brings areas of convergence between the qualitative and quantitative data (criterion 6; the interaction level between quali and quanti). The qualitative responses being supported by quantitative arguments are in sync with criterion 7 (analytical component priority), criterion 13 (cross over nature of the analysis) and criterion 5 (sequence of mixed analysis). Therefore, in line with criterion 10 (the research process phase when all analysis decisions are made), a model must address learner needs, societal needs, be consistent with the national education philosophy, promote developmentalism, produce functional graduates, satisfy the system, school and classroom factors. It should also promote self-direction so that graduates explore and innovate beyond what they are given in the classroom. It should enable the production of goods and services rather than theorisation.

An absolute model in higher education institutional programmes.
On being asked what they thought was the most impacting model between pedagogy and andragogy, participant A had this to say;

> *"… I think when introducing students to new concepts and subjects, there is need for prescriptive teaching, making pedagogy more effective in this context. Andragogy assumes a more dominating role when students build on the taught principles, conducting collaborative, experiential and transformative learning which is the thrust of university learning so that at the end, there is production of goods and services."*

The above argument by respondent A on fundamentals and new concepts being taught through pedagogy agrees with McGrath (2009)'s argument that in certain contexts, adults come to universities without prior background of certain disciplines such as accounting, law, medicine etc. In these circumstances, the lecturers would have to teach the fundamentals pedagogically.

Participant C had this to say on the impact of the two models;

> *"… The process of needs analysis requires that all stakeholders who will benefit from the programme be involved, thus this inclusivity is andragogical. However, the people who might then participate in the process of learning once the needs analysis and curriculum development are over might not be the ones who were involved in the process of needs analysis, thus some of the concepts might end up being a prescription and of no relevance to the learners involved. The government weighs in with a developmental orientation such as attainment of a middle-income economy by year 2030 and quite an array of aspects that it seeks the education system to achieve. This becomes a top-bottom to curriculum development which is pedagogical. Every subject has got its core values or principles which are mandatory for anyone studying the subject to know and these must be learnt whatever the case. This is pedagogy informed by perennialism as a philosophy of education."*

The argument of participants A and C above that put andragogy in a dominating role during needs analysis and curriculum development is in sync with Evans (2006) who argues that the process of curriculum development should be learner inclusive, but Wang *et al.* (2014) posit that the determination of what must be learnt cannot be the prerogative of learners alone. So, in as much as learners are to be included in the process of needs assessment, so should the other stakeholders. Their line of thinking on pedagogy assuming an upper role in teaching subject fundamentals and reducing as the learning progresses is in sync with Teodoro & Mesquita (2014)'s assertion that straight lectures are necessary for teaching principles and concepts and when entering into generally strange areas. However, progressively, depending on the competence of the facilitator, there should be a paradigm shift to andragogy to cement these principles through life applications and tapping into the students' experience.

Participant E had the following to say when asked on the comparative impact of pedagogy versus andragogy;

> *"… Depending on the level of the programme and stage of learning, pedagogy would be more effective in undergraduate studies where the focus is on grounding or building a base for future studies. However, it does not mean that as time progresses, andragogy is not employed. The other consideration is that at diploma and undergraduate level, the participants are the youths who may not have the self-direction, experience, intrinsic motivation and whose desire to learn may not be inspired by problems but by mere aspirations to attain academic qualifications as others. This makes pedagogy effective in these circumstances. As students continue with their studies up to post-graduate level where the majority of the learners are non-traditional, the most effective model for delivery is andragogy. This does not mean that pedagogy becomes non-existent."*

The above argument by participant E measures the impact and applicability of the two models basing on the stage of learning. The argument of the participant acknowledges Southhard (2017)'s assertion that andragogy may be applicable to post-graduate learning and in the later years of undergraduate learning. It also resonates well with Oyeleke (2018)'s argument that the concepts of andragogy and pedagogy are intertwined giving a sliding scale from self-directed in the latter part of

institutional learning to teacher centred learning during the introductory phase of learning. The meaning that can be drawn from this is the complementary role and contextual applicability of the two models along the learning continuum.

On being asked the most impacting model between pedagogy and andragogy, participant H had the following to say;

> *"… Both methods are effective and efficient depending on the context in which they are applied. It is important to note that it is difficult to have one model dominating institutional learning from the beginning up to the end of the teaching process. Therefore, the two models are contextually effective and efficient. What is important is to note that institutional learning is made up of adults, thus with time the andragogical model would assume dominance over the pedagogical model not implying that the latter becomes extinct or obsolete."*

Participant H's contextual effectiveness of both pedagogy and andragogy is amplified by Usman (2015) and Tight (1996) who argue that though seen dichotomously, the models have got functional overlaps but one could be having more impact on the teaching learning process depending on the context. They further argue that the effectiveness, efficiency and efficacy of the models would depend on the degree to which administrators, the professoriate and students adopt and adapt to the multiformity of higher learning among other situations.

