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CURRICULUM IMPLEMENTATION IN MILITARY UNDERGRADUATE EDUCATION: PRACTICES AT THE ETHIOPIAN DEFENSE UNIVERSITY

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Curriculum Implementation in Military Undergraduate Education: Practices at the Ethiopian Defense University

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This is to certify that the thesis prepared by Tesema Mamo, entitled, An Analysis of Curriculum Implementation Practices in Undergraduate Programs at Ethiopian University and submitted to the partial fulfillment of the requirements for the degree of Doctor of Philosophy in Curriculum Studies, complies with the regulation of Addis Ababa University and meet the accepted standards with respect to originality and quality.

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Signed by the Examining Board Committee

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Chair Person	*Signature*	*Date*

Dedication

This thesis is dedicated to:

To my beloved father, Mr. Mamo Haile, whose unwavering love, guidance, and strength shaped the person I am today. Though he is no longer by my side, his spirit lives on in every step I take. His courage and selfless sacrifices have been the foundation of my journey. This work stands as a testament to his enduring influence and the deep love I carry for him always. Forever in my heart.

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List of Acronyms

CD - College Dean

CE - College of Engineering

CHS - College of Health Sciences

CRM - College of Resource Management

EDU - Ethiopian Defense University

FGD - Focus Group Discussion

IQAD - Internal Quality Assurance Director

LM - Linkage Model

LOC - Leadership-Obstacle Course

ME - Monitoring, Evaluation, and Learning

MHEI - Military Higher Education Institutions

MPDIC - Military Pedagogical Development and Innovation Center

MoND - Ministry of National Defense

OECD - Organization for Economic Co-operation and Development

ORC- Overcoming Resistance to Change

OR - Organizational Development

QUAN - Quantitative

QUAL - Qualitative

UC - University Commandant

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CHAPTER TWO

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Abstract

The purpose of this study was to investigate curriculum implementation practices at the Ethiopian Defense University with a particular focus on the challenges encountered, the dynamics of stakeholder involvement, and the strategies required to enhance the quality and relevance of military education. Guided by a pragmatic research paradigm, the study employed a concurrent parallel mixed-methods design. Quantitative data were collected from 109 military students and 51 instructors using structured questionnaires, while qualitative data were obtained through interviews and focus group discussions with 10 purposively selected participants, including the University Commandant, the Director of Internal Quality Assurance, three College Deans, and six Department Heads. Quantitative data were analyzed using ANOVA, Mann-Whitney U-tests, regression, and correlation, whereas qualitative data were subjected to thematic and narrative analysis. The findings revealed a substantial gap between instructors' intended teaching objectives and the actual learning experiences of students. Despite efforts to adopt innovative pedagogical approaches, instructional practices remained mainly academic and insufficiently aligned with the practical realities of military training and operations. The study revealed that the institutionalization of stakeholder engagement in curriculum processes was inadequate, frequently resulting in superficial participation that lacked purpose, depth, and consistency. Furthermore, the fragmentation and poor coordination of reform initiatives across institutions undermined the scalability and long-term sustainability of curricular improvements. In response to these challenges, the study proposed the establishment of a Military Pedagogical Development and Innovation Center to serve as an institutional hub for pedagogical innovation, instructional enhancement, and professional development. Strengthening educational infrastructure and expanding opportunities for experiential learning were identified as critical measures to bridge the persistent theory–practice gap. The study further emphasized the need to institutionalize continuous professional development programs tailored to military pedagogy as a mechanism to ensure instructional quality. Moreover, the study recommended that EDU should prioritize stakeholder motivation, partnerships, and decision-making for effective curriculum implementation. This promotes ownership, engagement, and shared responsibility. Additionally, EDU should prioritize stakeholder engagement, support, understanding, commitment, and feedback to ensure the quality and effectiveness of curriculum implementation. Strategic partnerships with the wider defense sector and related industries were also highlighted as essential for aligning educational programs with operational requirements and national security priorities.

***Keywords*:** *Curriculum Implementation, Institutional Challenges, Military Education, Pedagogical Innovation, Stakeholder Engagement*

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In the past few years, higher educational institutions have widely acknowledged their transformational capacity in promoting intellectual growth, social advancement, and economic success (Olamo et al., 2019). Scholars universally recognize these institutions as essential catalysts for a country's economic and political progress (Binagwaho et al., 2022; Hachey, 2020).

Ethiopia's commitment to enhancing its military capabilities through robust training and education underscored the critical role of higher education in meeting the evolving demands of the military sector. According to Libel (2021), military institutions played a crucial role in preparing personnel for certainty, educating for uncertainty, and fostering inventive solutions in the face of unpredictability. The education and training of military officers and personnel were multifaceted processes that involved imparting skills, knowledge, problem-solving abilities, and critical thinking skills while also instilling values and beliefs essential for professional development. The effective adaptation of armed forces' knowledge, ethos, and ethics hinged on a flexible and proactive military education system (Libel, 2021).

Effective professional military education was crucial in cultivating military professionalism and promoting overarching objectives of human, national, and global stability (Iskandarov & Gawliczek, 2019). Professional military education is crucial for preparing prospective military personnel to learn, change analyze strategically, and innovate in many settings, consequently providing operational effectiveness and security across all levels. The Ministry of National Defense (MoND) is tasked with safeguarding the nation's sovereignty and democratic framework, highlighting its vital role in maintaining ongoing stability, security, and development in Ethiopia (FDRE, 1995).

Nevertheless, the MoND had challenges in sustaining educational and training resources that coincided with the increasing complexities of military science, technology, and future threats. To meet the needs of the 21st century, the military was required to be expeditionary, swiftly deployable, and versatile across many operational contexts (Syme-Taylor & Jalili, 2018). To

provide military personnel the dexterity, critical thinking abilities, and commitment needed to successfully traverse the ever-changing military terrain, curriculum implementation in line with national curriculum revisions was crucial (Sangwan & Raj, 2021). The Ministry of National Defense diligently facilitated the attainment of appropriate certification and competence levels for participants in both official and informal training programs.

The establishment of educational institutions under the Ministry of National Defense, including the Ethiopian Defense University and other institutions, was intended to improve the military's capabilities with specialized degree programs. College of Engineering; College of Health Sciences; College of Resource Management; Ethiopian War College; Ethiopian Command and Staff College; Ethiopian Military Academy; Mulugeta Buli Polytechnic Institution. Notwithstanding these efforts, a significant deficiency exists in the studies about the implementation of curriculum inside Ethiopian military higher education institutions.

A comprehensive investigation of curriculum implementation procedures at these institutions will provide insight into the challenges they have encountered and the tactics adopted to achieve their objectives successfully. The Ethiopian Defense University strives to be among the top ten higher education institutions in Africa by 2035, emphasizing the production and growth of competent professionals and the development of crucial concepts and technology for military missions (MoND, 2021). The university's mission is to provide quality education, undertake research that strengthens military forces' capabilities, offer professional support to defense units and the community, and provide comprehensive healthcare services. The rapidly evolving training requirements of the Ethiopian Defense Forces, necessitating individuals proficient in contemporary science, technology, and the arts, prompt the university's current curriculum modification and design (Defense University, 2021). The institution is dedicated to enhancing its training programs to guarantee that graduates are adequately equipped for successful mission execution. The institution acknowledges the significance of adaptive curriculum development and the rapid evolution of knowledge in the discipline (Barreiros dos Santos et al., 2019). The Ethiopian government's revised national education plan underscores the need for alignment between educational practices and national standards, ensuring that institutions advance the overarching objectives of the Ethiopian educational system. This comprehensive strategy

highlights the university's dedication to producing skilled professionals capable of significantly contributing to national security and development goals.

In recent years, Ethiopia's educational system has seen significant changes in order to conform to international standards and address the nation's evolving needs (Addis Ababa University, 2018). The changes sought to improve the quality, relevance, and accessibility of higher education, demonstrating the nation's dedication to socio-economic advancement and national growth. The Ethiopian Ministry of National Defense (MoND) closely integrates its educational initiatives with the general goals of national security and stability (FDRE, 1995). The MoND's responsibility to safeguard the nation's sovereignty and democratic system highlighted its crucial role in guaranteeing Ethiopia's security and development. Nevertheless, the Ministry of National Defense had challenges with sustaining educational and training resources that could align with the fast changes in military science, technology, and arising security threats (Tesema & Enguday 2024).

A curriculum associated with national educational reforms and specifically designed for the unique needs of the military profession was essential for developing agile, competent, and inventive military personnel (Karakuş, 2021). The Ethiopian Ministry of National Defense has developed several higher education institutes across the country to augment the skills and competencies of its military personnel. The Ethiopian Defense University and its affiliated institutions have been instrumental in preparing future military commanders with the requisite knowledge and abilities to address intricate security problems (Ministry of Defense, 2024). The changing dynamics of contemporary warfare have required a curriculum that promotes critical thinking, innovation, and flexibility among military professionals. Ethiopian military higher education institutions should adopt a curriculum that takes into account the evolving military scenario, the global context, and the information age. Effective curriculum implementation is crucial for the military profession to adapt to swift alterations in the global landscape and new threats (Syme-Taylor & Jalili, 2018). Furthermore, matching the curriculum with required skills is crucial for building military professionals that are physically and mentally flexible, critical thinkers, and dedicated to their duties and nation (Sangwan & Raj, 2021).

Nonetheless, despite the primary goals of education and training within the Ministry of National Defense, there is a lack of comprehensive studies about curriculum implementation practices in Ethiopian military higher education institutions.

Therefore, the study seeks to investigate the challenges encountered by Ethiopian Defense University and the solutions they utilized to effectively manage their curriculum implementation. This study aims to clarify the current state of curriculum implementation in Ethiopian military higher education institutions, offering insights for enhancing educational practices within the defense sector.

1.2 Statement of the Problem

The implementation of the curriculum is an essential stage in the development process, necessitating an integration of resources, staff, institutional practices, and support systems to attain designated educational objectives (Loveline, 2020; Karakuş, 2021). It transforms curricular content into realizable classroom activities to equip students with specific knowledge, skills, and attitudes while tackling challenges such as minimizing disparities and enhancing student engagement (Karakuş, 2021; Ogunseemi & Idowu, 2023). Evaluating the strengths, weaknesses and shortcomings of a curriculum and ensuring the attainment of desired goals necessitates proficient implementation (Lawyer, 2019). The complicated process of implementing a curriculum is affected by many things, such as the involvement of stakeholders, the availability of resources, the level of preparation of instructors, the support of institutions, and the social and cultural settings outside of school (Van den Akker, 2009; Olamo et al., 2019).

In Ethiopian Defense University, the implementation of the curriculum is crucial as it directly aligns education with military demands and prepares students with essential skills for national defense (EDU, 2021). This alignment is crucial to guarantee that military education achieves academic goals while also providing students with practical abilities necessary for defense operations (Tesema & Enguday, 2024; Barreiros dos Santos et al., 2019). Although its significance, the implementation of curriculum at Ethiopian Defense University encounters many enduring challenges that impede its efficacy and restrict its congruence with institutional objectives, which include providing quality education across different areas of study in order to produce competent military professionals.

The main challenge is the inadequate engagement of stakeholders, such as military leaders, instructors, students, and policymakers, in the curriculum implementation process. Effective stakeholder engagement is essential for promoting collaboration, empowering participants, and ensuring that curricula align with the requirements of both the institution and its stakeholders (Letlatsa, 2018; Viennet & Pont, 2017; OECD, 2020). The Defense University Self-Evaluation Document (EDU, 2021) underscores inadequate engagement from essential stakeholders in EDU, leading to curricula that do not meet stakeholder requirements and expectations. This disparity in engagement reduces the significance of military education programs, resulting in their misalignment with the actual needs of national security.

A notable challenge is the insufficiency of resources, which significantly affects curriculum implementation. Essential resources, including updated reference materials, well-organized textbooks, labs, broadband connectivity, and simulators, are often lacking in EDU (Haque & David, 2022; Rudhumbu, 2015). The lack of such resources restricts instructors' effectiveness in delivering educational content and hampers students' opportunities for hands-on, practical learning experiences (Olamo et al., 2019). Lack of resources also hinders the integration of contemporary pedagogical techniques, such as simulation-based training, which is essential for military education. According to Ogunseimi and Idowu (2023), resource availability is fundamental for curriculum implementation, and its lack causes substantial gaps in the attainment of educational goals.

Resistance to change is another challenge to the successful implementation of curricula in EDU. Instructors and administrative leaders often resist the implementation of new curriculum, pedagogical approaches, or changes due to a lack of understanding, anxiety of failure, or inadequate professional development opportunities (Ibeh, 2022; Chapman, 2019). Resistance to change may result in uneven practices, implementation delays, and misalignment of curriculum delivery with institutional goals. Moreover, inadequate support structures, like mentoring programs, peer collaboration, and ongoing professional development, intensify these challenges, leaving instructors unable to meet new expectations (Shilling, 2013; Karakuş, 2021).

The ability and competency of instructors are crucial factors in curriculum implementation. Instructors are tasked with transforming curricular goals into actionable teaching and learning

activities. Nevertheless, inadequate training and restricted professional development opportunities often impede educators' capacity to fulfill the requirements of curriculum implementation in military higher education (Karakuş, 2021; Haque & David, 2022). The lack of properly trained instructors may profoundly impact the effectiveness of curriculum implementation in military education, which prioritizes practical skills, tactical reasoning, and strategic planning (EDU, 2021; Chapman, 2019).

Moreover, the monitoring and evaluation systems employed by EDU are often hampering institutions from recognizing and rectifying deficiencies in curriculum implementation. Effective monitoring and evaluation are essential for implementing courses as planned and finding areas for improvement (Fekede, 2012). In the absence of these methods, evaluating the attainment of the curriculum's stated goals and implementing data-informed changes to enhance implementation techniques becomes difficult.

Despite considerable study on curriculum implementation in general settings, there is a lack of studies focusing specifically on military higher education institutions, especially in Ethiopia. Fekade's (2012) unpublished thesis examined methods within the Ethiopian Defense Training Main Department but failed to thoroughly address the challenges of implementation in Ethiopian Defense University (EDU). This gap in the literature highlights the need for further investigation to understand the distinct challenges encountered by EDU in curriculum implementation. Furthermore, my long career as an educator and an active participant in curriculum review over the last 25 years reveals ongoing disparities in practices, particularly the misalignment between curricular goals and their execution. These discrepancies underscore the need for a rigorous inquiry into the obstacles to successful curriculum implementation in Ethiopian military higher education.

The study aimed to explore the practice of curriculum implementation in Ethiopian defense education institutions. It attempted to fill the gap by examining multiple challenges specially those related to the Ethiopian defense university. The study aimed to reveal strategies that could enhance its effectiveness. The study specifically examined stakeholder engagement, resource accessibility, instructor's preparedness, resistance to change, and monitoring systems. The result will help make a plan for implementing the curriculum effectively, bringing together theory and practice, and making sure that educational goals are in line with institutional and national security goals.

This research is important as it identifies key challenges to curriculum implementation in Ethiopian EDU and offer pragmatic advice for government officials, educators, curriculum experts, and other stakeholders. This study seeks to provide an environment conducive to effective teaching and learning, consequently improving the quality and relevance of military education in Ethiopia (Melese et al., 2019; Gamede & Uleanya, 2021). The study has practical implication for addressing challenges associated with resource constraints, resistance to change, and inadequate professional development, thereby improving military education institutions' ability to achieve their objectives and effectively prepare students for the demands of defense operations.

1.3 Research Questions

This study attempted to investigate the following research questions:

1. How is the curriculum being effectively implemented in the Ethiopian Defense University?
2. To what extent have the stakeholders been engaged in the existing curriculum implementation process in the Ethiopian Defense University?
3. What are the opportunities and challenges in implementing the current curriculum within Ethiopian Defense university
4. What strategies do the Ethiopian Defense University use to enhance the existing curriculum implementation?

By addressing these questions, this study aimed to explore the challenges encountered by Ethiopian Defense University in their effective implementation of their curriculum. This would provide a frame work to enhance the curriculum implementation process, link educational practice with institutional goals, promote stakeholders' engagement, and prepare students with essential knowledge and knowledge and skills for military education.

1.4 Objectives of the Study

1.4.1 General Objective

This study was designed to examine the implementation of the current curriculum practices at Ethiopian Defense University with emphasis on identification of opportunities challenges, stakeholders' engagement and strategies to improve them.

1.4.2 Specific Objectives

The study aimed to:

- Examine how the curriculum is effectively being implemented in Ethiopian Defense University
- Explore the opportunities for improving the implementation of the current curriculum of the Ethiopian Defense University (EDU).
- Identify the challenges of the current curriculum implementation at the Ethiopian Defense University.
- Assess the extent of stakeholder engagement in the curriculum implementation process within Ethiopian Defense University
- Examine the strategies employed by Ethiopian Defense University to improve the implementation of the current curriculum

1.5 Significance of the Study

This study is significant for several reasons. The aim is to examine how the current curriculum is put into action at Ethiopian Defense University. By doing this, I hope to gain valuable insights that can lead to better educational practices and policies. These findings should ultimately enhance the quality of education for military professionals. Additionally, looking into how stakeholders engage in the curriculum implementation process will help us understand the teamwork needed for a well-rounded educational framework. Strengthening partnerships among educators, policymakers, and the military community is key to developing a more cohesive approach to curriculum development. Furthermore, evaluating the methods and practices used in these institutions will provide crucial information for future curriculum updates and teaching strategies. This can create more relevant and responsive educational programs for students and the

defense sector. The study will explore ways to improve curriculum implementation, encouraging thoughtful conversation and collaboration.

The findings may serve as a baseline for future research and discussion on effective teaching approaches at specialized institutions. The study aims to provide pragmatic recommendations to improve educational outcomes in the Ethiopian Defense University, hence strengthening the overall efficacy and preparedness of the defense sector.

1.6 Scope of the Study

This study examined the implementation practices of the current curriculum at Ethiopian Defense University, specifically analyzing the three institutions associated with Ethiopian Defense University: the College of Engineering, the College of Resource Management, and the College of Health Science. The study analyzed the distinct context and demands of military education, investigating the main challenges to the implementation of the existing curriculum and assessing the effectiveness of its implementation. The study evaluated the level of engagement of internal stakeholders, including instructors, administrative leaders, students, and military leaders, and explored the strategies used to improve curriculum implementation.

1.7 Limitation of the Study

Effective curriculum implementation seeks to enhance student outcomes by integrating materials with educational standards and competencies, enhancing achievements, and fostering critical thinking, problem-solving, and practical skills. It promotes equal treatment and inclusiveness, making the curriculum accessible to all students. Consequently, this study has the following limitations:

A notable constraint was the respondents' hesitance to permit video recordings during interviews, stemming from apprehensions about military secrecy and confidentiality. This reluctance hindered the researcher from obtaining elaborate non-verbal communication and contextual nuances, which may have enhanced the qualitative data.

The mitigate participants' hesitance to agree to video recordings, the researcher used audio recording devices to document talks devoid of visual elements. Respondents certainly felt more at

ease with this method since it did not capture their facial features or location. To establish confidence and guarantee secrecy, the researchers explicitly conveyed the safe storage and anonymity of the audio recordings, in addition to the audio recordings, the researcher meticulously recorded field notes throughout the interviews to capture observable non-verbal indicators, like tone, pauses, and hesitation, along with contextual information. The researcher used shorthand and symbols to quickly document essential findings in real time. Subsequently to each interview, the researcher elaborated on these notes via post-interview reflections, emphasizing further non-verbal communication and contextual data discerned during the conversation. The researcher augmented the data by including descriptions of the environment, nonverbal cues, and other pertinent details. The researcher expressed gratitude to respondents by supplying explicit, signed anonymity agreement that underscored the secrecy and anonymity of their data, thereby safeguarding their identities and sensitive information.