Consistent with criterion 3 (data types to be analysed), criterion 5 (the sequence of mixed analysis) and criterion 7 (analytical component priority) suggested by Onweugbuzie & Combs (2010), quantitative data from 64 respondents showed that it is not proper to say one model is more effective than the other because in all stages of educational systems planning, be it at the needs analysis, the curriculum development or delivery, both models complement each other. However, the complementarity which the respondents referred to is further clarified and amplified by the other 11 respondents whose argument is that though there is complementarity, during needs analysis and curriculum development, andragogy is more effective and topical than pedagogy, though the latter is always there. In the classroom, the two complement each other but when students are being introduced to new concepts, subjects and at lower levels of learning such as diploma and undergraduate levels, pedagogy dominates. However, apart from the mentioned cases and others, the andragogical model dominates the classroom activities in institutional learning as learners build on the prescribed principles such that towards the end of undergraduate studies, andragogy would have emerged conspicuous. In line with criterion 6 (the interaction level of qualitative and quantitative analysis), there is a positive interface between this quantitative view and the views provided by the qualitative participants.

This interaction level shows that the qualitative strand is being acknowledged by the quantitative view (criterion 5; sequence of mixed analysis and criterion 12; orientation of analysis). The generalization from the two data sets is that andragogy is more effective in needs analysis, curriculum development and dominates much of classroom activities serve for the time when new concepts and subjects are introduced as well as the early days of undergraduate studies where pedagogy assumes dominance (criterion 11; nature of generalisation). This does not mean that there is one model at a time but one becomes more topical, however complementing each other throughout the learning process. Though andragogy is dominant during needs analysis and curriculum development, the role of pedagogy must be located in the prescribed fundamentals by government in line with its desired development trajectory. This again shows the complementarity of the two.

Situations will determine during delivery whether to use pedagogy or andragogy. Therefore, in line with criterion 10 (the research process phase when all analysis decisions are made), neither pedagogy nor andragogy is the most impacting model. Their effectiveness is contextual and complementary depending on the level of design and delivery, the subject being taught, the level of study, the nature of students whether traditional or non-traditional and their level of comprehension etc.

When asked on the impact of MBK on developmentalism, participant D had this to say;

> *"… It does not follow that the curriculum captures the needs of all the people and it should also be known that the society is dynamic and constantly evolving and needs would also change over time. In this regard, the curriculum would also at one point become obsolete. In this respect, we cannot then say the MBK are enough to bring about real and total development but there is need to ensure that the curriculum remains afloat to move with contemporary development trends."*

Garwe (2018) defines MBK as the curricula which must be learnt by students who undertake each study programme at the higher education institutions in Zimbabwe. The determination of this curricula is done by ZIMCHE through experts in each of the study areas and will help in achieving comparable standards in what is learnt by students embarking on similar degree programmes at different universities. The MBK is regarded as the "tuning" project to bring comparability and compatibility of university curricula for higher education community. This definition acknowledges that there is needs analysis, expert advice and government involvement which is in sync with participant Ds argument. Garwe (2018) argues about compatibility and comparability of global higher education curricula, but chances are that what brings developmentalism in one country may not be functional in another country because of social, historical, political and cultural factors etc. This therefore justifies the last part of participant D which argues about MBK as no panacea to total development.

Participant E had the following to say on whether MBK capture all the learner, societal and developmental needs;

> *"…The name tells it all, they are minimum standards that must be addressed in the teaching learning and therefore cannot address learner, societal and developmental needs in totality. There is need for continuous needs assessment and to go beyond the benchmarked standards consistent with the current developmental thrust, current learner and societal needs."*

Participant H had the following response upon being asked to comment on the impact of MBK on developmentalism and learner needs;

> *"… As rightfully stated, they are minimum bodies of knowledge which could be defined as basic skills, knowledge and attitudes that a programme should satisfy. However, it does not mean that all that which is taught is relevant to everyone. This implies that institutions should not end on MBK, sit back and expect to address developmental needs in an ever-changing environment. A lot must be done such as ensuring that the needs of those that participate in the actual learning are met. There is need for constant university-community engagement to address developmental needs. To this end, the autonomy of the university and the necessary flexibility needs to be observed so that the institution can add value to the MBK rather than religiously following them."*

Participant I made the following comments on the impact of MBK on development;

> *"… It will be utopian for an education system to rely entirely on MBK for development because these can become obsolete at one point depending on whether those that are involved in the learning see them as relevant to their needs. One other aspect is that they are minimum skills determined at national level and may not capture all the needs of different societies and learners. They are just a yardstick to measure the minimum level of knowledge that should be achieved in a particular subject or programme. There is need for institutions to address the needs of the participants through conducting a needs assessment prior to the commencement of programmes so that these needs are factored in to complement the MBK."*

Participant F had this to say;

> *"… MBK need to be complemented by a thorough understanding of pedagogical and andragogical methodologies so that one would cater for the shortcomings of the other. As an example, andragogical in-class methodologies would ensure that learners are given the latitude to research further to develop themselves and the societies from which they come from."*

The above responses from participants D, E, H, I and F resonate well with the literature provided by Tapera an& Kuipa (2016) who argue that the quality of graduates from most East African countries do not meet the employers' expectations because of lack of relevant skills and competencies. This is the problem that affects the Zimbabwean institutions of higher education as postulated by Mlambo (2008), Raftopolous (2006) and Nyazema (2010) whereby the MBK are fundamental concepts which cannot solely be relied on for development. Raftopoulos (2010) weighs in by indicating that those better off in society have resorted to sending their children to outside universities where they think there is quality education. The implication thereof is that it is impossible to address developmental, learner and societal needs

through MBK. There is need for constant review of the MBK and continuous needs assessment of the society and those involved in the learning.
Participant A had a different view and when asked he had the following to say on the impact of MBK on developmentalism;

> *"…MBK can address the societal needs and at the same time lead to significant development provided they are arrived at through a thorough process and they are constantly reviewed say after 2 years instead of the usual four or five years. The other problem is that if there is a lot of theorisation in the MBK, definitely they will not lead to the desired development. They should be informed by a pragmatic and progressive philosophy. They should address the fundamental ingredients of development as dictated by society, learners and the government and should be reviewed regularly. My question would be why is it that we have got people who are going to outside universities and these people are considered functional and marketable when they graduate yet the curriculum in those universities is premised on MBK?"*

The above response by participant A seems to confirm the argument by Raftopoulos (2010) who argue that since its inception in 2005, ZIMCHE, has not been coming up with MBK that are reflective of what the society wants and those that perpetuate development. To this end, he observes that those better off in society have resorted to sending their children to outside universities where they think there is quality education. In support of this argument, Garwe (2015) argues that the Council has borne the brunt of interfering with university autonomy such as recommendations to include or remove certain degree programmes. So, from the foregoing it would imply that MBK are not the problem unto themselves but the regulating authority. The meaning that can be drawn from the responses is that if MBK are not thoroughly done, not constantly reviewed, not complemented by continuous needs assessment and in the absence of institutional autonomy, they become ineffective for development.

Consistent with criterion 3 (data types to be analysed), criterion 5 (sequence of mixed analysis), criterion 12 (analysis orientation), from the 77 questionnaire responses, there is a general consensus and concurrence with the above qualitative arguments that MBK need to be complemented with current learner needs, meaning that there must be alterations to the curriculum at institutional level so that facilitators embrace the current needs of learners. The society is not stagnant and therefore there must be continuous needs assessment preferably yearly to keep pace with the changing learner, societal and developmental demands. The interaction level from the two types of data is seen on the concurrence of quantitative data to the opinions and arguments summarised from the qualitative respondents (criterion 6; interaction level of qualitative and quantitative data). In line with criterion 13 (cross over nature of analysis) and criterion 11 (the nature of generalisations), there is generally an agreed position that MBK are not the panacea to development. There is need to have a thorough process of coming up with the MBK which should be informed by a

pragmatic philosophy, and they should be constantly reviewed. There is also need for continuous needs assessment to capture the diverse learner needs.

Though educational directives could be many to include STEM and Education 5.0, much of the data gleaned focused on the effect of Education 5.0 and the extent to which it dictates the model to be adopted in institutions. Upon being asked to comment on the impact of SEDs on the institutional model to be adopted and what the participants thought of Education 5.0, participant B had this to say;

> *"… Depending on the directive, institutions can become too theoretical or too pragmatic or strike a balance between theory and practice. So, the blame on whether institutions are producing theoretical graduates should not only be borne by the institutions but the government as well for coming up with a philosophy which is too theoretical."*

In the context of participant F, the following was said:

> *"… It is something which I think is obvious that whatever an educational directive from government, ours as educators is to adhere and advise through the rightful channels. So, a directive can have a theoretical or practical orientation and as such whatever that we teach will be informed by such orientation. Education 5.0 has got a practical orientation, and this is the reason why the UZ is reconfiguring its programmes and departments etc. so that it meets the dictates of the directive. My thinking of Education 5.0 is that it is a good model which is a paradigm shift from the traditional theorisation to practicality."*

Participant I acknowledges the importance of Education 5.0 and had this to say:

> *"… Yes, these directives affect the way we teach and the nature of graduates that we produce and as such I think Education 5.0 if well understood and implemented would greatly improve our education system. It is a directive which indicates a paradigmatic shift from perennialism to pragmatic philosophy of education. It emphasizes on less classroom hours and more of fieldwork. Furthermore, it is a model that seeks to tap into our natural resources premised on Heritage Informed Research (HIR). It is a model that seeks to develop by looking inwards however cognisant of other opportunities outside."*

The above responses from participants B, F and I confirm Magaya (2019)'s assertion that Education 5.0 should be contextualized as remedy to the historical chronologies that have weakened Africa's education system. He argues that Africa missed the first industrial revolution because of slavery, the second industrial revolution because of colonialism, the third industrial revolution because of the liberation struggles and it should now participate in the fourth industrial revolution spearheaded by technology and innovation. The meaning that can be derived therefrom is that Education 5.0 is a model that seeks to perpetuate development which is needs based, self-reliant, endogenous and ecologically sustainable but cognisant of the fact that we live in a global village, thus we need to keep pace with contemporary trends. The over-arching effect of SEDs on the educational discourse to be adopted by institutions is reflected in the above given responses.