Another limitation was the time constraints faced by military personnel during in-person interviews, arising from their engagement with various academic and military-related activities. The researcher used virtual interviews to provide military commanders a more adaptable choice that aligns with their demanding schedules. Consequently, this method gathers substantial insights without placing further temporal constraints on the participants.

1.8 Operational Definition of Key Terms

In academic writing and research, the accuracy of ideas is essential for successful interaction and understanding. An operational definition provides a specific, quantifiable interpretation of essential terminology used in research. It reduces ambiguity and enhances the precision of research results by focusing on the application or measurement of ideas within a specific context, unlike traditional definitions that may be vague or abstract (Rodriquez, 2023). Therefore, in this study:

Administrative Leaders refer to those who are in positions of power and responsibility at military higher education institutions; they are responsible for ensuring the institutions operate effectively.

Challenge denotes specific hurdles encountered by administrators, instructors, and students in implementing a curriculum at military higher education institutions.

Curriculum Implementation refers to the process of putting planned educational programs into action within EDU, including the delivery of content, use of instructional methods, assessment strategies, and coordination of resources to achieve intended learning outcomes.

Ethiopian Defense University (EDU) is a higher education institution dedicated to advancing the missions of the Ethiopian National Defense Forces (ENDF) by producing skilled professionals and generating defense-relevant knowledge and technologies. It comprises three core institutions: Engineering, Health Sciences, and Human Resource Management.

Higher Education A higher education institution (HEI) is an entity that offers advanced academic and professional education to students. Higher education institutions (HEI) may be either public or private and generally award bachelors, masters, and doctoral degrees (Tadesse & Melese, 2016).

Internal stakeholders refer to the groups and individuals (Instructors, students and administrative staff) who are engaged in, or directly affected by, the educational processes within Ethiopian military higher education institutions.

Military higher education institutions refer to educational institutions that provide military training and education at the level of a college. They are part of an extensive military education and training system.

Opportunity refers to the enabling conditions, favorable institutional environments, and available internal or external support systems that facilitate effective curriculum implementation within Ethiopian Defense University

Pragmatic Paradigm refers a research philosophy that prioritizes practical solutions and real-world application by using multiple methods to address complex educational problems in a flexible and outcome-oriented manner.

Practice-Based Curricula - refers to educational programs that integrate practical, hands-on learning experiences with theoretical instruction to prepare military students for real-world operational tasks and challenges within defense settings.

Stakeholder Dynamics refers to the interactions, roles, and influence of various individuals and groups (e.g., instructors, administrators, quality assurance personnel, and defense sector partners) involved in the planning, execution, and evaluation of military education reforms.

Stakeholder engagement is the process by which an organization includes those who may be affected by the decisions or who may affect the implementation of those decisions (Tesema & Enguday, 2024).

Strategies refer to a carefully planned approach or procedure aimed at attaining certain goals or objectives within curriculum implementation.

Strategic Partnerships refers to formal collaborations between EDU and external entities such as the defense sectors, industry partners, and technology providers, intended to support curriculum enhancement, practical training, and knowledge exchange.

University commandant refers military General who serves as the top administrative and strategic leader of an Ethiopian Defense University (EDU), responsible for overseeing institutional governance, enforcing military discipline, coordinating academic and training activities, and ensuring alignment of educational programs with national defense priorities.

1.9 Theoretical and Conceptual Framework of the Study

1.9.1 Theoretical Framework

A theoretical framework is referred to as a "blueprint for the entire dissertation inquiry that serves as the foundation for and support of your research and that provides the structure to define how you will approach the dissertation overall from a philosophical, epistemological, methodological, and analytical standpoint" (Grant & Osanloo, 2014). Additionally, Rudhumbu (2018) says that the goal of a theoretical framework is to come up with and describe a theory that explains why the study subject exists. Grant and Osanloo (2014:14) stated that the theoretical framework serves as a roadmap that provides a rationale for establishing connections between the study's predictors and outcome variables. This study looks at curriculum implementation in education using Force-field Theory and stakeholder Theory. Together, these theories help us understand the dynamics and challenges involved.

1.9.1.1 Force-Field Theory

Kurt Lewin's Force-Field Theory (1947) offers a foundational model for understanding organizational change. It proposes that change results from the interaction between two opposing forces: driving forces that facilitate change and restraining forces that resist it. In the context of curriculum implementation, driving forces might include instructors' enthusiasm and administrative support, while restraining forces could involve resistance to change and resource limitations. For Curriculum adoption to succeed, a balance between these forces is crucial, with driving forces being enhanced and restraining forces minimized. Research by Yilmaz and Kılıçoğlu (2013) and Tadesse and Melese (2016) highlight the need to tackle these issues in a structured way to ensure successful implementation.

The theory claims that restraining factors affect the behavior of organizations and people, eventually determining the outcome of change. The driving factors inspire and guide workers toward the new environment. The restraining factors underscore possible opposition to change, serving as the main challenges to change initiatives (Yılmaz & Kılıçoğlu, 2013; Fasinro, 2024).

Force field theory suggests that the relationship between driving and restraining forces determines the success or failure of a new curriculum's adoption (Good, 2015). Driving forces are elements that encourage and enable change, while restraining obstacles obstruct or resist it.

According to Yılmaz and Kılıçoğlu (2013), force-field theory could be used as a guide in this process. They say that for it to work, there needs to be a careful balance between forces that push and pull. This idea underscores the need for a delicate equilibrium between opposing forces in order to effectively implement and oversee change in education.

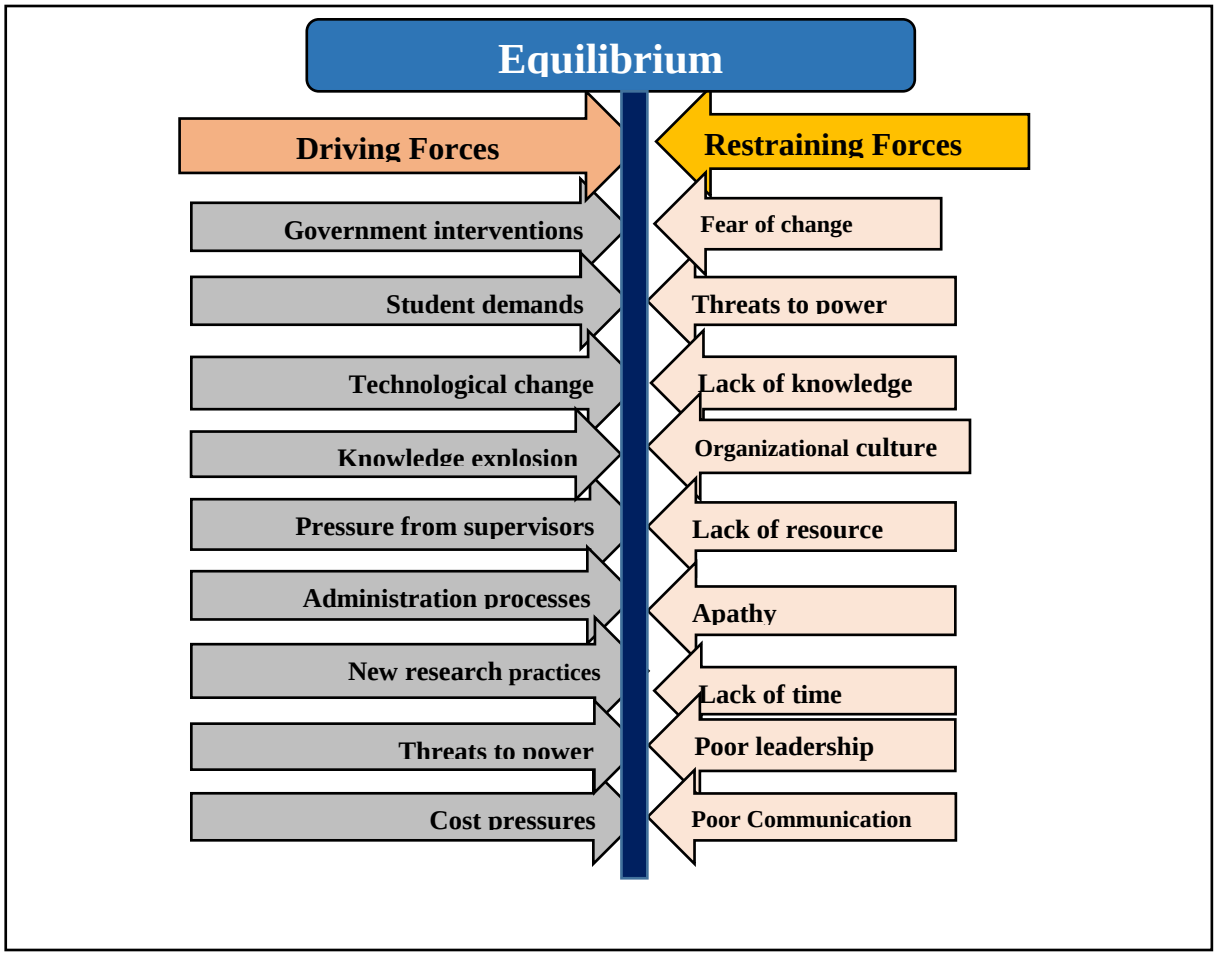

Figure 1: Forces driving and opposing change

The force-field theory of change shows how important it is to have both driving and restraining forces in order to get institutions to implement better curricula (Tadesse and Melese, 2016). Driving forces include the instructor's enthusiasm, administrative support, student engagement, and alignment with educational goals. Restraining forces, including government pressure, competition, and ongoing professional development, can impede the implementation of change or effective curriculum (Loveline, 2020). The force-field theory emphasizes the importance of identifying and addressing these pressures during the curriculum implementation process (Cumming, Bridgman and Brown, 2016). By considering both the driving impulses *that* facilitate change and the restraining forces that impede it, educators and institutions may effectively handle the challenges related to it. This approach increases the probability of effectively implementing and sustaining a new curriculum. The execution of change is a multi-stage process including three

separate phases: unfreezing, change, and refreezing (Lewin, 1947). The stages of transformation explain the effective implementation of curriculum modifications at Ethiopian Defense University. By navigating through these phases, stakeholders can create a supportive environment for educators and students alike, fostering a culture of adaptability and continuous improvement. Ultimately, this structured approach not only enhances the learning experience but also aligns educational outcomes with the evolving demands of the defense sector.

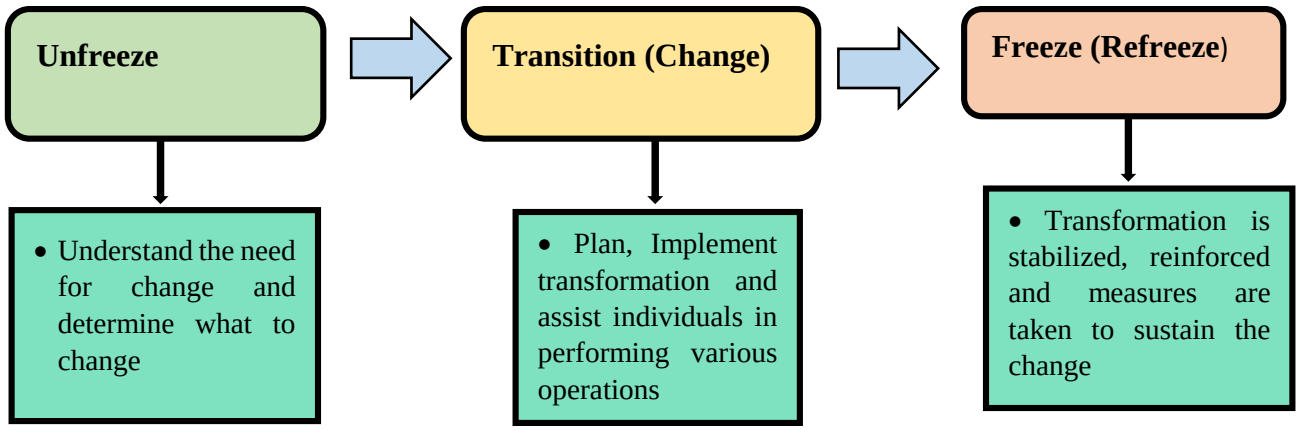

Figure 2: The 3-stage process of lewin's change Model

Unfreezing Stage

This phase involves preparing the social structure for change by fostering a willingness and readiness to accept it (Cumming et al., 2016). At this stage, both individuals and the organization see the need for change and are open to deviating from existing routines, attitudes, or processes. Individuals should first recognize the need for change to alter these behaviors. Deborah (2018) states that this is only possible if they fully understand the change (or curriculum implementation) and how it works. Unfreezing requires dismantling the existing mindset, overcoming resistance to change, and promoting psychological safety and responsiveness to new methodologies. This process often involves effective communication and training to ensure that all members feel equipped and supported throughout the transition. As individuals begin to embrace new practices, the organization can foster a culture of continuous improvement, inviting innovation and adaptability.

Changing stage

Lewin (1947) argued that unfreezing alone is inadequate for achieving change and managing its progress. Successful change implementation and management need a comprehensive assessment of all the contributing factors and an iterative assessment of all alternatives (Esa et al., 2017). This phase is characterized by challenges as implementers evaluate and learn new methodologies for the change process. It often entails doing experiments, obtaining information, and implementing required changes. Saleem et al. (2019) said that effective communication, thorough training, and strong support systems are essential throughout this period to enable and empower workers. This phase pertains to the implementation of change following the disruption of the status quo.

Refreezing stage

The "refreezing" step occurs subsequent to the implementation of changes and the adoption of new approaches (Saleem et al., 2019). At this stage, both individuals and groups establish new ways, adopt an entirely new viewpoint, and begin to return to their previous comfort levels (Rudhumbu, 2015). As to Loveline (2020), the refreezing stage involves the integration of new behaviors, attitudes, knowledge, skills, and norms into routine practices, with the goal of attaining a stable equilibrium and regulating motivating and restraining force.

Based on this theory, the researcher propose that the educational leaders involved in this study could identify obstacles that impede the successful implementation of the curriculum, specifically resistance to change and resource constraints (Chuene & Teane, 2024). If educational leaders and their leadership teams lack a comprehensive grasp of the curriculum, they will be unable to successfully assist instructors in reaching the same objectives. Educational leaders serving as curriculum implementers may articulate the rationale for their successes or failures (NIET, 2020). This understanding is crucial for fostering an environment that not only embraces change but also allocates the necessary resources for effective curriculum delivery. By recognizing and addressing these barriers, educational leaders can better support instructors in achieving their goals and ultimately enhance student outcomes.

1.9.1.2 Stakeholder Theory

Freeman's Stakeholder Theory (1984) emphasizes the need of engaging all relevant stakeholders in the decision-making process to get successful outcomes. In the educational sector, stakeholders include students, instructors, school administrative leaders, government bodies, and external educational groups. Freeman asserts that the effectiveness of educational reform depends on the active participation of stakeholders, since each group has a vested interest in the outcomes (Peng et al., 2024). Hong (2019) underscores the need of acknowledging and addressing the different needs of stakeholders to identify possible obstacles and promote cooperation. To ensure the effective implementation of curriculum, educational leaders should align strategic efforts with stakeholder expectations while alleviating resistance to change (Langrafe et al., 2020).

Stakeholder theory, first introduced by Freeman (1984), establishes a strategic and ethical framework for organizational management by acknowledging the mutual effect of diverse persons and groups and institutional aims (Freeman & Phillips, 2002; Mahajan et al., 2023). Asiyai (2014) contends that this theory advocates for a holistic approach to decision-making, prompting institutions to recognize and respond to stakeholder expectations. This inclusive approach guarantees responsible governance, optimizes wealth generation, and promotes long-term sustainability rather than just favoring the interests of certain groups. An organization's success is intrinsically connected to its capacity to interact with and manage relationships among essential stakeholders, such as students, instructors, educational authorities, and community partners (Tesema & Enguday, 2024). Thus, institutional leaders are responsible for promoting involvement, reconciling conflicting interests, and maximizing stakeholder advantages to fulfill primary educational goals.

In the context of higher education, specifically within Ethiopian military institutions, stakeholder theory highlights the need to foster strong connections with stakeholders due to their significant impact on the institutional goals (Tesema & Enguday, 2024). Hong (2019) argues that effective curriculum implementation requires a thorough understanding of stakeholder interests, viewpoints, and interactions within decision-making and strategic planning contexts. Tesema & Enguday (2024) assert that the use of stakeholder theory in Ethiopian military higher education institutions augments stakeholder engagement, aligns with institutional goals, and eventually improves educational results for military personnel. The effective execution of curricular changes

relies on the intentional involvement of stakeholders, the integration of their viewpoints, and the strategic oversight of their expectations throughout the reform process.

1.9.2 Conceptual Framework

Studies depict a conceptual framework as a model illustrating the links among the relevant concepts. It is also characterized as a cohesive method for addressing the issue or as the combination of multiple interconnected concepts to enhance comprehension of the phenomena or study challenge (Rudhumbu, 2018). This model illustrates the interconnections among the main factors influencing the curriculum's implementation in the Ethiopian Defense University. It also illustrates the interplay of several factors that influence the overall effectiveness of curriculum implementation.

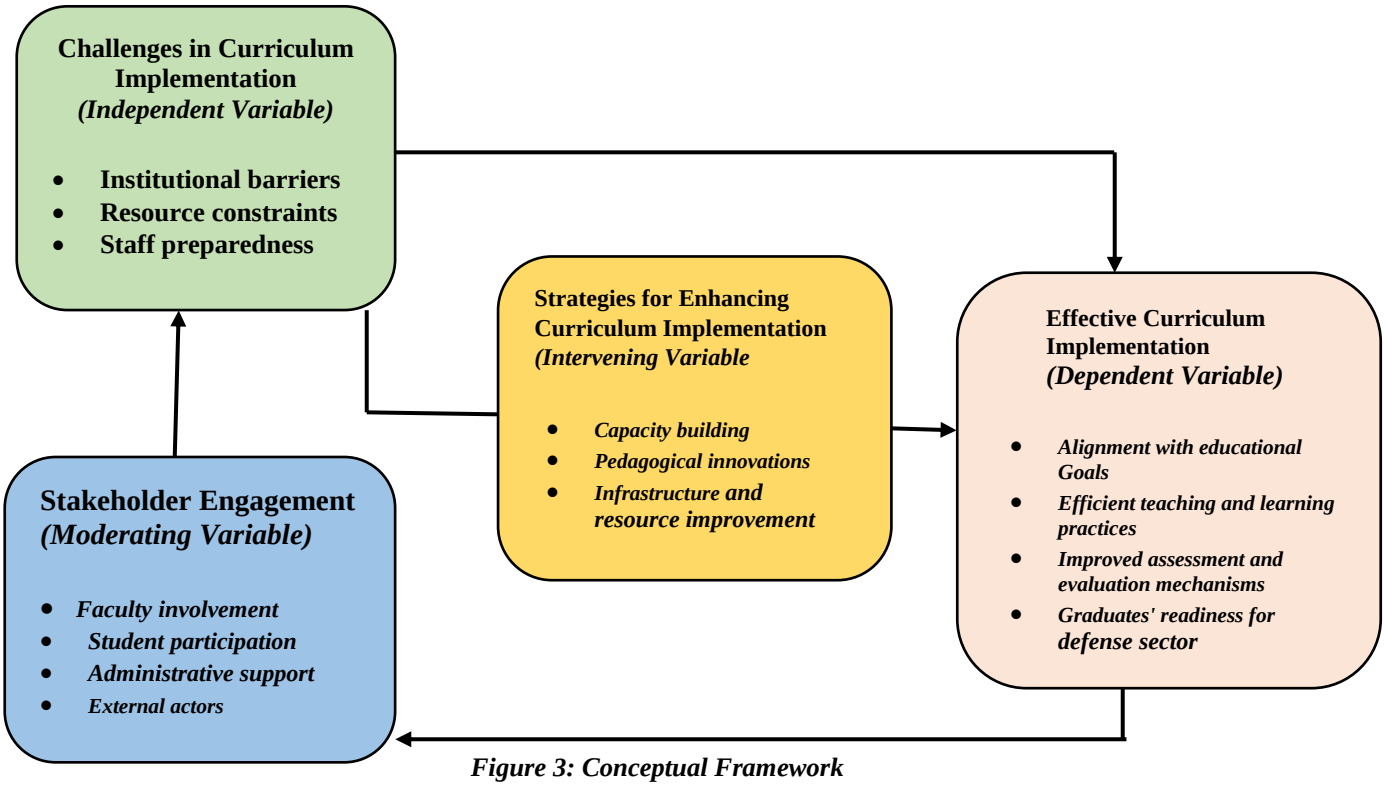

Figure 3: Conceptual Framework

Curriculum implementation at the Ethiopian Defense University (EDU) faces several interrelated challenges. Institutional barriers such as bureaucracy and rigid policies often slow down the process of curriculum updates, making it difficult to respond promptly to emerging defense and educational needs (Aslam et al., 2024). Additionally, limited resources, outdated instructional materials, and inadequate infrastructure hinder the adoption of innovative teaching models

(Chuene & Teane, 2024; Karakuş, 2021). Many academic staff members also lack sufficient professional development opportunities, resulting in resistance to new pedagogical approaches and reforms (Ibeh, 2022). Furthermore, policy misalignment between educational directives and defense objectives weakens the relevance and applicability of the curriculum to real-world defense contexts (Tesema et al., 2024).

Stakeholder engagement plays a critical moderating role in improving curriculum implementation. Faculty involvement is central to fostering innovation in teaching and curriculum design (Karakuş, 2021), while incorporating student feedback and experiential learning ensures that the content remains practical and relevant (Alves, 2012; Langrafe et al., 2020). Administrative support facilitates the strategic allocation of resources and reinforces institutional commitment to curriculum goals (Yihong et al., 2024; Peng et al., 2024). Moreover, collaboration with external stakeholders such as defense ministries, industry partners, and international bodies—helps align academic programs with national security priorities and global defense trends (Chan, 2021).

To address these challenges and strengthen implementation, several strategies can be employed. Capacity building through continuous faculty training and leadership development enhances teaching effectiveness and institutional adaptability (Mirzakhmadovna, 2023). Integrating pedagogical innovations, including active learning and technology-enhanced instruction, can improve student engagement and learning outcomes (Bumbuc, 2020). In parallel, improving infrastructure and expanding access to digital resources support more flexible and responsive curriculum delivery (Cohen & Ball, 2018).

Effective curriculum implementation ultimately occurs when educational programs align with both academic and defense goals, employ sound teaching methods, utilize comprehensive assessment systems, and produce graduates equipped to meet defense sector demands (Hattie, 2009). The success of this process depends on effectively managing challenges, fostering strong stakeholder engagement, and implementing robust enhancement strategies (Anderson & Krathwohl, 2001).

In conclusion, this conceptual framework emphasizes the dynamic and interconnected factors necessary for successful curriculum implementation within the context of defense education. It highlights the importance of flexibility, collaboration, and innovation in ensuring that the

Ethiopian Defense University's curriculum remains relevant, responsive, and aligned with national and global defense imperatives.

1.10 Organization of the Study

This study is organized as follows: The first chapter defined the concept of curricular implementation practices and articulated the problem statement, objectives, and limitations of the research. Chapter 2 focused on the review of pertinent literature about theories and practices of curriculum implementation. In this chapter, the researcher evaluated current frameworks, examined the role of various stakeholders, and examined empirical studies that enhanced the understanding of curriculum implementation in similar educational contexts. Chapter 3 provided an in-depth exploration of the research design and methodology employed in the study. It addressed the conceptual framework of the study and detailed the data-collecting methodology used to get trustworthy and relevant data to answer the research questions. This chapter addressed study design and methodology, sample techniques, data-collecting tools, data analysis techniques, quality assurance protocols, and ethical issues. Chapter 4 delineated the study's conclusions, examining and elucidating the data collected through surveys, interviews, and focus group discussions. This chapter emphasized quantitative and qualitative data, elucidating significant insights obtained from participants. Finally, chapter 5 offered conclusions drawn from the study, along with recommendations based on the challenges encountered and the best practice identifies in the context of curriculum implementation.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1. Introduction

This chapter examines the intricate concepts surrounding curriculum and its implementations, focusing on various strategies that promote effective execution. It investigates both the facilitators and barriers that affect curriculum implementation while also highlighting diverse models and processes associated with it. The phases of curriculum implementation are delineated to offer a structured perspective on the implementation continuum. Furthermore, the chapter emphasizes the significance of effective curriculum implementation and outlines strategies designed to enhance its overall effectiveness. Within the framework of military higher education, the chapter discusses specific challenges and unique considerations that characterize curriculum implementations in this environment. It provides a critical analysis of stakeholders' engagement, emphasizing its crucial role in determining the success of curriculum implementation. This section highlights the necessity of collaboration and effective communication among stakeholders throughout the implementation process. Finally, the chapter presents the theoretical framework underpinning the study, with a particular focus on force-field theory. Understanding the different factors that lead to good educational outcomes is easier with this theoretical lens. It gives you a better understanding of how changes happen in how the curriculum is taught. Through this thorough review, the chapter seeks to establish a foundational understanding of curriculum implementation, paving the way for further exploration in the following sections.

2.2. The Concept Curriculum

Defining the term "curriculum" presents challenges due to its diverse characteristics and interpretations. Rudhumbu, (2018) contends that the primary challenge in curriculum studies is achieving a clear definition of "curriculum." Many researchers, including Kelly (2005: 5–6, as cited in Rudhumbu, 2018), came up with a framework with four main aspects: a) educational planning and implementation, which includes the goals of curriculum developers; b) the steps taken to reach these goals; c) the actual experiences of students as a result of instructors' efforts to reach the planners' goals; and d) the lessons learned by accident because of how the school is set

up and how the curriculum is organized. This way, everyone can agree on what the curriculum means. These dimensions indicate that a curriculum fundamentally addresses key questions concerning 'who,' 'when,' and 'how' (Marsh, 2015).

Marsh (2015: 6) further states that the term "curriculum" may be interpreted in two fundamental ways. The first perspective perceives curriculum as a manifestation of factual, practical, or social tensions associated with political power. The second approach is an analysis of the material within educational settings, including aspects of race, gender, aesthetics, institutional practices, and poststructuralist theories.

The diverse interpretation indicated that “curriculum” has multiple meanings for various stakeholders. To get a more refined understanding of the term, it is crucial to look at and analyze its origin, considering both descriptive and prescriptive meanings.

2.2. Origin and Meaning of Curriculum

The term originates from the Latin word for “racecourse,” symbolizing the organized path that students follow to achieve educational goals. This analogy underscores that education is not merely about content delivery but an evolving and dynamic process for learners. Moreover, over time, scholars have proposed numerous definitions of curriculum, reflecting its diverse dimensions.

The concept of curriculum has been debated for years, with no universally accepted definition emerging (Wang, 2006; Ourairat, 2011). The term “curriculum” has its etymological roots in the Latin word *currere,* which translates to “a running “or “a course,” suggesting a journey or path that one follows in education. Olibie (2014) highlights secondary meanings related to career and racecourses, emphasizing the idea of a structured pathway to knowledge.

Early definitions often reflected a narrow and simplistic understanding of the term. For instance, Tanner and Tanner (1995) defined it as the subject matter that students are expected to cover, emphasizing a content-centric view. Taba (1962, in Cincioghu, 2014:24) framed it as “all the learning of students which is planned and directed by the school to attain educational goals,” highlighting the organized nature of educational efforts.

Contemporary understanding of curriculum reflects these traditional definitions while also evolving to incorporate broader perspectives. Tanner and Tanner (1985) summarized these views by portraying curriculum as a plan or program that learners experience under the guidance of educational institutions. In

Contrast, Rudhumbu (2018) argues that curriculum encompasses what students are expected to encounter, study, practice, and master, underscoring the critical role of planned activities in the holistic learning experience. This perspective reflects a more dynamic understanding of curriculum as it relates to teaching and learning, emphasizing its multifaceted nature and the importance of international educational design.

Contemporary conceptions of curriculum draw from ideas first proposed by Taba in 1962, who viewed curriculum as a framework of experience that includes all activities students engage in during their academic years (Wang, 2006). According to Wang (2006: 3) several components of curriculum: a) the syllabus; b) the instructional methods instructors use; c) the materials they employ, such as textbooks; d) the assessment methods they implement; e) the available facilities, including classrooms, laboratories, and athletic fields; and f) the diverse evaluation methods they utilize.

Wiles and Bondi (2007: 3) defined curriculum as "the complete set of experiences that individual learners encounter in a classroom setting, structured within a framework of theory, research, or historical and contemporary professional practice." This definition contributes to our understanding of curriculum. However, Taba's original framework is still a bit limited because it focuses mostly on structured learning experiences and ignores unplanned parts, which are often called the "hidden curriculum." According to Pfeiffer (2018), the hidden includes aspects such as the relationships between instructors and students, classroom structure, rules, routines, and procedures. Instructors' attitudes and the institution's goals significantly influence all these elements. Boutelier (2018) describes the hidden curriculum as informal lessons that encompass behaviors, viewpoints, and attitudes that students acquire within the classroom setting.

The concept of curriculum has significantly evolved over time. Marsh and Willis (2003) defined curriculum as an integrated collection of plans and experiences that students engage in under the supervision of educational institutions. In this context, the term 'plan' conveys

predictability regarding the desired learning outcomes for students, while 'experience' broadens the definition to include learning that occurs both inside and outside the classroom. The enacted curriculum may differ from the intended curriculum, as educators during interactions with students and curricular materials (Chim & Poon, 2014; Fotheringham et al., 2012).

Fotheringham et al. (2012: 63) provided the definition, which this study adopts for its comprehensiveness, in formativeness, and demonstration of the evolving nature of curriculum. It also explores the distinction between means and objective, as well as between curriculum and teaching. This perspective asserts that curriculum is dynamic and continuously evolving, rather than static or outdated (Joskin, 2012; Chin & Poon, 2014), acknowledging the shifts in learning that align with societal changes.

A complete curriculum includes several important components: a) it encompasses all students for whom the school is responsible; b) it contains relevant information; c) it is organized to ensure purposeful learning; d) it includes activities outside of the classroom; and e) it consists of a series of courses that pupils should complete (Chin & Poon, 2014; Chikumbu & Makamure, 2000; Sultana, 2008).

The term "experiences" in these definitions signifies those students' learning results from various factors, including interpersonal interactions between instructors and students, the physical environment, educational resources such as textbooks, and the prevailing values and social norms (Chin & Poon, 2014: 19). A curriculum encompasses the student, the instructor, instructional materials, pedagogical approaches, both anticipated and unanticipated experiences, as well as the outcomes of the learning process (Chin & Poon, 2014).

Additionally, curriculum is interpreted through various lenses, each influencing how it is implemented. These perspectives include curriculum as a product, a program of planned activities, an experience, a lived agenda, discrete tasks and concepts, a tool for societal change, intended learning outcomes, and cultural reproduction (Cincioğlu, 2014, Tubaundule, 2014).

2.2.1. Curriculum as Product, Content or Subject Matter

The concept of curriculum as a product reflects the traditional understanding of school curricula, which is often manifested through various documents outlining the courses of study to

be delivered to students over specific periods. Commonly encountered in educational institutions, these documents encompass curricula for subjects such as social sciences, mathematics, and physical sciences. These documents typically include course lists, syllabi, defined skills and objectives, recommended texts, and assessment methods. Collectively, people refer to these as "school curriculum" (Nevenglosky, 2018).

Tabaundule (2014) says that thinking of curriculum as a product is similar to thinking of manufactured goods. This shows that these documents are the result of a planned process of curriculum planning, development, or engineering. Supporters of this view say that this definition recognizes the need to plan a curriculum through a series of steps, such as figuring out what the students need, setting goals, choosing and organizing content, choosing learning experiences, and figuring out how to evaluate them (Mednick, 2006). This framework gives people who work with curriculum a concrete way to think about the term and helps with planning and development by making clear what the documents are supposed to do (Tabaundule, 2014; Rudhumbu, 2018).

However, critics express concern that this product-oriented definition restricts the notion of "curriculum" to the specific courses outlined in educational documents. They argue that this definition erroneously assumes that such documents can capture all possible educational experiences within a school setting, Furthermore, this definition tends to emphasize the delivery of information according to a pre-established plan, and potentially limiting the Mednick (2006) emphasize the richness of the educational experience.

Schubert (1986) contends that an exclusive focus on subject matter overlooks other planned and unplanned activities that significantly contribute to student's experiences in institutions. He asserts that school subjects merely represent the topic to be covered, neglecting vital aspects of cognitive development, creative expression, and personal growth. Schubert emphasizes that effective curriculum planning goes beyond the subject taught;

Effective curriculum planning encompasses instructional strategies, sequencing, scope, and motivational techniques, as well as evaluation instruments and content interpretations, all of which critically shape the character of a subject. Additionally, he highlighted the importance of unplanned factors such as students' prior knowledge and attitudes cannot be overstated. The learning process encompasses broader social, organizational, and physical dynamics. The learning

process involves broader social, organizational, and physical dynamics. The Environment profoundly influences the learning process. Informal social interaction among students, occurring in corridors, playgrounds and during breaks, as well as formal extracurricular activities is significant contributors to the learning experience. Critics argue that equating curriculum solely with subject matter of formal content simplifies and restricts the educational discourse.

They assert that institutions facilitate learning beyond the confines of formal curricula. They also say that to get a full picture of the curriculum, we need to look at both the intended and unintended learning outcomes that are part of the school's culture (Loveline, 2020).

2.2.2. Curriculum as Program of Planned Activities

The curricular viewpoint defined by Saylor, Alexander, and Lewis (1981) includes both narrow and broad interpretations. In its simplest form, the curriculum is the list of courses that a school offers, including both required and optional choices. The curriculum outlines the planning and recording of each student's education in official records (Tabaundule, 2014). The larger definition encompasses all facets of learning that transpire inside the educational setting, in addition to activities outside the classroom. Proponents of this broader approach argue that it acknowledges learning is not limited to formal educational settings but can take place in many situations, including different clubs.

Tabaundule, (2014) define two advantages of this holistic perspective: firstly, it expresses the curriculum in explicit terms, and secondly, it acknowledges the variety of situations in which learning occurs. Schubert (1986:28) presents many critiques concerning this categorization of curriculum. He contends that defining curriculum only by scheduled activities accentuates surface elements rather than profound developmental processes. This viewpoint often emphasizes results above the learning process itself. Schubert argues that an activity-oriented curriculum may mainly improve students' scores on standardized tests rather than really foster skill development, thereby undermining the desired effect on learning experience and personal relevance for students.

Moreover, he indicates that concentrating on predetermined duties can cover up the effects of unforeseen learning results. For example, diverse students may react differently to the same classroom activity, resulting in different educational experiences. Thus, consequently, Schubert

(1986:28) advocates for educational systems to concentrate on the experiences of students rather than rigidly adhering to planned activities.

2.2.3. Curriculum as intended learning outcomes

A curriculum defined by intended learning outcomes emphasizes what students should learn rather than how they acquire that knowledge (Tabundule, 2014). This focus on predetermined knowledge, attitudes, and behaviors often neglects the unintended outcomes of student learning. While this approach provides a clear outline of desired learning, it can restrict the methods through which students engage with the material (Carl, 2012). Educators who prioritize specific objectives may overlook the importance of unintended learning outcomes and the hidden curriculum in the learning process.

Schubert (1986) argues that this perspective prioritizes the specification of knowledge, skills, attitudes and behavior expected from students, often presented as objectives or a list of facts. Although it frames the curriculum as a conceptual framework and narrows its focus, it has been criticized for ignoring the hidden curriculum, which significantly influences student learning. Moreover, Schubert (1986) highlights that predetermined knowledge can have varying impact, and uninformed learning outcomes coupled with standardized teaching methods do not guarantee consistent effects across all students.

2.2.4. Curriculum as Experiences of the Learner

John Dewey, a key advocate of this curriculum conception, emphasized the importance of prioritizing students in curriculum design and implementation. He argued that the focus should be on how students learn rather than how instructors teach (Tabaundule, 2014, Rudhumbu, 2018). This student-centered approach reflects a humanist perspective, which positions the learner as the central figure in all curriculum decisions (Schubert, 1986). By emphasizing how students interact with events, materials, individuals, and their broader social and emotional environment, both inside and outside the classroom, this perspective highlights the significance of both planned and unplanned learning experiences.

In Ethiopia, this approach is more common in military higher education institutions, which tend to offer students a broader curriculum compared to nonmilitary higher education institutions.

Instructors who embrace this view often adopt learner-centered methods, treating students as the primary focus of their teaching practices (Rudhumbu, 2018). People widely regard these approaches, which cast the instructors as a facilitator or guide, as more engaging than traditional instructor-centered methods. Students generally respond positively to such teaching strategies, as they create an environment where learning revolves around the learner, fostering motivation and improved performance.

2.2.5. Curriculum as Currere

The concept of curriculum as "currere" underscores the significance of learners' personal development (Anderson, 2004), characterizing the curriculum as a lived experience that encompasses the activities and interactions students engage in until they complete a course. This perspective compares the educational journey to running a race Tubaundule (2014) with the primary aim being the completion of the course as planned. Educators who embrace this conception often prioritize teaching to meet curricular mandates, rather than ensuring that students fully understand the content. These instructors typically believe that the instructors should transmit knowledge, viewing students as passive recipients of information. Because of this, they often use instructors-centered teaching methods that help students move through the curriculum more quickly, so the course can be finished on time (Rudhumbu, 2018). Such educators frequently prefer a drill-and-practice methodology in their teaching.

2.2.6. Curriculum as an Agenda for Social Restructuring

The curriculum, viewed as a tool for social restructuring, is grounded in a constructivist philosophy that emphasizes the discovery and construction of meaning within one's environment. This perspective highlights the awareness of the interplay between the enacted and experienced curriculum (Tabaundule, 2014).Rudhumbu, (2018)says that the praxis view of curriculum doesn't just see it as a set of fixed plans for implementation, but as a living process that includes planning, criticizing, acting, and evaluating. This approach suggests that the curriculum should serve as an instrument for transformation, contributing to the establishment of a more just and equitable society (Tabaundule, 2014). Furthermore, for the curriculum to fulfill this transformative role, it should be implemented in ways that foster critical thinking among learners (Ornstein & Hunkins, 2018).