When asked on the effect of Education 5.0 on institutional learning, participant A had the following to say;

> *"… Yes, it is a pragmatic model and would to a greater extent change our educational discourse towards development but I feel it has compartmentalised education to assume others as being more important than others. The argument is that the engineer (Engineering) who produces agricultural machinery (Agriculture) and mining machinery (Geography), can become ill (Health sciences), can commit crimes (Law) and would need to market his or her products (Commerce) through a language (Arts) and will live in a community of a particular culture and morals (Social sciences). Development should be holistic and not pursued along one facet and, in this case, there is a very strong bias towards economic development."*

Participant E had the following to say in the context of the effect of Education 5.0;

> *"… I personally feel that Education 5.0 just like the new curriculum are not quite understood and have got their own complications. There are certain educational directives that are promulgated for institutions to abide by but without due consultation with the institutions. I do not believe that there are subjects or programmes that are considered irrelevant in total development unless we want to pursue economic development at the expense of other tenets of real development. One aspect that I have noted is that everyone is focussing on coming up with some form of production, and department and faculties are going out of their traditional mandates and purposes to fit into the paradigm of production. I feel, we need to embrace Education 5.0 within our educational domains as departments and faculties and the authorities must not define development in Education 5.0 by the number of innovations and goods because some departments are there to entrench Ubuntu, provide historical orientations etc and these must not be relegated to the dustbins."*

Participant H weighed in with the importance of all programmes in developmentalism and had this to say;

> *"… If development is to be premised on STEM, are we saying that the study of humanities and social sciences is not relevant to our development? What then do we have to say to those well recognised universities abroad that continue to teach humanities and social sciences to the advantage of their developmental discourse? Can we surely resuscitate the struggling economy, end the rampant academic fraud, corruption and poor corporate governance etc. through STEM? Issues to do with corruption, fraud and poor corporate governance are more to do with Ubuntu than scientific innovation. How are we going to promote Ubuntu in this discourse? Are we saying the teaching-learning of all programmes should lead to tangible goods? Where do we put our social sciences and humanities? The model seems to address economic development rather than real development which encompasses economic, political, social, cultural, human and environmental development etc."*

The arguments put forward by participants A, E and H relate well to the concept of holistic education and holistic development. Holistic education is education that focusses on completeness and avoids excluding any aspects of the human experience. Education should cultivate a relationship in the individual of aspects such as the intellectual, spiritual, emotional, physical, aesthetic and social. It also focusses on relations between the individual, society and the environment, the intrinsic self of students and outside environment, reason and emotion, different levels of knowledge

and how to know. It is not confined to fundamental skills but life experiences (Majethia & Patel, 2018). This argument is augmented by Hettne, (2008) who argues about Mainstream Development (MD) as that whose focus is on economic development and in this context economic development towards Vision 2030. However, holistic development is premised on the quantitative and qualitative growth of people in relation to their community and environment that sustains them as means of removing all the un-freedoms and poverties (Todaro & Smith, 2015; Johan & Jespersen, 2016).

The meaning that can then be derived from this literature and the given responses is that Education 5.0 does not promote holistic development in that it has compartmentalised education shunning other programmes that do not have a close nexus with STEM or whose orientation is not tangible production. Credit should however be given to the educational paradigm for trying to pursue endogenous, needs based and self-reliant development as expounded by the heritage-based philosophy. This is the Alternative Development (AD) discourse as advocated by Nerfin (1977) and Marx-Neef (1991).

From the questionnaire responses, all the respondents thought that once an educational directive is promulgated, it sets the tone for the design and delivery of instruction in institutional learning. They argued that Education 5.0 brought a new pragmatic approach to institutional learning, thus there is bound to be a paradigm shift from theoretical to practical orientation to learning. Generally, Education 5.0 is one strategic directive that implies that institutional learning should adopt a model or models that ensure that its desired end state is achieved. This argument brings to the fore convergence of both qualitative and quantitative views (criterion 6; the interaction level of qualitative and quantitative analysis and criterion 11; the nature of generalisation). However, despite this convergence, there is a divergence on what Education 5.0 entails. Twenty-one (21) respondents from the quantitative strand argue that Education 5.0 is a discourse which is rooted in science, technology, engineering and mathematics and perceives development as an aggregation of goods and pays little attention to the value of humanities in development. This line of thinking is shared by participants A, E and H who also argue that Education 5.0 would influence the institutional learning models towards pragmatism but seems to be devoid of other facets of development which are the human, political and social development which are inculcated by humanities and social sciences.

From the above points of convergence and divergence, the resultant generalisation is that Education 5.0 as a strategic educational directive greatly influences the choice of learning models to be adopted by institutions. It is important to note that Education 5.0 seeks to perpetuate development which is needs based, self-reliant, endogenous and ecologically sustainable but cognisant of the fact that we live in a global village,

thus we need to keep pace with contemporary trends. Generally, Education 5.0 needs to be achieved by a more pragmatic, work oriented, research oriented and an innovation-oriented model. Learning should lead to the production of goods and services. It is also important to note that the discourse seems to relegate the role of social sciences and humanities in development. To this end, the parameters of the model need to be redefined so that we do not throw away institutional programmes that are relevant for developmentalism only to need them in the future. There is need for inter-faculty learning where all the faculties assert their position in the developmental discourse without relegating other programmes to the dustbins.

The gleaned data led to the development of a model that reflects the connoisseurship of teaching learning in the context of the respondents and participants.