2.2.7. Curriculum as Discrete Tasks and Concepts

The conception of curriculum as distinct activities and concepts highlights student behavior, knowledge generation, skill acquisition, and an appreciation of nature, informed by the skills development approach (Rudhumbu, 2018). This viewpoint shows knowledge as discrete notions instead of as interrelated components of a unified whole. Consequently, it is considered a disjointed approach that only seeks to provide students with isolated facts for assessment, rather than developing lifelong knowledge and competencies (Rudhumbu, 2018; Tabaundule, 2014). Educators who embrace this viewpoint often use a drill-and-practice method, indicating an instructors-centered approach to curriculum execution.

2.2.8. Curriculum as Cultural Reproduction

The concept of a curriculum is a set of planned learning activities that are meant to give students structured chances to learn a wide range of experiences, facts, values, and skills that are all geared toward certain educational goals (Karakuş, 2021). Additionally, it serves as an organizational framework for activities and experiences within a defined temporal and spatial context in educational settings (Ogunseemi & Idowu, 2023).

Arsyad and Safitriani (2023) say that the curriculum is a complete framework that includes detailed plans and arrangements for content and learning materials. It goes beyond formal education to include all activities and experiences that help students grow as people, both in and out of school. It can be viewed narrowly as a series of purposeful experiences (Kandiko Howson & Kingsbury, 2023) or more broadly to include objectives, content, alignment, learning activities, assessment methods, physical environments, and collaborative partners.

Defining “curriculum” presents challenges due to its diverse characteristics and interpretation. Rudhmbu (2018) argues that the primary challenge in curriculum studies lies in achieving a clear definition of the term. Many researchers, including Kelly (2005: 5-6 in Rudhumbu, 2018), have come up with a framework that includes four main parts: a) educational planning and implementation, which includes the goals of curriculum developers: b) the steps that are taken to reach these goals: c) the actual experiences of students that come from instructors’ efforts to meet planners’ goal: and d) the lessons that students learn that weren’t meant to be learned because of how the school an curriculum are set up. This framework aims to provide a consensus on the

meaning of “curriculum”. These dimensions indicate that a curriculum fundamentally addresses crucial questions related to ‘Who,’ ‘When,’ and ‘how’ (Marsh, 2015). Marsh (2015: 6) further posits that the term “curriculum” can be interpreted in two fundamental ways. The first perspective views the curriculum as a reflection of factual, practical, or social tensions associated with political power. The second approach involves analyzing the content within educational contexts, encompassing aspects such as race, gender, aesthetics, institutional practices, and poststructuralist theories. These diverse interpretations indicate that “curriculum” hold multiple meanings for various stakeholders. To gain a more nuanced understanding of the term, it is essential to examine its origins while considering both descriptive and prescriptive meanings.

2.3. Defining Curriculum Implementation

Curriculum implementation is a critical yet often neglected aspect of the educational process. Despite its frequent misinterpretation, the definition of curriculum implementation is fundamental to effective teaching and learning. The term "implementation" originates from the Latin word *implere*, meaning "to fill up," which has led to misconceptions that it merely involves bridging knowledge gaps for instructors and students. However, Ornstein & Hunkins (2018) more accurately describe implementation as the active application of methods and procedures to achieve educational goals.

At its core, curriculum implementation entails translating a curriculum document into practice within the classroom. This process involves collaborative efforts among educators, students, school administrative leaders, and parents, as well as interactions with instructional materials, strategies, and the broader educational environment (Fasinro, 2024). It is defined as the execution of a new curriculum with the intention of instigating meaningful changes in learners (Ornstein & Hunkins, 2014).

Various scholars have offered definitions of curriculum implementation, emphasizing its multifaceted nature. For instance, it involves the specific activities designed to operationalize a curriculum (Ibeh, 2022) and checks whether these activities affect change (Obilo & Sangoleye, 2015). Curriculum implementation also encompasses the daily teaching practices of educators, their assessment methods, and their interpretation of the curriculum (Nevenglosky, 2018; Karakus,

2021). Wiles and Bondi (2014) highlight that it involves the delivery of instruction and assessment through designated resources outlined in the curriculum.

Ornstein & Hunkins (2018) view it as an iterative and ongoing process, where changes in one aspect can lead to adjustments in other. This flexible method emphasizes that implementing a curriculum is not a one-time job; instead, it requires ongoing change and communication between all parties involved in the learning process.

Overall, curriculum implementation represents the systematic organization of educational plans into actionable practices within the classroom. It requires a commitment from instructors to facilitate meaningful engagement between learners and content, ensuring that desired educational outcoms are achieved (Fasinro, 2024; palestina et al, 2020 ;). By fostering active participation and collaboration, effective curriculum implementation aims to create a transformative learning experience that leads to improved educational outcomes for students.

2.4. Phases of Curriculum Implementation

Curriculum implementation encompasses the integration and evaluation of the curriculum, resulting from its design and development processes. Rudhumbu (2018) defines incorporation as the active participation in the curriculum. Ornstein and Hunkins (2018) categorize the curriculum implementation process into two primary phases: the preoperational phase and the operational phase. These stages are marked by essential elements like individuals and resources, change methods, communication channels, professional development, and instructional preparation. Collectively, these components are essential for the successful implementation of the curriculum (Palestina et al., 2020; Fasinro, 2024). According to Ibeh (2022), curriculum implementation is a series of actions aimed at executing a specified program. Ornstein and Hunkins (2018) assert that a curriculum begins as a plan, signifying its actualization only through its implementation in school classrooms. Consequently, curriculum implementation embodies the real pedagogical practices of educators about the newly formulated curriculum goals (Rudhumbu, 2018).

2.4.2. Pre-Operational Phase

The pre-operational phase is crucial for preparing stakeholders and testing the curriculum prior to full-scale implementation (Rudhumbu, 2018). This stage emphasizes stakeholder

engagement through various strategies, including mass media, seminars, workshops, and public lectures, aimed at highlighting the curriculum's benefits and building enthusiasm among educators, administrative leaders , parents, and students (Ornstein & Hunkins 2018). Rudhumbu (2018) says that effective dissemination involves targeted communication strategies such as personal outreach and campaigns, ensuring that stakeholders comprehend the curriculum's purpose and structure. Staff development is critical during this phase, as training educators equips them with the necessary skills and knowledge for effective implementation, including mastery of new teaching methods and assessment tools. Pilot testing plays a vital role in testing the curriculum in real-world settings. This process includes training pilot instructors, distributing trial materials, and observing classroom practices to gather valuable insights (Rudhumbu, 2018; Ornstein & Hunkins, 2018). Monitoring and evaluation are essential components, focusing on assessing material distribution efficiency, evaluating topic sequencing and coverage for alignment with learning objectives, and gauging educator competency and readiness to teach the new curriculum. Additionally, reviewing the appropriateness of materials, such as textbooks and resources, for student accessibility is critical. Identifying an instructor's preparedness allows for targeted intervention through additional training (Ibeh 2022). Finally, formative evaluation enables the revision or rejection of the curriculum based on pilot outcomes, ensuring that all components align with desired educational goals (Palestina et al., 2020; 2024). Overall, this phase serves as a "quality assurance" stage, minimizing risk and refining the curriculum before broader adoption.

2.4.3. Operational Phase

The operational phase is the full-scale implementation of the curriculum across all institutions, requiring meticulous logistical preparation. Key tasks include distributing the finalized curriculum syllabus to all institutions and ensuring that adequate infrastructure such as classrooms, labs, and workshops as well as resources like textbooks and technology, are available (Ornstein & hunkins 2018).Capacity building is prioritized, with ongoing professional development organized through refresher courses and workshops designed to maintain motivation, address challenges, and refine implementation practices for instructors, supervisors, and administrative leaders (Rudhumbu, 2018). Then there is active implementation, which involves putting the curriculum into practice in classrooms through planned teaching and learning activities. To make sure that the curriculum is taught consistently, teaching strategies are matched with the

goals of the curriculum (Ibeh 2022). Support mechanisms are established to provide continuous technical and material assistance to institutions, alongside feedback loops that monitor progress and facilitate real-time adjustments (Rudhumbu, 2018). This phase emphasizes sustained execution and requires collaboration among all stakeholders to maintain fidelity to the curriculum's design while adapting to practical challenges.

Overall, the success of the operational phase is intricately linked to the comprehensive preparation undertaken during the pre-operational stage. Pilot testing identifies possible issues, while stakeholder involvement secures buy-in and preparation for execution. All of these stages together provide a cycle of continuous improvement, in which input from the implementation informs future adjustments, ensuring that the curriculum remains flexible and tuned to the demands of education.

2.5. Curriculum Implementation as a Process of Change

Curriculum implementation involves altering resources, methodologies, and values within educational institutions. Rudhumbu (2018) sees curriculum implementation as a process of change that can lead to three different kinds of changes: changes in materials, changes in practices, and changes in the values and beliefs of the people implementing the curriculum, the students, and the institution. This view of implementing a curriculum as a process of change is very similar to Loveline (2020) definition, which says that implementing a curriculum means starting a crucial conversation between well-known teaching methods and new, unfamiliar methods. This viewpoint regards curriculum implementation as a shift from conventional pedagogical techniques to innovative strategies.

Karakus (2021) asserts that curriculum implementation requires a change in the practice of educators, learners, and educational institution to ensure its effectiveness. Karakus, (2021) agrees with Fullan's (2001) perspectives that implementation includes a) using new materials, b) adopting new behaviors and practices, and c) integrating new beliefs of change. Curriculum implementation is therefore seen as a process of change or the translation of theory into practice (Chapman, 2019; Rudhumbu, 2018).

Consequently, effective curriculum implementation may be defined in several ways. Effective curriculum implementation is a process that aids students in learning new things, enhances their cognitive abilities, relies on research, involves students in various groups, employs effective classroom management techniques, and continuously monitors their academic progress (Pak et al., 2020). The Organization for Economic Cooperation and Development (OECD) (2020) asserts that effective curriculum implementation involves establishing a supportive classroom setting, providing students with learning opportunities, fostering creativity and innovation, and promoting a clear presentation of student work. Kisirkoi and Mse (2016) say that implementing a curriculum well means giving students chances to think critically, practice, and apply what they've learned using methods that focus on the students. Loveline, (2020) put all of these definitions of effective curriculum implementation into one piece by saying that it is an interactive process that aims to teach students not only facts but also skills like problem-solving, collaboration, creativity, and innovation. Effective curriculum implementation is the process of executing a curriculum that consistently fosters student development in knowledge and skills.

Kandiko Howson and Kingsbury (2023) contend that curriculum implementation, as a changing process, encompasses not just the implementation of the curriculum but also the attitudes and beliefs of its implementers. Rudhumbu (2018) assert that implementing a curriculum entails a) using new resources, b) modifying instructional methods, and c) embracing novel pedagogical concepts. Fasinro (2024) concurs with the perspective that curricular implementation constitutes a transformation. As part of the implementation process, practices need to be changed in five areas of the curriculum: materials, curriculum structure, the role and behavior of staff carrying out the curriculum, staff knowledge and understanding of the curriculum, and staff adoption of the curriculum's values.

Chapman, (2019argues that effective curriculum implementation, as a change process, depends on collaborative decision-making and requires a change in perspectives on knowledge, pedagogy, and student learning. According to Gouëdard et al. (2020), curriculum implementation is the ongoing reform of educational programs that includes changing students' routines, behaviors, academic focus, schedules, and learning environments. According to Haque & David, (2022).such changes require that implementation personnel get rigorous in-service training to guarantee their competence in addressing the new curricular expectations.

According to Karakuş, (2021) curriculum implementation is a dynamic process in which designers and implementers continuously define and redefine the essential characteristics of a new concept throughout the planning and implementation phases. This method of curriculum implementation seeks to foster progress and change by consistently redefining the essential characteristics of an invention such as the curriculum.

Curriculum implementation as a change process alters the thoughts and actions of those who execute the curriculum and those who engage with it, as well as the interactions among school management, instructors, students, and all other participants in the process (Ornstein and Hunkins, 2018). This indicates that a holistic approach to curriculum implementation should engage all stakeholders. This argument says that implementing a curriculum needs changes in many areas, such as the design, materials, roles, and behaviors of the people who are doing the implementing, as well as their knowledge and attitudes (Nevenglosky, 2018; Karakuş, 2021).

Palestina et al., (2020) underscores that curriculum implementation includes educational praxis, instructors' action research, and professional development. Paulo Freire's work is where educational praxis got its start. Freire (1970) believed that through praxis (reflection and action), people can learn to critically understand their surroundings and work with others to make change (Ornstein and Hunkins 2018).

2.6. Approaches of curriculum Implementation

Curriculum implementation, a multifaceted process, embodies the translation of a designed curriculum into practical classroom experiences, thereby bridging the gap between theoretical framework and tangible educational outcomes. This endeavor is not merely a linear execution of prescribed guidelines but rather a dynamic interplay of various factors, including the role of educators, the characteristics of learners, the availability of resources, and the broader institutional context (Aslam et al., 2024). Curriculum implementation can be understood through various paradigms, each offering a distinct perspective on the nature of the process and the roles of the actors involved. These paradigms serve as lenses through which educators, policymakers, and researchers can analyze, interpret, and ultimately improve the effectiveness of curriculum implementation efforts. It is imperative to have implementation strategies that translate research findings into the formulation of policy and practice (Alazmi & Alazmi, 2022). Translation of

empirical research findings and policies in to clear, practical steps help educators understand their role (Alazmi & Alazmi, 2022). Further, research is needed to determine how educators interpret new reforms and translate them into classroom practice. Policy implementation is a critical stage in the policy process that involves putting laws, rules, or policies into use in order to solve a problem (Alazmi & Alazmi, 2022; Okewole & Ajibade, 2024).

Curriculum implementation paradigms, as articulated by Guba and Lincoln, provide a framework for understanding the diverse approaches to enacting educational curricula. These paradigms offer contrasting perspective on the role of stakeholders, the degree of fidelity to the original design, and the overall goals of the implementation process. These parading, including the fidelity approach, the mutual adaptation approach, and the enactment approach, each offer unique insights into the complexities of curriculum implementation, highlighting the importance of considering context, collaboration, and the active role of the instructor in shaping the learning experience. The review identified critical challenges related to instructors, students, the curriculum itself, and institutional factors (Asham et al., 2024). Instructors-related challenges included inadequate professional development and inefficient teaching methods (Aslam et., 2024). Student-related challenges highlighted diverse learning needs and varying levels of engagement. Institutional challenges pointed to resource limitations and insufficient stakeholder support (Aslam et al., 2024). In order for policy implementation to be effective, there are four main issues that should be considered, namely communication (Satibi et al., 2021).

2.6.2. The Fidelity Approach

The fidelity approach to curriculum implementation emphasizes the importance of adhering closely to the original design and intent of the curriculum (Harris et al., 2020).In this paradigm, the curriculum is viewed as a standardized product, and successful implementation is measured by the extent to which instructors replicate the prescribed content, methods, and assessments. This approach assumes that the curriculum developers possess the expertise and knowledge to create an optimal learning experience, and those instructors should faithfully execute the plan to achieve the desired outcomes. Central to the fidelity approach is the belief that strict adherence to the curriculum will ensure consistent and high-quality instruction across different classrooms and

institutions. The idea behind this by following the plan, the outcomes will be consistent and positive. In the end, the curriculum will succeed only if implemented as designed.

However, the fidelity approach has been criticized for its top-down, prescriptive nature, which may stifle instructors' creativity and autonomy (Harris et al., 2020). It assumes that the curriculum is context-free and universally applicable, failing to account for the diverse needs and backgrounds of students and the unique characteristics of different learning environments. Critics argue that strict adherence to a standardized curriculum can lead to a de-professionalization of teaching, reducing instructors to mere technicians who deliver pre-packaged content without critical reflection or adaptation (Hernandez & Bourrows,2021). Furthermore, the fidelity approach may neglect the importance of student engagement and motivation, as it prioritizes adherence to the curriculum over responsiveness to individual learning needs. Instead of focusing on the needs of the learners and adapting the curriculum to fit those needs, the curriculum is the focus. In contrast to the fidelity approach, the mutual adaptation approach recognizes that curriculum implementation is a dynamic and interactive process, involving a reciprocal relationship between the curriculum and the context in which it is implemented. This paradigm emphasizes the importance of adaptation and adjustment, recognizing that the curriculum may need to be modified to fit the specific needs of students, the expertise of instructors, and the available resources. Rather than viewing the curriculum as a fixed entity, the mutual adaptation approach acknowledges that it is subject to ongoing refinement and improvement as it is implemented in practice. Instructors adjust or change a curriculum to meet the diverse learning needs of students (Hill & Erickson, 2019). It reflects how flexibly a instructor adapts the curriculum and makes adjustments that meet students' learning needs (Harris et al., 2020). Instructors who tailor their instructions more precisely, writing lesson plans and designing exploratory activities to expedite students' learning goals, are said to hold student-centered beliefs (Hill & Erickson, 2019).

2.6.3. The mutual Adaptation Approach

The mutual adaptation approach also highlights the importance of collaboration and communication among stakeholders, including curriculum developers, instructors, administrative leaders, and community members. By embracing input from educators, subject matter experts, and members of the community, curriculum developers can create a more comprehensive and inclusive

educational experience (Asas & Charles, 2024). It fosters a sense of shared ownership and responsibility for the success of the curriculum (Harris et al., 2020). This is because it involves the collaboration of educators, administrative leaders, and stakeholders to ensure that the curriculum aligns with the needs of 21st-century learners and the goals of educational institutions (Ayas & Charles, 2024). The curriculum development process should integrate authentic assessment strategies that align with the desired learning outcomes (Ayas & Cahrls, 2024). This approach recognizes that instructors are active agents in the implementation process, bringing their own knowledge, experience, and perspectives to bear on the curriculum. They are not just passively delivering the curriculum, but are actively shaping it to meet the need of their students and the demands of a particular context (Breitenstein et al., 2010).

2.6.4. The Enactment Approach

The enactment approach to curriculum implementation goes even further in emphasizing the role of the instructor as an active agent in shaping the curriculum. This paradigm views the curriculum not as a fixed entity or a set of prescribed materials, but as a framework or set of guiding principles that instructors use to create meaningful learning experiences for their students. Unlike the fidelity approach, the enactment prioritizes the instructor's autonomy, creativity, and professional judgment. This approach is useful in curriculum integration, which is generally part of a more comprehensive set of educational practices involving inquiry-based learning and other types of learning that make use of time flexibility and cooperative teaching across various levels of classes (Rudhumbu, 2018).

Instructors are encouraged to draw upon their own knowledge, experience, and understanding of their students to design and deliver instruction that is relevant, engaging, and effective. Curriculum integration is generally part of a more comprehensive set of educational practices involving inquiry-based learning and other types of learning that make use of time flexibility and cooperative teaching across various levels of classes (Rudhumbu, 2018). The instructors become the curriculum makers, designing and implementing learning experiences that are tailored to the unique needs and interests of their students. Such a perspective corroborates the idea of the integrated curriculum becoming a way of creating better and more meaningful education (Rudhumbu, 2018). This approach recognizes that teaching is a complex and context-

dependent activity, requiring instructors to make ongoing decisions and adjustments based on their interaction with students and their observation of student learning

In conclusion, these curriculum implementation paradigms provide different lenses through which to view the process of translating curriculum plans into classroom practice. Each approach offers valuable insights into the complexities of curriculum implementation, highlighting the importance of considering the roles of instructor, students, and the broader context in shaping the educational experience. The integrated programs have many advantages over traditional fragmented programs in education. Integrated programs allow the learners to pursue holistic learning without the restrictions imposed by subject and/or level of learning boundaries.

2.7. Models of Curriculum Implementation

Implementing curricular changes in an organization requires a thorough and varied strategy. Ornstein and Hunkins (2009) assert that several tactics may be used to implement reforms in educational institutions. These strategies assist change agents in overcoming certain challenges and facilitating the transformation process. Freeman (2010) defines a model as a depiction of certain instances and how they are related. The selection of models for curriculum implementation is often influenced by overarching educational frameworks and foundational philosophical viewpoints. Multiple methods have been suggested to facilitate successful curriculum implementation, including the Overcoming Resistance to Change (ORC) model, the Organizational Development (OD) model, the Linkage Model (LM), and the Leadership-Obstacle Course (LOC) model (Loveline, 2020).

2.7.1. The Overcoming Resistance to Change (ORC) Framework

The ORC model underscores that the effectiveness of planned curricular improvements depends on the ability of school leaders to address staff opposition, particularly during the first phases of implementation (Gross, 1979). Argyle (1967) noted that resistance often stems from entrenched behavioral patterns, as people apprehend the adverse effects of changes on their personal or professional circumstances. Employees may express anxiety around heightened workloads or less compensation, while managers may be anxious about a loss of power or exclusion from decision-making processes. Hall and Loucks (1978) propose that the power dynamics between management and staff, specifically school administrative leaders and

instructors, should be equilibrated to promote a more inclusive and collaborative approach to change.

Ornstein and Hunkins (2009) believe that engaging workers in the preliminary planning and decision-making stages may markedly minimize resistance. When stakeholders participate in the development of new initiatives, they are more inclined to see the change as self-directed, therefore developing a feeling of ownership and commitment. Hall and Loucks (1978) delineate four phases of staff concerns during the change process:

By addressing concerns at every level, educators may reduce resistance and facilitate a smooth curriculum adoption process. Involving educators in candid dialogues on their apprehensions enhances their confidence and proficiency in implementing the new curriculum, hence enhancing the overall efficacy of the change process.

2.7.2. The Leadership-Obstacle Course (LOC) Model

The LOC model, developed by Neal Gross in 1971, expands on the ORC framework and emphasizes the systematic detection and handling of staff opposition throughout curriculum implementation (Nsengimana, 2021). The LOC model identifies resistance as a significant barrier and underscores the need for data collection to evaluate the kind and extent of resistance, enabling leaders to effectively manage and confront impediments (GOOD, 2015)

The LOC model delineates five critical prerequisites for effective curriculum implementation: ***Comprehending the Innovation:*** Participants should possess an extensive understanding of the innovation's objectives, methods, and anticipated results that align with the implemented improvements (Fullan, 2007).

Providing Essential Skills: Educators and administrative leaders should undergo professional development and training to refine their skills and prepare for the new curriculum (Darling-Hammond et al., 2017).

Facilitating Resources: Availability of requisite resources, tools, and equipment is crucial to underpin the curriculum modification (Harris & Muijs, 2005).

Aligning Structures and Culture: Educational institutions should assess and, if necessary, modify their policies, frameworks, and cultural elements to promote the integration of the innovation (Pak et al. 2020).

Encouraging Participants: Motivational methods, such as acknowledgment, establishing a supportive atmosphere, and articulating the advantages of change, are essential for promoting the implementation of the new curriculum (Ryan & Deci, 2000). By addressing these five factors, the LOC model seeks to establish a situation that fosters change, reduces resistance, and promotes effective curriculum implementation.

2.7.3. The Linkage Model

Formulated by Ronald G. Havelock in 1973, the Linkage Model underscores the need to align educational advancements with the distinct challenges encountered by educators. Meaningful change arises when educators recognize their own challenges and pursue solutions that meet their demands. The concept presents two interrelated systems: the user system (educators encountering issues) and the resource system (the support structures providing answers).

The interplay among these systems is a cyclical process of diagnosing problems, seeking solutions, formulating and distributing them, and assessing their efficacy. This ongoing feedback mechanism guarantees that the solutions remain relevant and efficient in tackling the difficulties recognized by the user system. Ornstein and Hunkins (2009) assert that the efficacy of the Linkage Model is contingent upon elements like the school's features, student attributes, the innovation being executed, and the resources and time at hand. These elements should be evaluated to customize the model for the particular educational situation, hence enhancing the probability of effective adoption.

2.7.4. The Organizational Development Model

The Organizational Development (OD) paradigm, introduced by Schmuck and Miles (1977), conceptualizes institutions as dynamic systems comprised of interconnected elements collaborating to achieve shared objectives. This comprehensive viewpoint emphasizes the need to comprehend how many roles and interactions within educational institutions aid in fostering transformation.

Educators are urged to evaluate institutions using two fundamental perspectives:

Bureaucratic Structure: Educational institutions are seen as formal organizations with established roles and hierarchies designed to accomplish specified objectives.

Loosely Coupled System: Educational institutions function as flexible networks of departments, classrooms, and people, whereby connections are malleable and crucial for establishing the school's identity.

To achieve effective curriculum reform, educators should cultivate an atmosphere that promotes cooperation, transparent communication, and collective accountability among all stakeholders. The OD model differentiates between two forms of learning:

Single-Loop Learning: Entails identifying and rectifying mistakes without questioning fundamental principles or assumptions.

Double-Loop Learning: An advanced process in which reasoning and reflection may result in the alteration of the system's fundamental values.

Embracing the OD paradigm fosters a culture of perpetual improvement and cooperative involvement in the curriculum execution process. Recent research, like that of Asumeng and Osae-Larbi (2015), underscores the importance of the OD model in cultivating learning organizations that adopt systemic change, hence affirming its pertinence in contemporary educational contexts.

2.7.5. The Rand Change Agent Framework

The Rand Change Agent Model, established by the Rand Corporation in the 1970s, emphasizes addressing organizational barriers to curricular change, especially post-adoption of a program. The model delineates critical characteristics that facilitate or obstruct change across several levels of curricular activities, emphasizing the implementation phase (Fullan, 2007). The Rand model delineates three phases in the curriculum modification process:

The Initiation Stage: During this step, curriculum developers get endorsement for the proposed modification. This entails cultivating a collective vision among stakeholders and assuring the congruence of the change with the institution's objectives. Effective communication and the engagement of all stakeholders are essential for fostering a responsive environment (Fullan, 2007).

The Implementation Phase: Following the acquisition of support, the new curriculum or program is assimilated into the school's framework. Success is contingent upon aspects like the nature of the change, the competencies of the personnel, and the alignment of the program with the current school infrastructure (Berman & McLaughlin, 1977).

The Incorporation Stage: In the concluding phase, the modification is completely assimilated into the standard operations of the institution. It is essential to secure the requisite human and financial resources for the program's sustainability. This phase underscores the need for ongoing assistance and congruence with the school's overarching objectives (Hall & Hord, 1987). The Rand Change Agent Model emphasizes the significance of leadership, community engagement, and resource distribution in achieving the effectiveness and durability of curricular modifications. By adhering to these steps, institutions may effectively manage the intricacies of change and augment their potential for sustained educational advancement.

2.8. Effective Curriculum Implementation in Military Higher Education

The effective implementation of curriculum at military higher education institutions requires meticulous planning, coordination, and collaboration among all stakeholders. An essential component of this approach is acknowledging the need for educational reform. Loveline (2020) asserts that when the need for change is clearly recognized and expressed by all stakeholders, it markedly enhances the probability of attaining beneficial results. This understanding should be disseminated among all pertinent stakeholders, from administrative leaders to educators, to guarantee cohesive involvement and support throughout the process.

An initial crucial stage in implementing an effective curriculum is its alignment with educational goals and the distinctive military standards that regulate training and professional development (Gouëdard et al., 2020). The curriculum should cater to the diverse needs of military students while achieving the primary goals of military education, equipping them to satisfy the particular needs of the military profession (Tesema & Enguday, 2024). Furthermore, it should be structured to fulfill both academic and operational requirements while also providing students with the competencies and insights necessary to address real-world military challenges.

Moreover, in a military educational context, the readiness of instructors is essential for the curriculum's success. Educators with a profound understanding of the curriculum's goals are more adept at developing immersive, engaging, and effective learning environments for military students (Karakuş, 2021). Juhary (2015) asserts that continuous professional growth and thorough pre-implementation training are essential. Not only should instructors prepare themselves in educational methodologies, but they should also understand the unique needs of military students. Ongoing support and professional development should be offered throughout the implementation phases to enable educators to adjust to the evolving demands of military education (Mulenga & Mooya, 2020).

Also, in military higher education, it's important that resources like textbooks, computers, and simulation tools are easy to get to and used effectively so that the curriculum can run smoothly. Challenges such as inadequate funds, inadequate facilities, and a lack of specialized teaching resources may pose substantial challenges to providing effective education (Chapman, 2019; Haque & David, 2022). To address these problems, institutions need to stress the fair allocation of resources and investigate external financing alternatives to ensure that all military students have access to the necessary instruments for success (Fasinro, 2024).

In addition, effective leadership is vital for the successful implementation of curriculum in military higher education institutions. Leaders should offer explicit guidance, oversee the curriculum implementation process, and tackle any issues that may emerge (Loveline, 2020). As Tesema and Enguday (2024) say, including a wide range of stakeholders, such as military personnel, community members, and local groups, creates a collaborative environment that makes the curriculum more relevant and ensures it meets both institutional and social needs.

Furthermore, curriculum implementation is a dynamic and continuous process necessitating continual evaluation and feedback. Setting up regular evaluation systems makes it easier to find places to improve and lets changes be made quickly to meet the changing needs of military students (Pak et al., 2020). Feedback chains allow institutions to modify instructional techniques, resources, and the curriculum to maintain relevance and effectiveness. A culturally responsive curriculum is vital for enhancing engagement and improving learning results, considering the different backgrounds of military students. Challenges may emerge from discrepancies between the

intended curriculum and its actual implementation, as educators may interpret materials differently (Haque & David, 2022). Ongoing support for educators is essential to address these inconsistencies and coordinate classroom practices with curriculum objectives (Chapman, 2019).

The institution's culture significantly influences the effectiveness of curriculum implementation. A military institution dedicated to explicit curricular goals and a culture that promotes cooperation, discipline, and ongoing improvement is more likely to succeed in the successful implementation of the curriculum. Curriculum reform at military institutions should consider military principles, social systems, and the distinct requirements of the armed services. It's not enough to just change the content of the curriculum; instructors' methods also need to be changed to fit better with military culture and the overall goals of military education (Leslie, 1976).

The efficient use of classroom time is a crucial element in guaranteeing the success of curriculum implementation. Sufficient time should be designated for instructors to participate in collaborative activities, attend seminars, and exchange experiences with colleagues; this enhances comprehension and implementation of the curriculum (Mulenga & Lubasi, 2019). Moreover, military educators should use classroom time effectively to achieve the desired learning objectives and evaluate the curriculum's efficacy in real time (Mulenga & Kabombwe, 2019). In the military setting, the curriculum should include practical and experiential training that replicates actual military actions.

Ultimately, it is crucial to acknowledge that curriculum implementation in military higher education is not a singular occurrence but an ongoing, adaptive process. As teaching methods change in the military, instructors, resources, knowledge, behaviors, and beliefs should all interact in a way that fits with the goals of the curriculum and the institution's purpose (Moses, Nghipandulwa, and Abed, 2024) Military higher education institutions can make sure that the curriculum stays effective, helps students do well, and fits with the strategic needs of both the military and society by constantly evaluating, reflecting, and changing it. Successful implementation of a curriculum at military higher education institutions depends on robust leadership, ongoing professional development for instructors, efficient resource allocation, engagement of stakeholders, and constant assessment. Institutions may create an environment that

prepares students to meet the needs of military service and societal expectations by focusing on these areas and making sure the curriculum meets both educational and military standards.

2.9. Changes in curriculum Implementation in Military Higher Education

Curriculum implementation in higher education institutions faces challenges such as resistance to change, time constraints, inadequate professional development training, resource limitations, lack of military pedagogy, cultural and institutional barriers,

i. Resistance to change Resistance to change

Resistance to change in curriculum implementation occurs when individuals or groups hesitate, oppose, or struggle to accept modification in educational programs. This reluctance is often rooted in psychological, emotional, and practical concerns that shape stakeholders' perceptions and responses to change (Cumming et al., 2016). Although curriculum reforms are typically introduced to enhance educational outcomes, resistance can hinder their successful adoption.

A key factor driving opposition is the belief that the existing curriculum is already effective, leading stakeholders to question the need for modification. Many faculty members, administrative leaders, and students view change as unnecessary or disruptive, especially if the institution has a history of academic success (Karakus, 2021). Additionally, uncertainty about the impact of new curricula can lead to skepticism, as stakeholders may fear negative consequences for their roles or the institution's overall performance (Ibeh, 2022). Poor communication and lack of involvement in the decision-making process further exacerbate resistance. When stakeholders feel excluded from discussions about curriculum changes, they are less likely to support and engage with new initiatives (Yilmaz & Kılıçoğlu, 2013).

Concerns about increased workload and decreased efficiency also contribute to opposition. Curriculum revisions often require faculty to adopt new teaching strategies, redesign course materials, and modify assessment methods, all of which demand additional effort. For those already managing heavy responsibilities, these added tasks can feel overwhelming. Similarly, doubts about the effectiveness of new curricula may lead to fears of diminished credibility or declining educational outcomes (Yilmaz & Kılıçoğlu, 2013). A general preference for stability

further reinforces resistance. Many individuals find comfort in familiar routines and are reluctant to change, especially in institutions where existing method have yielded positive results (Karakus, 2021)

Different stakeholder groups within an institution may resist curriculum changes for various reasons. Administrative staff may oppose reforms if they believe the changes will create additional management challenges or threaten institutional stability. Instructors, who play a central role in curriculum implementation, may resist if they feel the new approach undermines their teaching autonomy or if they lack the necessary training and support to implement it effectively (Ibeh, 2022). Students, though often overlooked in curriculum discussions, may also resist changes if they perceive them as increasing workload, creating confusion, or misaligning with their academic and professional goals (karakus, 2021)

In military higher education, resistance to curriculum changes is particularly strong due to deeply embedded tradition and rigid institutional structures (Ibeh, 2022). Military training prioritizes discipline, consistency, and adherence to established methodologies, making faculty and students wary of new instructional approaches. Many perceive curriculum change as unnecessary disruption to proven systems. Additionally, uncertainty about how new teaching styles, content, or assessment methods will impact learning effectiveness further heightens resistance. Tesema and Enguday (2024) stated that fear of the unknown plays a significant role in opposition, as both instructors and learners may be apprehensive about adapting to unfamiliar academic frameworks.

i. Inadequate Professional Development Training

The effective implementation of curriculum in military higher education is significantly dependent on the proficiency and readiness of instructors (Ibeh, 2022). Instructors should have proficiency in both the revised material and the pedagogical methods required for efficient delivery (Rudhumbu, 2018). Nonetheless, insufficient training often presents a significant barrier to this process, as some faculty members may lack proper professional development to facilitate their adaptation to new curriculum (Karakuş, 2021). Inadequate training may hinder instructors' ability to adapt to novel teaching approaches, incorporate developing technology, or accurately evaluate student performance in accordance with updated learning goals. The absence of readiness may

result in discrepancies in course delivery, less student engagement, and ultimately, worse learning results (Fasinro, 2024).

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Tesema and Enguday (2024) assert that inadequate professional development may impede educators' capacity to effectively apply innovative teaching methodologies in military education. According to Darling-Hammond et al. (2017), successful curriculum reform requires not just the implementation of updated material but also extensive training programs that provide faculty members the abilities and self-assurance they need to lead relevant learning experiences. Targeted professional development is crucial for closing the gap between military instructors' strong subject-matter competence and their potential lack of formal pedagogical training (Hadisaputra et al., 2024). In order to deal with these problems, military institutions need to keep training their instructors on new ways to teach, how to test students, and how to make sure that their lessons are in line with changing military and academic standards. By focusing on professional development, institutions can improve instructors' effectiveness, help students learn more, and make sure that efforts to implement the curriculum continue to be successful (Syme-Taylor & Jalili, 2018).

ii. Resource Constraints

Military higher education institutions need substantial funding for implementing curriculum improvements, especially updated teaching materials, cutting-edge technology, improved facilities, and enough staff support (Darling-Hammond et al., 2017). Nevertheless, inadequate funding often hinders the acquisition of essential resources, complicating the effective

implementation of curricular improvements (Hadisaputra et al., 2024). Many military institutions operate under severe financial constraints that favor operational and defense spending over academic innovation (Chuene & Teane, 2024). Consequently, outdated educational materials, limited exposure to digital technologies, and inadequate classroom or training facilities are faced, adversely affecting the quality of education and training. The expenses associated with professional development, the creation of new evaluation frameworks, and the integration of new technology into pedagogical practices further strain already limited financial resources (Rudhumbu, 2018). Insufficient investment may hinder curricular revisions from achieving their intended objectives, undermining the efficacy of military education.

Fasinro (2024) asserts that resource allocation is crucial for the effectiveness of curriculum implementation. Insufficient finance may impede the establishment of complete training programs, restrict access to innovative educational technology, and curtail professional development chances for educators (Fasinro, 2024). Also, differences in how resources are shared between military institutions can cause curriculum effectiveness to vary, since some institutions may be better prepared to make changes than others (Karakuş, 2021). Leaders in higher education and policymakers should advocate for increased funding for educational resources, ensuring that educators and students possess the necessary tools to implement contemporary lessons (Tesema & Enguday, 2024) to address these challenges. By emphasizing sufficient funding and strategic resource allocation, military higher education institutions can improve instructional quality and more effectively provide staff for the evolving demands of their professional responsibilities.

iii. lack of Instructors'' Military Pedagogical Knowledge And Skills

Military pedagogy is a specialized field within pedagogical science that focuses on the educational and training of military personal and units, aiming to prepare them for effectively carrying out military mission (Mirzakhmadovna, 2023). It refers to the methods of teaching and learning processes used in a military setting, including the educational environment and the specific practices designed for military goals (Juhary, 2015). It is very different from regular pedagogy because it is specifically designed to meet the needs of military personnel. It changes the way institutions train military personnel (Bumbuc, 2020). Military pedagogy promotes the development of educational settings that equip students for the unique demands of military service, necessitating particular approaches.

Juhary (2015) suggests that military pedagogy, frequently defined as the combination of teaching and learning in a military context, encompasses more than these two fundamental elements. Military pedagogy is a complex and structured educational framework that takes into account the many elements that make up military education systems. Mirzakhmadovna (2023) asserts that an in-depth understanding of military pedagogy requires a detailed examination of the fundamental frameworks and ideologies that form the basis of military education.

A significant challenge to effective military education is a lack of educators' pedagogical knowledge and skills, especially regarding curriculum implementation. Military education combines rigorous academics with hands-on, mission-focused training. This means that instructors need to be experts in both their subjects and how to apply theoretical knowledge to mission-focused learning situations in the real world. The dual function of instructor and operational commander necessitates that instructors be prepared to direct military troops in critical situations when judgments have instant real-world repercussions (Bumbuc, 2020).