Asked whether the current institutional models have embraced the aspects of Ubuntu, humanagogy, heutagogy and ergonagy and whether these models add value to institutional learning, participant B had this to say;

> *"… Whilst some of these terms might appear to be new but given the explanations, it would appear as if some other changes that the government has been trying to implement such as the recommendations of the Nziramasanga commission, STEM, the new curriculum and Education 5.0 are some of the efforts that fall within the domain of these models. I believe there are certain aspects of practicality that have been pursued which are consistent with those models. I think if ubuntugogy, humanagogy, heutagogy and ergonagy are to be combined with Education 5.0 and other practical models, it would be very beneficial."*

Participant A had the following to say on the efforts that have been made to embrace ubuntu, humanagogy, heutagogy and ergonagy and the impact thereof if any;

> *"… It is very unfortunate that 40 years after attaining independence, the country is yet to have a very impacting model. I think we realized the dis-functionality of our education system after getting sanctioned yet all along we thought that we had the best education system in Africa, boasting of higher literacy rates. My submission is that the country has done very little to ensure that 40 years down the line, we have got an innovative and production oriented institutional model and this has produced dysfunctional graduates."*

The above line of argument is not far-fetched as it is supported by Mlambo (2008), Raftopolous (2006) and Nyazema (2010) who argue that independent Zimbabwe has failed to produce functional graduates as the latter lack relevant skills and competencies needed in the industries.

Participant A further places emphasis on combining models and argued that;

> *"… I feel that combining the models would be beneficial in coming up with an effective model of institutional learning but efforts must be made to ensure that we have a pragmatic philosophy that addresses our values, morals, functionality and developmental aspirations as a people. We should also tap into functional aspects of other models or philosophies cognisant of their political,*

social and economic factors so that we do not repeat the same mistake of adopting the British colonial models of learning."

The above response by participant A puts emphasis on a model that respects the Zimbabwean values, morals and functionality of graduates as individuals and as members of the society. This means that our model must embrace the art and science of teaching and learning within the confines of humanity towards others (Bangura, 2017; Ganyi & Owan, 2016). It places importance on functionality it should aim to develop an adult who is cultured, who operates within the dictates of the whole society as a collective entity. The model should abide by Zimbabwean morals as these are of paramount importance and anything that violates the moral fabric and peace of others is taboo which is ubuntugogy (Ngonidzashe & Hapanyengwi-Chemhuru, 2014). The dysfunctionality of the present institutional models as highlighted by participant A is justified by Bangura (2017) who argues that universities in Africa have for long relied on the Western models causing Africa's underdevelopment, mal-development, civil conflicts and low literacy rates.
Participant C argued that;

"…My argument would be if we had done much to embrace pragmatism which I think is one fundamental aspect that ubuntugogy, humanagogy, heutagogy and ergonagy seek to address, we could have been one of the most industrialized nations in Southern Africa. I also bemoan the abolishment of the British F-system. Whilst it was colonial, we could have built on it to develop a better model, but we got drowned in theorization to the detriment of an effective and efficient model of learning. My thinking would be to have a model that combines all the practically oriented models so that we can have a holistic model of institutional learning. I envisage a model that is work oriented and that addresses industrial or workplace demands but I also appreciate that there are certain fundamentals that must be taught which form the basis for work related learning."

The above response by participant C seems to confirm the assertion by Tanaka & Evers (1999) who postulate that the effectiveness of institutional learning is benchmarked by its ability to address industrial demands which is termed ergonagy. The meaning that can be inferred is that ergonagy should be a component of an effective model, but the principles can be taught first implying that pedagogy should kick start the process of ergonagy.

Participant D had the following to say in response to what has been done to improve the effectiveness of institutional learning and the extent to which ubuntugogy, heutagogy, humanagogy and ergonagy have been embraced in institutional learning;

"… Not much has been done to embrace these aspects of practical orientation in our institutional learning though of late efforts have been seen to be emerging. I feel that we have taken too long to be responsive to the dysfunctionality of the institutional model. I agree that we should have a combined model, but we definitely need to be guided by our values as a people and have a philosophy that embraces our development trajectory as Zimbabweans. Students must be self-directed, self-determined and the learning should be capability based and should prepare students for the global job market demands. I envisage a model that promotes action learning and field research."

Participant D places emphasis on Ubuntu as postulated by Ngonidzashe & Hapanyengwi-Chemhuru, (2014). Emphasis is on a model that prepares workers for the global job market which is defined by Tanaka & Evers (1999) as ergonagy. The envisaged model in the context of the participant should promote field research, self-determination, self-directed and transformative learning which is in sync with Hase & Kenyon (2000)'s heutagogy model. The implication that can be drawn from this is that in the ideal model of institutional learning, there should be a combination of pedagogy and andragogy in action learning with an ultimate focus to produce employable graduates who can compete on the international job market. This calls for a combination of endogenous philosophy to satisfy the internal needs and then look for functional overlaps from outside educational philosophies.

Participant E had this to say;

> *"… I think not very much has been done to improve our institutional learning judging from some of the things that we import yet as universities we are churning out thousands of graduates who cannot manufacture the simplest of those products. We have been affected by rote learning for a long time and it would be necessary that we look at practical orientation to learning. One other aspect that has affected us is non-consistence of policies to such an extent that policies have been abandoned prematurely. I think one underlying aspect on the models that you have asked is that they are pragmatic, and I think combining them together with pedagogy and andragogy would produce a better model. We need to embrace theory and put it into practice and embrace all the models for their functional overlaps."*

The line of argument by participant E concurs with the argument by Knudson (1980) who argues that a more holistic approach would be Humanagogy which is basically pedagogy and andragogy combined. He argues that the model does not take away what educators already know about pedagogy and andragogy but put both into perspective, thus takes development of the whole being from birth to death (Holmes & Abington-Cooper, 2001). The implication is that the envisaged model should promote development through a process of lifelong learning, contextually applying models for best results.