A lack of knowledge and skills in military pedagogy may severely affect the quality of training and education. According to Hadisaputra et al., (2024) instructors without adequate pedagogical training may find it challenging to provide effective education, leading to deficiencies in the cultivation of critical abilities such as leadership, decision-making, and adaptation in the field. Moreover, in the absence of instructors who understand the need to merge experiential learning with academic instruction, military personnel may find it challenging to connect theoretical concepts with actual implementation. This may result in decreased combat preparedness, weakened leadership skills, and a failure to fulfill the institutional learning goals of military education (Juhary 2015)

iv. Time Constraints

Time constraints considerably hamper curriculum implementation in military higher education (Aslam et al., 2024). Military personnel often balance operational responsibilities, training obligations, and deployments, therefore limiting the time allocated for academic endeavors (Cooper, 2017). In contrast to conventional students, military learners should reconcile their education with erratic schedules, complicating regular participation in class. Moreover, the rigors of military training and service commitments may induce weariness, thereby diminishing

the ability for effective learning and memory (Tesema & Enguday, 2024). Institutions should implement flexible learning models, including asynchronous online courses and modular curriculum, enabling students to advance at their own speed while maintaining their professional obligations (Cooper, 2017). Failure to address these temporal constraints could impede military students' capacity to finish their studies, hence adversely affecting their academic progress and professional growth (Obilo & Sangoleye, 2015).

2.10. Strategies for Effective Curriculum Implementation in Military Higher Education

Implementing an effective curriculum in military higher education requires a strategic approach that considers the unique demands of military training and education. Below are several detailed strategies to enhance curriculum implementation.

i. Stakeholder Engagement (Inclusive Decision-Making)

The implementation of curriculum in military higher education institutions faces the challenge of reconciling academic rigor with practical relevance to address the growing needs of military service (Chan, 2021; Korneć, 2020). In this context, integrating inclusive decision-making into the curriculum development process is one of the most effective strategies for enhancing curriculum implementation. This approach engages a variety of stakeholders, including instructors, administrative leaders, military personnel, and operational leaders, in the creation, development, and implementation of courses. By integrating diverse viewpoints in decision-making, a sense of ownership and commitment is developed among all stakeholders, hence enhancing the efficacy of curriculum implementation (Chepkemoi, 2019; Tesema & Enguday, 2024).

Furthermore, in military higher education, the curriculum serves dual objectives: it should be academically demanding and simultaneously equip students for the practical challenges they will encounter. Achieving this equilibrium necessitates careful cooperation between educators and military specialists (Erjavec, 2021; Tesema & Enguday, 2024). Notably, engaging military officers and commanders in the curriculum development process ensures the integration of academic knowledge with practical, mission-oriented competencies. Demirkesen and Reinhardt (2021) suggest that this partnership integrates genuine military experiences with academic viewpoints, guaranteeing that curriculum remains relevant and flexible to changing military operations. As a

result, this strategy allows military programs to remain flexible to the changing requirements of global security problems and operational demands.

In addition, the significance of inclusive decision-making in curriculum creation is its capacity to build contextually relevant curricula that address the distinct requirements of military personnel. Mahajan et al. (2023) assert that the participation of military educators and operational commanders in the curriculum design process yields programs that are both academically rigorous and practically relevant to real-world military contexts. By integrating the experience of military experts, curricula are developed to meet essential training requirements, including battlefield decision-making and leadership development (Langrafe et al., 2020; Tesema & Enguday, 2024). This collaborative approach ensures that the educational experience provides students with the skills necessary to thrive in high-pressure, mission-critical contexts.

Moreover, Pak et al. (2020) emphasize the need to include all stakeholders in the decision-making process to guarantee the successful translation of educational standards into actual teaching resources and approaches. In military education, it is particularly essential to fulfill both academic standards and operational needs. Inclusive decision-making guarantees that instruction emphasizes standards-based information, crucial for equipping students for leadership positions and decision-making in military operations. Tesema and Enguday (2024) asserts that engaging a varied array of stakeholders in the curriculum-building process connects pedagogical practices with explicit educational standards, ensuring that both educators and learners concentrate on attaining quantifiable learning objectives. Therefore, this alignment improves the overall quality of the military curriculum, guaranteeing its efficacy in addressing the profession's requirements.

Furthermore, inclusive decision-making guarantees that military curriculum remains consistent with evolving operational realities. By consistently incorporating input from diverse stakeholders, programs may be periodically modified to remain relevant and effective. Freeman (1984) asserts that engaging a variety of stakeholders, including instructors, administrative leaders, and military officers, results in educational programs that are both academically rigorous and pertinent to military duty. Thus, this collaborative method cultivates a culture of ongoing improvement, whereby input is routinely integrated into curriculum development, assisting military institutions in adjusting to the changing requirements of military education and duty.

Finally, this technique establishes a dynamic feedback loop that guarantees the curriculum is adaptable and sensitive to the demands of students and the wider military environment. Tesema & Enguday (2024) assert that participatory decision-making cultivates a climate of continuous adaptation, crucial for addressing obstacles in curricular implementation. Asiyai (2014) asserts that inclusive decision-making enables military institutions to be responsive to the operational requirements of military service and the changing needs of their students.

In general, inclusive decision-making in military higher education is essential for effective curriculum implementation. Engaging various stakeholders, faculty, military personnel, administrative leaders, and commanders ensures that curricula are both intellectually robust and practically relevant. Such a strategy promotes commitment and accountability, ensuring that curricula remain flexible and responsive to the changing needs of the military. Ultimately, it facilitates the alignment of pedagogical practices with explicit requirements, increasing the quality and effectiveness of military education.

ii. Professional Development and Training

A major challenge to curriculum implementation in military higher education institutions is the preparedness of instructors and staff to embrace innovative pedagogical approaches. To address this issue, it is crucial to provide professional development programs that equip instructors with contemporary pedagogical approaches and facilitate the effective implementation of new curricular material. Programs emphasizing military-specific pedagogical abilities, including instruction under duress, adaptation, and leadership training, is essential (Tesema & Enguday, 2024). In addition, promoting faculty cooperation and providing opportunities for interdisciplinary learning contribute to developing a culture of ongoing improvement.

Furthermore, the effective implementation of curriculum in military education relies on the instructional knowledge of instructors. Numerous military instructors face a significant challenge due to their lack of knowledge in pedagogical approaches. This creates a disparity between theoretical knowledge and practical application in actual situations (Juhary, 2015; Bumbuc, 2020). To resolve this issue, military education institutions should establish a Comprehensive Military Pedagogy Training Program (CMPTP). This curriculum will assist educators in enhancing their

pedagogical abilities and aligning their instructional techniques with military learning objectives (Mirzakhmadovna, 2023).

In line with this, Mirzakhmadovna (2023) states that the Comprehensive Military Pedagogy Training Program is a systematic educational framework aimed at improving the pedagogical skills of military instructors. It aims to integrate conventional education with military training by equipping instructors with the skills and methodologies necessary for successfully teaching military courses.

Additionally, the initiative's fundamental element is the Specialized Military Pedagogy Certification, which offers systematic training in instructional design, experiential learning, and leadership development (Mirzakhmadovna, 2023). This certification program should include stringent evaluations to test instructors' proficiency in implementing military pedagogical concepts in real training environments. Moreover, Instructor Exchange and Mentorship Programs are essential for the dissemination of information. Experienced military educators are permitted to mentor novice instructors and facilitate their understanding of best practices used in other nations via faculty exchanges.

Moreover, the use of experiential learning and simulations is a vital aspect of curriculum improvement. War games, case studies, and Live, Virtual, and Constructive (LVC) simulations are all effective ways to engage students in learning and improve their decision-making in real-life situations (Palestina, 2021; Turugare & Rudhumbu, 2020). In addition, cultivating collaborative alliances with civilian and military organizations may greatly improve educational frameworks. Collaboration with civilian educational institutions enables military instructors to acquire modern instructional methods. Collaborative initiatives for faculty development integrate robust academic instruction with practical military skills.

iii. Resource Allocation and Infrastructure Support

The effective implementation of curriculum at military higher education institutions relies on the strategic allocation of resources. These resources include financial assets, educational materials, technological tools, and personnel (Onyango & Rupia, 2022; Otaki et al., 2022). The equitable allocation of these resources is crucial for providing high-quality education, including

modern pedagogical methods, and matching training programs with the changing requirements of the military (Chuene & Teane, 2024). However, many military education institutions contend with constrained resources, which may undermine teaching quality, limit access to vital learning tools, and hinder instructors from providing courses that are both academically challenging and practically relevant (Fasinro, 2024).

Financial investment is a crucial element in the effective execution of the curriculum. Adequate funding enables military institutions and universities to enhance faculty competencies, adopt innovative instructional technologies, and develop conducive learning environments that integrate theoretical and practical military training (Ereh et al., 2019). Fasinro (2024) notes that institutions with substantial financial resources may provide contemporary instructional materials, practical training tools, and ongoing professional development for their instructors (Onyango & Rupia, 2022). These expenditures guarantee that the curriculum stays relevant, responding to the demands of evolving military operations and adapting to transformations in the global security environment. Conversely, institutions with limited funds often find it challenging to maintain educational standards and incorporate new developments in military science and strategy, thereby diminishing the effectiveness of military education (Allocation et al., 2018).

In addition to financial resources, technological advancements have become integral to modern military education, particularly through the incorporation of simulation-based learning and experiential training methods (Kigwilu & Akala, 2017). Methods such as live, virtual, and constructive simulations, as well as war gaming and virtual reality training, are progressively used to improve decision-making, situational awareness, and combat preparedness among military personnel (Pak et al., 2020). However, the effective utilization of these technologies necessitates substantial financial investment and meticulous planning to ensure their availability and alignment with current military requirements. Insufficient technological resources may render courses impractical, thereby undermining the readiness of military personnel for real-world operational situations.

Moreover, human capital is an essential element in the successful implementation of curriculum. The acquisition and retention of experienced educators, subject-matter experts, and instructional designers are essential for providing specialized military curriculum. Chuene and

Teane (2024) argue that programs for faculty recruitment, training, and professional development are necessary to equip military educators with the pedagogical skills needed to bridge the gap between theoretical knowledge and practical military training. Matter et al. (2009) emphasize that managing faculty workloads is crucial to prevent instructors stress. This enables educators to dedicate sufficient time to lesson planning, effective teaching, and research in military education (Tesema & Enguday, 2024). Ensuring an optimal faculty-to-student ratio and offering continuous support for educators significantly improves the quality of curriculum delivery.

Furthermore, infrastructure and logistical support are crucial for enabling curriculum implementation at military institution (Taylor et al., 2019). Well-equipped classroom, advanced training centers, digital libraries, and research facilities are essential for providing students with the resources needed for effective learning (Demirkesen & Reinhardt,2021). Tesema and Enguday (2024) underscore the difficulties arising from resource scarcity, especially in rural or conflict-affected areas, which may profoundly undermine the efficacy of military instruction. Ereh et al. (2019) assert that inadequate physical and digital infrastructure hinders access to educational resources, resulting in poor learning outcomes and reduced effectiveness of military training programs.

iv. Enhancing Military Instructors' Motivation

Motivation in school hinges on how satisfied or dissatisfied instructors are with their jobs (Narinder, 2023). In particular, motivating instructors is a critical factor for the successful implementation of curricula in military higher education institutions. Kagema (2018) emphasizes that instructors' motivation directly influences instructional effectiveness, student engagement, and flexibility to curriculum changes. Similarly, Karakuş (2021) underscores that strengthening intrinsic motivation, by enhancing professional knowledge, skills, interests, and conviction in educational duties, is crucial for curricular achievement. As a result, motivated educators are more likely to provide effective instruction and meet student needs, resulting in enhanced student achievement (Narinder, 2023). Conversely, excessive workloads, rigid institutional framework, and overwhelming tasks can reduce motivation, making it harder to implement the curriculum effectively, (Makewa & Ngussa, 2015).

To address these challenges, military institutions can adopt strategies that enhance instructor's motivation and involvement. David (2023) contends that motivated educators exert more effort in teaching, use new instructional strategies, and consistently pursue professional development. This is particularly important in military education, where operational preparedness and systematic training are essential. Thus, dedicated instructors are vital for ensuring curriculum relevance and conformity with changing defense requirements. Furthermore, these instructors are more inclined to adopt curricular modifications and enhance student achievement (Pratson et al., 2021; Yıldız et al., 2021).

There are several ways to enhance motivation for instructors in military organizations. Offering professional development, leadership training, and career progression opportunities are essential for improving job satisfaction and commitment (Makewa & Ngussa, 2015). Additionally, recognizing educators through awards, promotions, and incentives enhances motivation and fosters ongoing commitment to curricular achievement (Narinder, 2023). At the same time, alleviating administrative constraints and ensuring equitable workloads are crucial to preventing instructors' burnout and disengagement (Mikalayeva, 2016).

In addition to these strategies, giving instructors more freedom and letting them help create the curriculum gives them a sense of ownership and responsibility, which in turn makes them much more motivated (Tranquillo & Stecker, 2016). Creating a positive school environment that encourages teamwork, mentoring, and ongoing feedback can also make instructors more interested in their jobs and boost the overall effectiveness of the curriculum (Pratson et al., 2021).

2.11. Stakeholder Engagement in Higher Education Institutions

Engagement with stakeholders is essential for higher education institutions, impacting academic policies, curriculum development, and institutional effectiveness. In military higher education institutions (MHEIs), stakeholder engagement is essential for synchronizing courses with national security objectives and operational readiness. This part discusses what stakeholder engagement is, why it's important, the different levels of it (from informing and advising to cooperating and giving power), and how it affects the performance of institutions. It also examines strategic approaches such as proactive communication, inclusive decision-making, professional

development, and the establishment of an inclusive educational environment. All of them contribute to the flexibility and adaptability of the school system.

2.11.1. Concept of Stakeholders

A stakeholder is defined as any individual, group, or organization that has a vested interest in or is affected by a project, decision, or institution (Belita et al., 2020). This broad definition encompasses a diverse array of entities, including employees, customers, suppliers, members, investor, and regulatory bodies. According to Freeman (1984), stakeholders are characterized as "any group or individual who can affect or is affected by the achievement of an organization's objectives. "This definition underscores the reciprocal nature of the relationship between organization and their stakeholders, highlighting how both parties can influence each other's success (Langrafe et al., 2020; Tesema & Rnguday, 2024).

The concept of stakeholders is fundamental to understanding organizational dynamics, as it recognizes that various group can have differing interests and levels of impact on an organization (Chepkemoi, 2019). For example, employees may seek job security and career advancement, while customers may prioritize product quality and service. Similarly, suppliers are concerned with maintaining profitable contracts, and community members may focus on the organization's social responsibility and environmental impact. By acknowledging the diverse interests and influences of stakeholders, organizations can better navigate their strategic decisions and enhance their overall effectiveness. This involvement encourages people to work together and help each other, which help organizations reach their goals while also taking into account the larger social context in which they operate (Mahajan et al., 2023).

2.11.2. Stakeholder Engagement

Stakeholder engagement is a deliberate process aimed at incorporating individuals, groups, or organizations with a vested interest in a project's outcomes throughout its planning and execution phases (Ferrero-Ferrero et al., 2018). This comprehensive strategy encompasses various actions designed to enhance communication, cooperation, and mutual understanding between the organization and its stakeholders (Mahajan et al., 2023). Such activities may include consultations, collaborations, public forums, and joint projects, all intended to build trust and integrate diverse perspectives into the organization's strategic framework. Demirkesen and Reinhardt (2021)

emphasize the importance of establishing strong connections with stakeholders for project success. They say that organizations can find potential problems and opportunities by involving stakeholders; this improves the quality of decisions by including the views of those who will be affected by the results (Berhe & Embiza, 2015). Furthermore, Demirkesen and Reinhardt (2021:4) and Chepkemoi (2019:2) highlight that effective stakeholder engagement requires direct collaboration with stakeholders throughout the decision-making process. This engagement ensures that their concerns, goals, and needs are recognized and integrated into organizational plans. By prioritizing such interaction, organizations can foster a more inclusive environment, leading to informed decisions that reflect the interests of all stakeholders. This approach not only enhances the organization's legitimacy and accountability but also promotes more sustainable and effective outcomes.

2.11.3. The Importance of Stakeholder Engagement in Military Higher Education Institutions (MHEIs)

Stakeholder engagement plays a critical role in military higher education institutions (MHEIs) by ensuring that educational programs are aligned with military objectives and adequately equip personnel for the challenges they will face in service (Belita et at., 2020) this collaborative process includes a diverse group of stakeholders, such as faculty members, students, military leadership and external partners, all working together to enhance the educational experience and ensure it meet operational demands (Tesema & Enguday, 2024) one key function of stakeholder engagement is the alignment of the curriculum with military needs, by integrating input from military leaders and industry experts, MHEIs can create a curriculum that is not only relevant but also equips students with the necessary skills and knowledge to perform effectively in their roles (Mahajan et al., 2023)

Stakeholder feedback is also valuable in continuously improving the quality of education offered by incorporating feedback from students and military leaders, MHEIs can foster a dynamic and responsive learning environment that adapts to evolving military need (Johnson et. 2021).Moreover, collaboration with external organizations, as noted by Demirkeses & Reinhardt (2021). Further enriches stakeholder engagement. External partnerships can provide students with

beneficial resources such as internships and exposure to cutting-edge technologies, enhancing the overall educational experience

Fostering trust and transparency within this engagement process is essential. Open communication channels create a sense of ownership among stakeholders, promoting their commitment to the institution's goals (Ferrero-Ferrero et al., 2018). Additionally, actively engaging underrepresented groups ensures diversity and inclusion, enriching the educational environment and preparing student for diverse military contexts. According to Mahajan et al., (2023), accountability is a key element in stakeholder engagement. By involving stakeholders in the educational process, MHEIs are held accountable for their commitments, ensuring that the institution remains responsive to the needs of military readiness (Langrafe et al., 2020; Tesema & Enguday, 2024).

2.11.4. Levels of stakeholder Engagement levels

. Effective implementation of a curriculum necessitates a well-organized strategy for engaging stakeholders at multiple levels (Ferrero-Ferrero et al., 2018). The first level, informing, involves keeping stakeholders updated on curriculum developments to promote transparency and trust. By providing regular updates and relevant information, stakeholders are better equipped to understand the changes and their implications. The second level, consulting, focuses on actively soliciting feedback from stakeholders. This engagement ensures that the curriculum remains relevant and meets the diverse needs of the community it serves. By incorporating stakeholder input, the curriculum can reflect a broader range of perspectives and priorities (Belandres, 2023; Ferrero-Ferrero et al., 2018) Next, the involving stage emphasize the importance of including stakeholders directly in the curriculum development process.

This participation fosters a sense of ownership and commitment among stakeholders, as they feel their contributions are valued and integral to the success of the curriculum. According to Ferrero-Ferrero et al. (2018), collaboration represents the fourth level, where partnerships with stakeholders can lead to innovative solutions and shared resource. By working together, educator and stakeholders can leverage their combined expertise to enhance curriculum effectiveness. Finally, the empowering level underscores the significance of granting stakeholders leadership role within the curriculum framework. This approach ensures that the curriculum remain adaptable

and responsive to changing needs, allowing stakeholders to influence its directions actively. In summary, a structured engagement strategy across these levels not only enhances curriculum quality but also strengthens community ties and support (Ferrero-Ferrero et al., 2018; Ramonyai et al., 2022).