In the context of Participant I, the following was said;

> *"… Yes, efforts have been made to embrace those models in question though such terms as used in your questioning are not common to come by. I think Education 5.0 is a good example that reflects the basic tenets of those models. My suggestion would be to look at our education philosophy and say, where do we want to go as a nation? How do we get their cognisance of our strengths, weaknesses etc.? We can combine these models, but I think the first port of call is to visit our educational philosophy because this informs the way we shall learn whether we want to produce graduates that are morally upright, innovative and competitive in the industry or otherwise. All the models should then be combined in a continuum where pedagogy would become the subject centred beginning then moving down to learner-centred, self-determined learning, transformative learning, capability and work-centred and lifelong learning. The importance of morals or Ubuntu can never be ignored in the model. One aspect that I think would be of importance is to have the model within the dictates of Education 5.0."*

Participant I highlights the sliding effect of the model in a continuum from pedagogy to practical orientation which is in sync with the argument proffered by Oyeleke (2018) who argues that andragogy and pedagogy are intertwined giving a sliding scale from self-directed to teacher centred learning. The implication is that the institutional model should have more of self-directed learning and less of teacher centred learning.

From the questionnaire responses, a total of 48 respondents thought that not much had been done to embrace ubuntugogy, ergonargy, heutagogy and humanagogy and thought that it would be beneficial to factor in these concepts to complement andragogy and pedagogy. Their views interacted positively with those of participants A, C, D and E, who generally thought that in as much as there have been efforts of late to revamp the education system, the anomalies in institutional learning took too long to notice to the detriment of development. They argue that universities have produced graduates who are not competent in the industries. Instead of universities being innovation hubs, they have perpetuated theorisation of concepts, some of which are not relevant to the Zimbabwean development discourse (criterion 6; interaction level between qualitative and quantitative analysis). Thirty-nine respondents (39) argued that there have been constant efforts to orientate our education to the production of goods and services, production of practical graduates and promotion of Ubuntu. These views are also shared by participants B and I (criterion 6; interaction level between qualitative and quantitative analysis).

Despite these variations, both qualitative and quantitative participants felt that harnessing the models to complement andragogy would to an extent produce a holistic model of institutional learning whose over-arching philosophy would be Afro-centric, Zimbabwean to be precise. The philosophy would also tap into the positives of Eurocentric philosophies that perpetuate the desired nature of development. Learning should be done within the confines of functional values as a people (*Ubuntu*). Learning should be an interwoven process where all models work together in a continuum of Ubuntugogy-Ergonagy-Humanagogy (Andragogy and Pedagogy)—Heutagogy (UEH2) etc. Whatever that is learnt should at the end of the day lead to the production of goods and services, thus the envisaged model should take cognisance of the dictates of Education 5.0. The complementary nature of the individual models must be understood and used contextually in the teaching-learning discourse to produce a whole graduate who is able to compete internationally, contribute to society through research, innovation and be morally upright. Institutional learning must lead to qualitative and quantitative development in all aspects be it economic, political, human, social, cultural and environmental etc. (criterion 13; cross over nature of the analysis).

To this end, the envisaged model which combines all the different models should be premised on the following assumptions as generated from the gleaned data:

a. Institutional learning is not mechanistic or linearistic but fluid. Thus, an ideal model should operate within the overall confines of Education 5.0. Whatever, the teaching-learning, *ubuntu* must come first. This makes Ubuntugogy the overarching model. The teaching learning must be work related, thus Ergonagy and this must be done within the principles of complementary andragogy and pedagogy (Humanagogy). There needs to be blended learning that is industry based, collaborative learning, problem and project-based learning. The teaching-learning must be situated in the community and there should be wide use of technology that involves net-centric learning (Heutagogy). This then forms a non-mechanistic model of Ubuntugogy-Ergonagy-Humanagogy-Heutagogy (UEH2) which to a greater extent speaks to the dictates and outcomes of Education 5.0.

b. The process of Educational Systems Planning (ESP) is interwoven, over-arching and complementary from needs analysis to evaluation.

c. Institutional learning begins with teacher centred approach, progresses in a continuum to self-directed to self-determined to competence related and to work related learning. All models are at play during these processes but some would assume an upper role at given contexts, academic level and time. Institutional learning is informed by the dictates of Education 5.0 whereas the latter is informed by the national education philosophy of Ubuntugogy and Professional Philosophy (Combination of Afro-centric and Euro-centric philosophies for functional overlaps).

Participant A had the following to say;

> *"… It is a simple fact that the process of teaching is not easy because it does not entail having graduated with a Doctorate or being a professor. It does not necessarily mean that if somebody has got a qualification in a particular field, he or she can then teach students in that subject or programme. A lecturer should qualify as a teacher and not a teacher of children but a teacher of adults. In this regard, the concepts of andragogy and pedagogy need to be understood by the university teacher and should know how these should be contextually applied in the design and delivery of instruction. Having university facilitators who are not qualified as teachers compromises the design and delivery of instruction."*

This argument is supported by the literature provided by Thompson (2018) in which she points out that straight lectures, rote learning, recitation, mere presentations, a culture of examinations and prescriptive learning in which the lecturer assumes the repository of knowledge contributed much to the academic excellence of students in terms of grades but lacked application to the real world. She then concluded that the learning was progressively regressive in that it focused on the passing of students and theorization with very little application. The implication as drawn from participant A is that it does not matter that a lecturer is a Doctor or Professor, he or she must have a teaching qualification for the effective and efficient design and delivery of

institutional instruction. Fundamentals of pedagogy and andragogy must be learnt by the lecturer for the application of their functional overlaps.

Participant C had the following to say;

> *"… University lecturers must be trained teachers and not mere holders of degrees with no teaching qualification if ever they are to be competent. However, a university teaching qualification should be different from a secondary school teaching qualification. The emphasis in university teaching qualification should be on andragogy and on preparing the student for life after graduation rather than theorisation, yet the opposite should be true for secondary teaching certification."*

The argument by participant C confirms the literature from the Russian Federation where universities have got colleges of andragogy to ensure that those that deal with adults have got an additional qualification of andragogy in addition to the pedagogical qualification (Yoon, 2009). Rule (2017) argued that teaching at university level required that the professoriate acquire the requisite knowledge and skills in the teaching process. Schmidt (2008) argues that the professoriate does not necessarily need to focus on pedagogy training alone to impact on the teaching learning process. It therefore means that for university lecturers, bias should be on andragogy in their teaching qualification because university students are adults, and their needs differ from those in secondary and primary schools.

Participant D had the following to say;

> *"… There is need for lecturers to be trained teachers rather than being lecturers by merely possessing a qualification in a particular field. There is also need for university teaching qualification to be different from the primary and secondary school teaching qualification. However, the current status quo seems to treat the two levels of education with the same teaching qualification. This therefore necessitates a qualification that is in sync with the demands of adult learners in universities. One way of doing this is to have a specialisation during studies of the post graduate diploma in education so that one can specialise in andragogy or pedagogy. If not possible, then there should be an additional qualification in andragogy specifically for university lecturers. This is because the post graduate diploma in education covers the basics of both pedagogy and andragogy but does not get into the deeper details of the two which is something that the university teacher should be equipped with."*

The line of argument by participant D shows that importance should be attached to training lecturers in andragogy. This is also highlighted by Kapur (2017) who observed that university lecturers in India are now mandated to undergo training in andragogy for the purposes of facilitating non-traditional students. This is also supported by Berret (2012) who underscores the need for lecturers to understand the process of how adults learn best and how the teaching-learning should be managed.

For participant G the process of capacitating university learners entails the following;

> *"…If the university community is made up of traditional and non-traditional adult learners, it is imperative that the focus of lecturer training be on andragogy. However, it does not mean that pedagogy must not be taught because there are certain contexts in which it is applicable. In many countries of the developed world such as Britain, Greece, Russia, Germany, Norway, Denmark, Sweden etc. there are colleges and universities of andragogy for the purposes of capacitating university and college lecturers."*

The above line of argument by participant G also puts much emphasis on lecturer training but with a bias towards andragogy. This is because the lecturers' qualifications must be of high-quality owing to the difficulties and obstacles in adult learning. So, the teacher must be able to coordinate and facilitate the educational process and at the same time being an educational consultant of the learners. The versatile role requires the able capacity of the facilitator throughout the teaching-learning process. The facilitator also should guide adult learners regarding their educational obligations cognisant of their competing and conflicting interests (Giannoukos *et al.*, 2016).

In line with criterion 5 (the sequence of the mixed analysis), the quantitative responses from the 78 respondents show that 55 respondents concur with the views of participants A, C, D and G that the university lecturers need to be trained in teaching rather than mere qualification in a particular discipline. They argue that a post graduate diploma in higher education would suffice (criterion 13; cross over nature of analysis and criterion 6; the interaction level of qualitative and quantitative analysis). The views of the qualitative participants are also shared by 18 respondents from the quantitative strand (criterion 5; sequence of mixed analysis) that teaching qualification for university lecturers should be more inclined to andragogy rather than pedagogy though the two concepts must be taught in the post graduate diploma in education. They argue that an andragogical qualification in addition to the post graduate diploma in education is necessary for the competence of lecturers. The generalisation of the arguments (criterion 11; the nature of generalisation) as considered together with criterion 9 (link to other design components) and criterion 10 (research process phase when all analysis decisions are made) would then imply that for effectiveness, efficiency and efficacy, it is mandatory that university lecturers possess a teaching qualification which is different from that of teachers teaching in secondary schools. The post graduate diploma in higher education should have a specialisation in andragogy for university lecturers so that they go beyond the basic aspects of andragogy. Another way would be to attain a postgraduate diploma in higher education then in addition have a purely andragogical qualification preferably a diploma. This argument is in sync with previous arguments under the comparative impact of pedagogy versus andragogy theme which put the latter on the upper role in the complementary continuum in institutional learning (criterion 13; cross over nature of the analysis).

Among the themes that emerged from the data gleaned from the participants include a lack of vibrant and up to date virtual learning. In this regard, participant I had the following;

> *"…Our institutional model has been exposed as one which is rooted in the traditional four walls where learning must be done in the physical classroom. Yes, we can talk of needs analysis and other aspects that need to be addressed for the connoisseurship of teaching learning in institutions of higher learning but our model is one that has been exposed as*

inefficient during the Covid 19 era. My feeling is that our education system should not remain that which demands physical contact though the latter is also necessary for monitoring and increased comprehension."