2.11.5. Strategies to Enhance Stakeholder Engagement

Enhancing stakeholder engagements in the implementation of curriculum requires a comprehensive approach that encompasses several strategic initiatives (Matuleviciene & Starvinskiene, 2025; Tesema & Engudy, 2024). First and foremost, the establishment of clear communication channels is essential. Regular updates disseminated through newsletters and online platforms can significantly enhance transparency within the educational community. Institutions can create a culture of trust and openness, which is important for effective engagement, by making sure that stakeholders are always informed about changes to the curriculum. Moreover, the formation of collaborative partnerships plays a pivotal role in stakeholder engagements. By organizing participatory workshop and joint committees, institutions can create opportunities for stakeholders to share their insights and perspectives. This collaborative framework not only enriches the curriculum by incorporating diverse viewpoints but also cultivates a sense of shared ownership among all participants, thereby enhancing commitment to the educational process.

In addition, involving stakeholders in decision-making is a crucial strategy. Actively soliciting input from various stakeholder groups ensures that the curriculum is responsive to their needs and expectations, ultimately increasing its relevance and effectiveness (Chepkemoi, 2019; Tesema & Enguday, 2024). This participatory approach empowers stakeholders and reinforces their significance within the educational framework.

Professional development opportunities are another vital component in strengthening stakeholder engagement (Ferrero-Ferrero et al., 2018). By providing training programs, workshops, and seminars, institutions can equip stakeholders with the necessary skills and Knowledge to engage meaningfully in curriculum implementation. This investment in capacity building enhances the overall quality of contributions from stakeholders. According to Demirkesen & Reinhardt (2021:4), understanding stakeholder motivation is also essential for tailoring engagement strategies effectively. Conducting surveys to measure the interests and aspiration of

stakeholders allows institution to align their engagement efforts with these motivations, thereby increasing participation and commitment. Furthermore, implementing robust feedback mechanisms is critical for promoting responsiveness. Establishing channels through which stakeholders can provide input, such as surveys, suggestion boxes, or forums, ensures that their voices are acknowledged and integrated into decision-making processes.(Freeman et al., 2020; Chan, 2021) Finally, fostering an inclusive environment is imperative. Creating a culture where all stakeholders feel valued encourages the expression of diverse perspectives, which can lead to richer discussions and innovative solutions. Actively reaching out to underrepresented groups ensures that engagement opportunities are accessible to everyone, thereby enhancing the overall equality and effectiveness of the curriculum (Chepkemoi, 2019; Chan, 2021).

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Introduction

This section outlines the study design and methodology used for data collecting and analysis, as the research aimed to investigate the implementation of the undergraduate curriculum at Ethiopian Defense University. This section provides a thorough explanation of the research paradigm, design, and several data sources, including the population, sampling techniques, and instruments used for data collecting. The methodology includes data analysis techniques, guaranteeing appropriate management of both quantitative and qualitative data. Ultimately, ethical considerations were assessed to ensure that the research adheres to ethical standards throughout the study's duration.

3.2. Research Paradigm

A research paradigm denotes a systematic framework of standards that influences our comprehension of knowledge acquisition. Establishing the research paradigm that underlies a study elucidates the justification for its selection approach (Kaushik & Walsh, 2019). Modern scholarship defines a research paradigm as an all-encompassing philosophical or ideological perspective, including a belief system about the nature of reality and the fundamental assumptions that direct knowledge creation. Kaushik and Walsh (2019) define a paradigm as a fundamental collection of views collectively held by scientists, including a consensus on issue comprehension, worldview, and research methodology. Khatri (2020) defines a research paradigm as a systematic planning framework including components such as methods, assumptions or hypotheses, and models. Creswell (2014) indicates the relationship between a researcher's paradigmatic stance and their methodological decisions, asserting that a researcher's perspective is influenced by their epistemological (knowledge), ontological (nature of reality), axiological (values guiding the research), and methodological (approach to conducting research) positions.

This work is grounded on the pragmatic ontological paradigm, which acts as a bridge between the positivist and interpretivist paradigms. A research study is using pragmatism to evaluate the

efficacy of curriculum implementation in EDU (Khatri, 2020; Elgeddawy & Abouraia, 2024). Positivism, interpretivism, and pragmatism are the three major ontological perspectives.

Pragmatism is a philosophical framework proposed by John Dewey and Donald Davidson, emphasizes the existence of various realities and stresses practical solutions in research (Lata, 2023). Khatri (2020) argues that pragmatists reject the rigid distinction between quantitative and qualitative methodologies, asserting that truth is defined by what is most effective in elucidating a specific study issue. A pragmatic perspective embraces many knowledge assertions, permitting numerous techniques, worldviews, and assumptions, alongside varying data collection and analytical approaches (Creswell, 2014). Pragmatists reject the notion of a single, absolute reality and, like mixed-methods researchers, integrate multiple methods for data gathering and analysis instead of rigidly conforming to either quantitative or qualitative methodologies.

This study aimed to explore the practices of curriculum implementation in the Ethiopian Defense University, focusing on identifying challenges, stakeholder engagement, and strategies for improvement by adopting a pragmatic paradigm. Thus, this approach provides the researcher with the flexibility to use various approaches, strategies, and processes to guarantee thorough and sufficient answers to the study topic (Juhary, 2015; Khatri, 2020). Moreover, by integrating both quantitative and qualitative approaches, pragmatism allows the researcher to rigorously analyze the existing factors affecting curriculum implementation in EDU, thereby producing comprehensive data to enhance future curriculum delivery.

3.3. The Research Design

A research design is like a detailed blueprint that helps researchers keep things organized and in control when dealing with different variables. This ensures that the findings of the study are both reliable and valid (Creswell, 2014; Islamia, 2016). Creswell (2014) and Sharma et al. (2023) both suggest that a research design offers a systematic plan that guides researchers in effectively answering their research questions or testing their hypotheses.

The goal of this particular study was to look into how curricula are actually put into practice in Ethiopian Defense University. It focused specifically on pinpointing challenges, understanding how stakeholders are involved, and exploring ways things could be improved. To tackle this, the

study used a mixed methods approach, which means it blended both quantitative and qualitative research techniques. According to Zandvamari and Daryapoor (2013), mixed methods research is all about combining bits and pieces from both qualitative and quantitative research like perspectives, how data is collected, analyzed, and interpreted to make the findings richer, broader, and more trustworthy. This approach is also seen as a continually developing way of doing research (Almeida, 2018; Chege, 2011; Hemming, Levine & Gallo, 2017; Ponterotto, Mathew & Raughley, 2013), and it's valued because it can really enhance study outcomes by using various data collection methods. Because of these advantages, the mixed methods approach was chosen as the best fit for this study. The mixed methods approach serves as both a research method and a methodological framework. As a method, it provides specific techniques for collecting and analyzing data, whereas as a methodology, it encompasses the entire research process, from data collection to interpretation (Hesse-Biber & Johnson, 2016; Creswell, 2015; Dunlop, 2013; Johanson & Christensen, 2012; Zoellner & Harris, 2017). However, the concept of mixing methods remains a topic of debate in academic discourse (Creswell, 2014). As a result, multiple definitions of mixed methods research exist. Early studies referred to it using terms such as multi-methods, integrated, hybrid, or combined methods (National Institute of Health Office of Behavioral and Social Sciences, 2018; Creswell & Plano Clark, 2017; Almeida, 2018). The way we think about mixed methods research has certainly changed over time, even though people are still figuring out the best way to define it. Back in 2009, Borrego, Douglas, and Amelink described it as a way of bringing together different research styles like qualitative and quantitative approaches, their methods, ideas, and even their special terms into one big study. Then, Creswell (2014) offered an even broader take, saying mixed methods is both a way of thinking about research (with its own set of beliefs) and a practical plan for gathering and looking at both kinds of data (qualitative and quantitative) all within the same study.

For this particular study, I used something called a parallel design, which is also known as concurrent triangulation. When researchers use mixed methods, they often choose from one of six main designs (Creswell, 2014), like sequential exploratory or concurrent nested. I decided on the concurrent triangulation design. This means we collected and analyzed both the numerical (QUAN) data and the descriptive (QUAL) data at the same time.. This approach allows for the identification of either confirmatory or conflicting findings, which ultimately enriches the study

(Almeida, 2018; 2012; Creswell, 2014; Gallo, 2017; Guetterman et al., 2017). Data triangulation took place during the analysis phase, where both QUAN and QUAL findings were integrated.

As illustrated in Figure 3.1, the concurrent triangulation design follows a QUAN-qual. structure. This means that while both quantitative and qualitative data were collected concurrently, greater emphasis was placed on the QUAN phase (Creswell, 2014; Terrell, 2012). The primary rationale for adopting this design was to leverage the strengths of one method to compensate for the limitations of the other (Terrell, 2012; Creswell, 2007, 2013). By integrating both approaches, the study aimed to produce a more robust and well-rounded understanding of curriculum implementation at EDU.

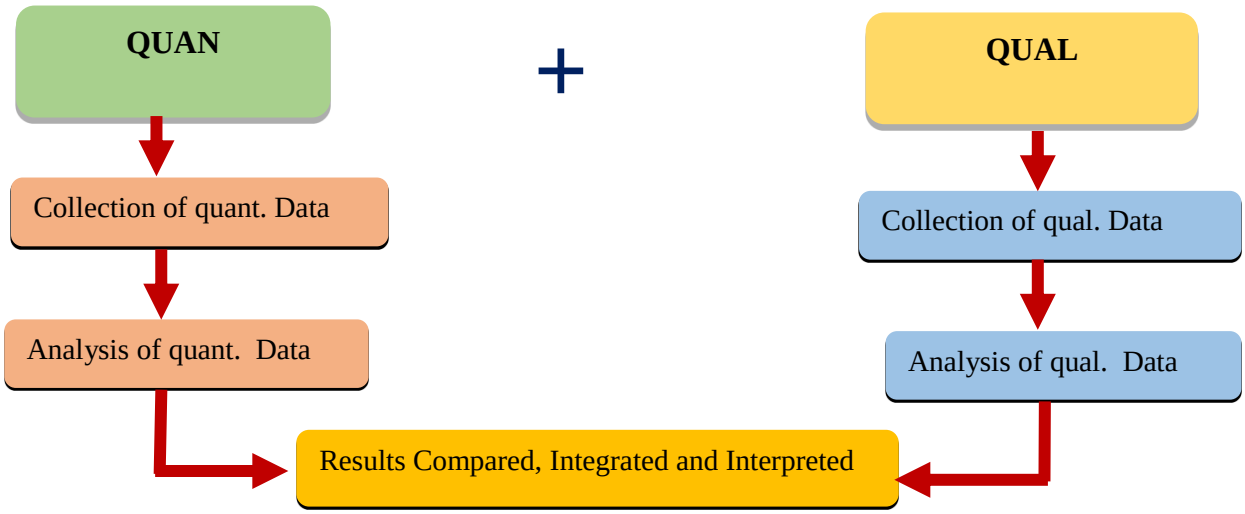

Figure 4: Design of Concurrent Triangulation (Creswell & Plano-Clark, 2007: 181)

Using a concurrent triangulation design in a mixed-methods approach (Tashakkori and Teddlie, 2009), the main goal of this study was to cross-validation. The study specifically examined the implementation of curricula in Ethiopian Defense University, using qualitative findings to support quantitative results.

According to Johnson and Onwuegbuzie (2010), the concurrent triangulation design had a number of significant advantages and disadvantages. One of its main benefits was that it was widely known among researchers, making it usable even by those with little background in research methodology. Another great thing about it was how efficient it was. Compared to

sequential designs, the research process took less time overall because the quantitative (QUAN) and qualitative (QUAL) phases of data collection and analysis happened at the same time. Most importantly, this design made the research results more reliable by using the good things about both approaches to make the bad things about each less noticeable.

Johnson and Onwuegbuzie (2010) pointed out that a major disadvantage of the concurrent triangulation design was that it necessitated proficiency in both quantitative and qualitative research techniques. It required a lot of work to conduct these phases simultaneously because, in order to guarantee a rigorous study, researchers needed to have a thorough understanding of both methodological approaches. The researcher actively sought to improve their methodological competencies in order to address these issues in the context of the current study. This was accomplished through reading widely, attending seminars and workshops, participating in academic conferences, and publishing scholarly works in well-known journals. These endeavors not only improved the researcher's proficiency but also made it easier to put theoretical knowledge into practice.

This study employed a concurrent triangulation design within a mixed-methods framework, necessitating an explanation of its selection. The main reason given was that concurrent triangulation can combine several research methods at the same time, letting the pros of one approach balance out the cons of another. In this study, the benefits of structured questionnaires outweighed the drawbacks of semi-structured interviews, and vice versa. This methodological approach made sure that the research produced trustworthy and well-supported results (Creswell, 2014; & Cortey, 2013).

Also, this design made it easier to gather more detailed and richer data, which allowed the study to successfully answer research questions about how EDU implemented curriculum in military education setting. Concurrent triangulation improved result interpretation by locating data convergence points, bolstering the validity of the study's conclusions, claim Creswell and Plano Clark (2017). Finally, the effectiveness of this strategy was a significant benefit. The research process took less time because both the quantitative and qualitative data were collected and analyzed in a single phase. Because of this efficiency, the researcher was able to devote more time

to important tasks like interpreting data, coming to conclusions, and writing the final research report, which ultimately led to a more rigorous and comprehensive study.

3.4. Sources of Data

This study comprised both primary and secondary data sources to thoroughly investigate the implementation of curriculum at Ethiopian Defense University. The main sources were key stakeholders, including instructors, students, commandants, department heads, and education quality experts, who offered direct views on curriculum implementation.

3.5. Population, Sample Size, and Sampling Technique

The study included participants from three institutions with in the Ethiopian Defense University: college of engineering, college of health science and college oh human resource management.in total, student population at these institutions was 1,090 from which a 10 % proportionate sample of 109 students was selected. Accordingly, 52 students were drawn from the College of Engineering, which had 520 students; 44 students were chosen from the College of Health Sciences, which had 440 students; and 13 students were selected from the College of Human Resource Management, which had 130 students. Within each college, the specific participants were likely selected using a simple random method, such as drawing names by lottery or using random numbers, to ensure that every student had an equal chance of being included in the study. This approach maintained proportional representation while minimizing sampling bias.

Similarly, the total instructor population at these universities was 348, with 51 instructors included in the sample. 17 instructors were selected from the College of Engineering, which had 170 instructors; 16 were chosen from the College of Health Sciences, which had 160 instructors; and all 18 instructors from the College of Human Resource Management were included, since their total number was small. For the first two colleges, the instructors were randomly selected using methods such as random numbering or lottery draws to give each member an equal chance of participation. In contrast, a **census approach** was applied to the College of Human Resource Management to ensure complete representation of this smaller group. This combination of proportionate sampling and census methods ensured that the instructor sample was both balanced and representative.

This approach involved classifying the population into homogenous subgroups (strata) and then proportionately selecting participants from each category (Creswell, 2014). Stratified sampling is particularly beneficial because it ensures that important subgroups are properly represented, thereby making the results more generalizable (Etikan & Bala, 2017). In this study, the population was categorized into three strata based on their respective institutions, with 10% of students selected from each stratum to maintain proportionate representation. A similar method was applied to instructors, except at the College of Resource Management, where all instructors were included due to the limited population size, thus ensuring thorough representation.

Ultimately, the use of this sampling method resulted in a broad and representative sample that accurately reflected the distribution of students and instructors across EDU. Stratified sampling is widely recognized for its ability to enhance study accuracy by reducing sampling error and ensuring that the sample truly represents the target population (Taherdoost, 2016). Consequently, this method strengthened the reliability and validity of the data, allowing the research to provide valuable insights into curriculum implementation in higher military education institutions in Ethiopia.

To figure out the sample size using proportional stratified sampling with a 10% sample rate, the proportional allocation formula was used for both students and instructors. Here's how it was done:

Step 1: Proportional Allocation Formula*

$$nh = \left(\frac{Nh}{N}\right) \times n$$

Where:

$\boldsymbol{n}\ h$ = Sample size for stratum h (each college)

$\boldsymbol{N}\ h$= Population size of stratum h (each college)

N = Total population size (students or instructors)

n = Total sample size (students or instructors)

Step 1: Calculate Total Sample Sizes (10%)

Total student population (N) = 1,090

Total instructor population (N) = 348

Total sample size for students:

$\boldsymbol{n}$ students = 1,090 × 0.10 = 109

Overall sample size for instructors:

$\boldsymbol{n}$ instructors = 348 × 0.10 = 34.8 ≈ 35

Step 2. Apply Proportional Sampling Formula for Each College

For Students:

College of Engineering (CE):

Population = 520

Sample size, $\boldsymbol{n}$CE - students = (520/1090) ×109 = 52 students

College of Health Sciences (CHS):

Population = 440

Sample size**,** $\boldsymbol{n}$CHS-students = (440/1090) ×109 = 44 students

College of Resource Management (CRM):

Population = 130

Sample size, $\boldsymbol{n}$ CRM-students = (130/1090) ×109 = 13 instructors

For Instructors:

1. College of Engineering (CE):
   Population = 170

Sample size, $nCE - instructors = \left(\frac{170}{348}\right) \times 35$ = 17 instructors

2. College of Health Sciences (CHS):
   Population = 160

Sample size, $nCHS - students = \left(\frac{160}{348}\right) \times 35$ = 16instructors

3. College of Resource Management (CRM):
   Population: 18 instructors

Sample size: All 18 instructors are included.

Table 1: Summary of Sample Sizes

College	Total Students	Sample Students	Total Instructors	Sample Instructors
College of Engineering (CE)	520	52	170	17
College of Health Sciences (CHS)	440	44	160	16
College of Resource Management (CRM)	130	13	18	18 (Census)
Total	1,090	109	348	51

Purposeful sampling was utilized in this study in selecting the participants who directly taught the curriculum in Ethiopian Defense University. This is a common qualitative method endorsed by Creswell (2014) wherein the researcher may directly select participants who are highly experienced or an experts in the topic of choice. According to this plan, participants were chosen based on the level of their academic and administrative workload, proximity to curriculum planning and implementation, and capability to collect rich, relevant data. In particular, the study included 11 participants: the University Commandant, Director of Education Quality Assurance, three Deans of Institutions, and six department chairs from the College of Engineering, College of Health Science, and College of Human Resource Management. The participants were selected specifically to represent various leadership and departmental views in the military-university context. Their choice enabled an overall understanding of the threats, possibilities, and strategic paths toward implementing the curriculum at institutional levels. This agrees with Patton's (2002) suggestion that qualitative sampling should not target representativeness statistically but depth, richness, and diversity of understanding. The argument behind the hiring of senior-level administrators and mid-level academic leaders is based on Merriam and Tisdell's (2016) assertion that the strength of purposeful sampling is that one can access recruit participants who can shed light on the research questions in unequivocal and deep ways, leading to and rich understanding of the study phenomenon.

3.6. Data Collection Tools

The instrumentation used for the research depended on the nature of the data sources, characteristics of the data, and the overall strategy. The research involved a combination of open-ended and closed-ended questionnaires, and semi-structured interviews, Apart from that, utilizing multiple data-collection methods was intended to provide an even better, more complete, and more equitable representation of the results. This approach follows the triangulation principle, which is that the combination of different research strategies, epistemologies, and methodologies makes the study more robust by leveraging their greatest complementary strengths and avoiding their respective weaknesses (Johnson & Turner, 2003; Silverman, 2006).

3.6.1. Questionnaire

This study intended to examine the challenges, opportunities, effectiveness, stakeholder engagement, and strategic measures required to enhance curriculum implementation at Ethiopian Defense University The study utilized a mixed approach, combining quantitative and qualitative data-gathering methods to provide a comprehensive examination of the curriculum implementation practices (Creswell, 2014).