Larson (2002) defines traditional institutional learning as teacher-centred instruction of synchronised and scheduled groups, confined in the classroom while virtual learning is student-centred, and asynchronous where learning can take place anywhere and anytime. The traditional type according to participant I is characteristic of Zimbabwean university learning. Sauer (2001) describes virtual learning as that which adjusts to environments and situations. The advancement of e-learning or virtual classroom is seen in most leading countries to meet the developmental needs of those countries in times of crises where students cannot be confined to the four walls (Panyajamorn *et al.*, 2018). This aspect of being adaptive to evolving situations and pandemic is the one that participant I is advocating for in the Zimbabwean institutional model. However, one problem that e-learning experiences is the inability and unwillingness of students, the institutions and the government to adapt to computer-led learning The other problem which could be related to government commitment is that of lack of e-learning equipment, such as the computers themselves and fast internet (Sanchez-Gordon & Luján-Mora, 2014). The other problem is the lack of relevant skills in computer literacy (Randy, 2011) which could be attributable to government commitment to a computer-literacy nation.

According to Panyajamorn *et al.* (2018), a learning model in virtual learning must be an interactive one to be effective rather than the usual non-interactive. The meaning that can be inferred from the above argument is that there is need to have a learning model that embraces e-learning in a very interactive mode such as Skype, WebEx, and Moodle etc. So, the issues to do with adopting e-learning have got everything to do with government decisions on the model of learning that it wants adopted in institutions. The argument of participant I also confirms the need to embrace heutagogy which according to Blaschke (2012) is net-centric implying the use of the internet as a technological self-directed resource centre.

One of the issues that was raised in the study that negated the effectiveness of institutional teaching learning and effectiveness of adopted models was the non-consistency of promulgated policies. To this end, participant E had the following to say;

"… There is a serious lack of consistency when it comes to educational policies in the country. I am not sure whether it is politicisation of policies or what because there are so many policies not only in the educational sector that have been abandoned prematurely. I also think that whilst it is good for a country to be reactionary to contemporary educational and developmental trends, there is need for a thorough analysis before coming up with policies so that they are functional. Deviating from education, an example of unpopular policy would be the indigenisation act while in the education sector we can talk of the new curriculum etc. There are also some policies that are functional but are not implemented

because of political orientations. We cannot condemn the British education system in totality today, yet it is the one that has brought us this far. We cannot then opt to get rid of it, yet development was there rooted on the same education system during the colonial era."

The use of education for political expedience to the detriment of development as outlined by participant E is also echoed by Hove & Ndawana (2019) who argue that since 1999, the Zimbabwean education system has been manipulated by ZANU-PF for political interests through the extensive and compulsory study of History and National Strategic Studies (NASS). Whilst the argument behind this SED was to inculcate patriotism, the authors argue that it was a reactive directive towards the MDC formation. However, if History and NASS are necessary in the educational discourse, is there consistency between this directive and Education 5.0 which participants A and H argue as having relegated humanities in favour of STEM (criterion 9; link to other design components and criterion 13; cross over nature of the analysis). The implication that can be drawn from this is that there is no follow through when it comes to policy formulation and implementation but rather reactionary policies that may not sustain the educational and developmental discourse in the long run.

In the same context of policy inconsistency, participant F had this to say;

"… I can describe educational policy formulation and implementation as a 'destroy and build new' phenomenon. There is need to build on already existing educational structures rather than a complete revamp. This allows us to single out shortcomings and proffer solutions to those shortcomings rather than bringing completely new things. I think Education 5.0 and other directives such as the New Curriculum are pointers to the 'destroy and build new' syndrome. This could be due to the turnover of staff in key educational ministries where those that assume office would strive to leave a mark. The Dr. Dokora controversy on National Pledge is one other example."

The line of thinking of participant F resonates with that of participant C who bemoaned the abolishment of the British F- system (criterion 13; cross over nature of the analysis). The implication therefrom is that educational policies should complement or be incremental rather than to destroy existing ones. In his response to American traditional education, Dewey (1938) cited in Williams (2017) came up with progressivism but did not condemn the traditional system in totality. The implication is that the American education system has been on a continuous improvement which is something that the country needs to emulate for an effective and efficient model of learning.

The chapter presented data in textual form in line with the dominance of qualitative paradigm over the quantitative paradigm. The voice of the questionnaire respondents consisted of both statistical and qualitative flare because of the nature of the questionnaire that was administered. In this vein, the qualitative dominance was

further extended from the in-depth interviews to combined questionnaire responses. The researcher established from the participants the contextual effectiveness and efficiency of pedagogy and andragogy in the design and delivery of instruction in institutions of higher learning. The complimentary nature between MBKs and learner needs was also established whilst views on a more pragmatic absolute model of institutional learning were brought to the fore. The chapter also looked at the effect of SEDs on the choice of models to be adopted in institutions of higher learning and emphasis was put on the value and effect of Education 5.0. Lastly, the perceptions of the professoriate and students were gleaned as to what generally constitutes the connoisseurship of teaching in higher education institutions with regards to the qualifications of the professoriate. Data that was presented first was gleaned from the in-depth interviews **(n=10)** and was followed by data gleaned from combined questionnaires **(n=78)** in line with the sequential exploratory design. The analysis followed Thematic Analysis (TA) and 13 steps of mixed analysis by Onweugbuzie & Combs (2010) and Teddlie & Tashakkori, (2011). The next chapter looks at the summary, conclusions and recommendations.