The questionnaire consisted of 87 closed-ended questions and five open-ended questions, systematically organized into five main sections to enable structured analysis. The first section, Background Information, collected demographic data such as institutional affiliation, gender, age, and years of experience in the Ministry of Defense to provide contextual insights into respondents' viewpoints. The second section, Challenges and Opportunities in Curriculum Implementation, looked at factors influencing curriculum implementation across four dimensions. This section addresses Instructor-Related Challenges, including pedagogical resistance, inadequacies in teaching competency, insufficient industry collaboration, and the incorporation of emerging technologies, time constraints, student diversity, language barriers, and limitations in evaluation. The Resource-Related Constraints subsection examined access to instructional materials, financial limitations, insufficient funding, and weak connections with the industry, time restrictions, and challenges in curriculum assessment. The Student-Related Challenges subsection identified issues of motivation, resistance to curriculum changes, inadequate academic support, limited industry exposure, deficiencies in up-to-date military education trends, constrained opportunities for

innovation, and barriers to learning related to diversity. The Potential Areas for Improvement subsection outlined strategies to improve industry collaboration, integrate emerging technologies, broaden experiential learning methods such as simulations and field exercises, cultivate international partnerships, and augment interdisciplinary programs.

The third section, Effectiveness of Curriculum Implementation, comprised 14 closed-ended questions and one open-ended question, evaluating the curriculum's alignment with military values, facilitation of skill application, integration of technology in instruction, promotion of inclusivity, assurance of systematic evaluation, enhancement of instructor competence, and fulfillment of student expectations. The fourth component, Stakeholder Engagement in Curriculum Implementation, examined the engagement of stakeholders in curriculum development and implementation with 20 closed-ended questions and one open-ended question. The Stakeholder Engagement in Curriculum Development subsection assessed engagement with curriculum feedback, industry collaborations, and the incorporation of different perspectives, professional development, and trend recognition. The Engagement of Internal Stakeholders part evaluated the responsibilities of instructors, students, administrative leaders, and military leadership in the execution of the program.

The fifth section, Institutional Strategies for Enhancing Curriculum Implementation, comprised 17 closed-ended questions and one open-ended question, emphasizing on professional development for instructors, technological integration (e.g., online platforms, simulations), student support services, experiential learning (e.g., internships, field training), ongoing curriculum evaluation, promoting collaboration, aligning strategies with institutional goals, integrating cross-cultural competencies, and ensuring stakeholder accountability.

The questionnaire commonly utilized a five-point Likert scale, an accepted instrument in educational and social science research (Likert, 1932; Boone & Boone, 2012). This scale enabled respondents to convey differing levels of agreement, frequency, or intensity for certain claims, offering nuanced insights into curricular implementation. A questionnaire was employed in the current investigation. A structured questionnaire included a 5-point Likert scale, such as the aspects of Strongly Agree (SA), Agree (A), Neutral (N), Disagree (DA), and Strongly Disagree

(SDA). Each of the Likert scale characteristics was given a weight in the order SA-5, A-4, N-3, DA-2, and SDA-1 to simplify descriptive statistics analysis.

The reliability of the findings was a key factor in the researcher's decision to use structured surveys in the study. Timpany (2011) asserted that, since questionnaires undergo standardization during the design stage, they can gather more reliable and accurate findings compared to any other instrument that is not standardized.

3.6.2. Semi-Structured Interviews

Interviews, as defined by Creswell (2014), constitute a data collection method that involves eliciting information through direct questioning, with responses captured through listening, audio or video recording, or a combination of these techniques. According to Saunders et al. (2012), research interviews are generally classified into four main types: structured, semi-structured, and unstructured (in-depth), and focus group discussions. In the present study, semi-structured interviews were employed as the primary data collection method due to their flexibility and effectiveness in eliciting in-depth qualitative information.

Semi-structured interviews allow researchers to adjust the wording and sequencing of questions in accordance with the natural flow of conversation while maintaining alignment with the study's objectives. This flexibility provides opportunities for probing, clarification, and the exploration of emerging themes (Harrell & Bradley, 2009). Consequently, semi-structured interviews were deemed appropriate for this research, which aimed to obtain rich, detailed insights into the processes and challenges associated with curriculum implementation within Ethiopian military higher education institutions.

The Semi-structured interview participants comprised instructors, academic program coordinators, and administrative officials drawn from the three constituent colleges of the Ethiopian Defense University namely, the College of Engineering, the College of Health Sciences, and the College of Human Resource Management. These participants were purposefully selected based on their direct involvement in curriculum design, delivery, and oversight, which positioned them as key informants capable of providing valuable perspectives on the topic under investigation.

The interview guide was developed in alignment with the study's objectives and covered several core thematic areas:

1. Participants' experiences and perceptions regarding the introduction and implementation of the curriculum
2. The challenges and barriers encountered during the implementation process;
3. The strategies employed to address such challenges; and
4. Participants' perspectives on factors contributing to effective curriculum implementation within military higher education contexts.

In line with the recommendations of Phellas et al. (2011) and Creswell (2013), all interviews were audio-recorded with participants' informed consent to ensure accuracy and completeness of data. The recordings were subsequently transcribed verbatim to facilitate systematic analysis. Audio recording was particularly advantageous as it minimized data loss, allowed for the capture of nuanced verbal expressions, and ensured fidelity to participants' original accounts.

The interviews were conducted face-to-face within each college in quiet, private settings conducive to open dialogue. Each session lasted approximately 45 to 60 minutes**,** depending on the participant's level of engagement and the depth of discussion. The researcher adhered to a pre-designed interview guide but retained flexibility to pose follow-up questions or probe emergent issues as appropriate.

Overall, the use of semi-structured interviews enabled the researcher to collect rich, qualitative data that provided a comprehensive understanding of the curriculum implementation process within Ethiopian military higher education institutions. This approach not only facilitated the exploration of participants' opinions, attitudes, and experiences but also uncovered the contextual factors influencing the success and challenges of curriculum implementation.

3.6.3. Focus Group Discussion

A focus group discussion was conducted to obtain in-depth understanding of Ethiopian Defense University (EDU) adoption of the undergraduate curriculum. Qualitative research approach was utilized due to its ability to enable interaction among participants, thus facilitating collective exploration of challenges, opportunities, and curricular improvement processes

(Krueger & Casey, 2015). To have a general overview, six representatives were selected from each of the three institutions, and hence nine representatives in total. Two department heads and one education quality assurance (EQA) officer from each college were included among the members so that the members had immediate experience in curriculum development, assessment, and improvement (Creswell & Creswell, 2018).

The focus group interview was held in a relaxed and neutral setting to address the issue of open disclosure, and the conversation was led by an experienced facilitator to allow everyone a voice. A note-taker as well as an audio recorder was used to record the conversation to be analyzed later. The session was 90 to 120 minutes long and followed a structured yet flexible agenda. The discussion questions aligned with the research objectives of the study and were the same as those applied in individual interviews to maintain data consistency. The discussion was organized into three phases: introduction, main discussion, and conclusion.

During the introductory phase, lasting between 10 and 15 minutes, the facilitator described the purpose of the discussion, established ground rules, and allowed the participants to introduce themselves. During the 60- to 75-minute core discussion session, the participants touched on such critical areas as curriculum implementation effectiveness, challenges they faced, stakeholders' level of involvement, and improvement strategies. They touched on alignment of curriculum with organizational objectives, teaching methodologies effectiveness, and observed use of the curriculum. In addition to these, participants also discussed constraints, faculty development, and logistics issues and also quantified the stakeholder participation in curriculum planning and evaluation. They explored the relationship between technology and faculty development needs.

The final session, lasting 10 to 15 minutes, provided the participants with a chance to make their final comments. The facilitator marked important concerns, and next steps were explained to participants. The entire session was audio-recorded, transcribed, and coded using thematic analysis (Braun & Clarke, 2006). For cross-validation of findings, FGD questions were cross-checked with interviews.

FGD was chosen because it allowed others to elaborate on top of each other's responses, thereby giving a more, richer picture of curricular issues and solutions (Morgan, 1997). The group environment also allowed for clearer observations and fewer personal biases. The relaxed-like

atmosphere also facilitated frank discussions, in which the researchers were able to obtain diverse views within a very short space of time. Expected FGD results were the identification of strengths and weaknesses in curriculum implementation, realization of areas that impact the quality of education, and recommendations for enhancing teaching methodology and professional development activities. The FGD offered a deep insight into curriculum implementation in EDU, offering scientific recommendations for improving educational practice.

3.7. Data Collection Procedures

The data collection process for this study followed a structured approach, integrating multiple quantitative and qualitative methods to ensure comprehensive and reliable findings. The procedures were carefully designed to align with the research objectives, ensuring consistency, validity, and triangulation of data. Before initiating data collection, necessary approvals were obtained from relevant authorities within Ethiopian Defense University, including institutional leadership, department heads, and educational quality assurance (EQA) officers. Ethical considerations were addressed by obtaining informed consent from participants, who were briefed on the study's objectives, confidentiality measures, and their right to withdraw at any stage.

The administration of questionnaires involved distributing a structured survey comprising 95 closed-ended and five open-ended questions. This questionnaire was designed to assess curriculum implementation, challenges, stakeholder involvement, and institutional strategies, utilizing a five-point Likert scale to quantify responses for statistical analysis. Participants received clear instructions and were given sufficient time to complete the questionnaire, which was collected in person to ensure a high response rate and clarify any ambiguities immediately. Semi-structured interviews were then conducted with key stakeholders, including instructors, department heads, and EQA officers. These interviews were scheduled at mutually convenient times and locations to create a comfortable environment for open discussions. A standardized interview guide ensured consistency while allowing flexibility for follow-up questions. With participants' consent, interviews were audio-recorded, and detailed notes were taken to capture critical insights into curriculum implementation, instructional challenges, and strategies for improvement.

To further enrich the data, focus group discussions (FGDs) were conducted with 18 participant's six individuals from each of the three institutions, including department heads and

EQA officers, to ensure diverse perspectives. Facilitated in a neutral setting by a trained moderator, each FGD lasted between 90 and 120 minutes and followed a structured format consisting of an introduction, core discussion, and conclusion. Discussions were audio-recorded, and a note-taker documented key themes and emerging insights, providing an interactive platform for participants to explore curriculum effectiveness, challenges, and strategic improvements. Following data collection, all gathered information was systematically organized to facilitate analysis. Questionnaire responses were entered into SPSS Version 27 for quantitative analysis, while interview and FGD transcripts were reviewed, coded, and thematically analyzed.

Table 2: Alignment of Research Questions, Objectives, Units of Analysis, Research Instruments and Research Design

Research Questions	Research Objectives	Units of Analysis	Research Instruments	Research Design
1. Howis the curriculum being effectively implemented in the Ethiopian Defense University?	To assess the methods and practices employed for the effective implementation of the curriculum in the Ethiopian Defense University	Instructors, Students. Dept. heads, education quality assurance expertise and Commandants	Questionnaires validated by interviews and FGD	QUAN validated by QUAL
2. Towhat extent have the stakeholders been engaged in the existing curriculum implementation process in the Ethiopian Defense University?	o evaluate the extent of takeholder engagement in the urriculum implementation rocess in the Ethiopian Defense Jniversity?	Instructors, Students. Dept. heads, education quality assurance expertise and Commandants	Questionnaires validated by interviews and FGD	QUAN validated by QUAL
3. Whatare the opportunities and challenges in implementing the current curriculum within Ethiopian Defense University?	To identify the challenges and examine the opportunities for enhancing the implementation of the existing curriculum at the Ethiopian Defense university.	Instructors, Students. Dept. heads, education quality assurance expertise and Commandants	Questionnaires validated by interviews and FGD	QUAN validated by QUAL
4. Whatstrategies do the Ethiopian Defense University use to enhance the existing curriculum implementation?	To explore the strategies utilized by the Ethiopian Defense University to enhance the implementation of the existing curriculum. .	Instructors, Students. Dept. heads, education quality assurance expertise and Commandants	Questionnaires validated by interviews and FGD	QUAN validated by QUAL

3.8. Data Analysis Techniques

This section delineates the methods used for the analysis of both the quantitative (QUAN) and qualitative (QUAL) phases of the research. Engaging in mixed-methods research requires that a researcher possess proficiency in various analytical techniques to accurately interpret both qualitative and quantitative data (Braun & Clarke, 2016; Creswell, 2014).

3.8.1. Analysis of Quantitative Data

The independent variables were institutional challenges, resource constraints, and faculty preparedness, while the dependent variable was the effective implementation of the curriculum, as shown in Figure 3.1 (Conceptual Framework). The study employed statistical methods, including descriptive statistics like frequency, mean, percentage, and standard deviation, to summarize data and discern patterns. Inferential statistical methods, such as the independent sample t-test and chi-square test, were used to examine the relationships between variables and assess the significance of differences. The analysis provided valuable insights into the implementation of the curriculum by the Ethiopian Defense University. They illustrated the main challenges, their solutions, and the elements that enabled effective curriculum implementation.

3.8.2. Analysis of Qualitative Data

Qualitative analysis in this study explored the perceptions and experiences of commandants, department heads and quality assurance experts regarding curriculum implementation. According to Creswell (2014), as well as Baker and Edwards (2012), qualitative research aimed to understand how individuals perceived, interpreted, and engaged with their environment.

In this context, qualitative data focused on factors that facilitated or hindered effective curriculum implementation, as well as strategies employed to mitigate barriers (Snelgrove, 2014; Braun & Clarke, 2016; Willig, 2013). Given that this study adopted a mixed-methods approach with concurrent triangulation, quantitative data were prioritized, while qualitative data served as a supplementary element to validate and support the findings. Thematic analysis was employed to categorize transcribed interview data into predetermined themes aligned with the study's objectives. The qualitative findings either reinforced or challenged the results derived from the quantitative phase.

3.9. Validity and Reliability of the Instruments

In the study entitled "Curriculum Implementation Practices in Undergraduate Programs at Ethiopian Defense University" (EDU), validity refers to the extent to which the measurement reflects the true value of what is intended to be measured (Kombo & Tromp, 2006). For the purposes of ensuring validity of the study instruments, special emphasis was placed on construct validity and content validity. This was achieved in coordination with a panel of experts, who were academic advisers and a university's military curriculum specialist. The researcher worked together with the curriculum specialist to design the initial instruments so that the questions were relevant and addressed the purposes of the study. The supervisor reviewed the drafts to determine the effectiveness of the questions and provided feedback, which was incorporated in the final questionnaire.

The questionnaires were distributed to both students and instructors through the respective college deans, who provided guidance on how to complete the surveys. The deans and department heads subsequently collected the completed questionnaires from the participants. During the pilot stage, several participants provided constructive feedback, noting that some questions were double-barreled**,** vague**, or** loaded**,** which could potentially lead to confusion or biased responses.

For instance, a few questions combined more than one idea within a single item (double-barreled), making it unclear which aspect respondents were addressing. Other questions contained ambiguous wording or technical terms that could be interpreted in multiple ways, thereby reducing clarity and reliability. Additionally, certain items were identified as leading or emotionally charged (loaded)**,** which risked influencing respondents' answers.

Based on this feedback, the researcher revised the questionnaire to enhance its clarity, precision, and neutrality. The improvements included rewording ambiguous statements into simpler, more direct language, separating double-barreled questions into two or more distinct items, and eliminating leading or biased phrasing to ensure objectivity. The layout and instructions were also refined to make the questionnaire more user-friendly and to minimize misinterpretation. These modifications resulted in a more reliable and valid data collection instrument, capable of accurately capturing participants' views on curriculum implementation within Ethiopian military higher education institutions.

The validity and credibility of research were boosted by applying mixed methods (Creswell, 2014; Creswell & Plano Clark, 2011). The method allowed the conduct of data triangulation, combining more than one source of data, data collection and analysis modes, sampling methods, and perspectives to attain holistic knowledge on curriculum implementation. This blended strategy reinforced the reliability of the findings by analyzing the study questions from multiple divergent perspectives, thereby ensuring that the findings were supported by various sources and methods (Tashakkori & Teddlie, 2009).

Triangulation, such as ongoing observation, was employed to ensure minimal researcher bias and focus the research on the topic of curriculum implementation. Appropriate question asking and questioning were employed in the course of interviews to guarantee that there was clarity as well as unbiased responses, hence rendering the information more credible. Additionally, for the sake of reliability, the researcher applied purposive sampling as well as the combined methodological approach, allowing the use of consistent and reliable data collection as well as interpretation. Data analysis consistency and sticking to a clear protocol of data-saving guaranteed the findings to be independent and reliable.

A pilot test was conducted using a subset of the target population from the Ethiopian Military Academy (EMA) to assess the validity and reliability of the questionnaire. The purpose of the pilot test was to determine whether the content of the questionnaire accurately represented the concepts being studied and whether the items were clearly understood by respondents.

To evaluate the internal consistency of the questionnaire items, Cronbach's alpha was calculated. Cronbach's alpha is a widely used statistical measure that indicates how closely related the items in a questionnaire are within a particular category or dimension (Tavakol & Dennick, 2011; Griffith, 2015). In this study, a Cronbach's alpha value of 0.70 or higher was considered acceptable, as suggested by Tavakol and Dennick (2011) and Panayides (2013). A coefficient above this threshold suggests that the items measure the same underlying concept and that the instrument produces consistent results.

The findings from the pilot test confirmed that the questionnaire had satisfactory internal consistency. This ensured that the measurement tools used in the study were reliable and

dependable for assessing curriculum implementation practices within the Ethiopian Defense University.

3.10. Pilot Study Results

Before the main data collection, a pilot study was conducted with 50 participants**,** comprising **20** instructors and 30 cadets**,** from the Ethiopian Military Academy (EM**A)**, which was excluded from the final study to prevent potential bias (Mersha et al., 2024; Wubale et al., 2024). The primary purpose of the pilot study was to assess and refine the questionnaire to ensure clarity, relevance, and logical flow. Feedback from participants identified ambiguous, redundant, and irrelevant items, which were subsequently **reworded,** removed, or reorganized**,** resulting in a more precise and coherent instrument (Chen & Chan, 2024). To evaluate the questionnaire's reliability**,** Cronbach's Alpha coefficients were computed for the main dimensions—challenges and opportunities ($\alpha = 0.87$), methods and approaches for curriculum implementation ($\alpha = 0.852$), stakeholder engagement ($\alpha = 0.811$), and strategies to enhance curriculum implementation ($\alpha = 0.904$) all exceeding the 0.70 threshold and demonstrating strong internal consistency (Paneerselvam & Yamat, 2021). Additionally, corrected item-total correlations were examined to confirm that each item contributed meaningfully to its construct. Overall, the pilot study confirmed that the questionnaire was reliable, valid, and suitable for collecting accurate and comprehensive data in the main study.

3.11. Ethical Consideration

Ethical concerns were rigorously upheld throughout the research process. The Department of Curriculum and Instruction at Addis Ababa University had sought ethical approval for the study. With the ethical clearance certificate obtained, the researcher was authorized to conduct the study in the EDU. Prior to data collection, commandants and lecturers were asked for their consent.

Informed consent, being a fundamental ethical principle in research, was prioritized. The researcher respected the participants' rights by ensuring their permission was obtained before beginning the data collection process (Creswell, 2012). Ethics in research, as defined by the researcher, involved the application of moral principles and professional standards to the collection, analysis, reporting, and dissemination of information regarding study participants.

All respondents were fully informed about the study's purpose and objectives. The researcher respected the views of any participant who chose not to take part in the research, ensuring anonymity by assigning numbers to the returned instruments. This approach maintained the confidentiality of the participants' identities. Additionally, all participants provided written consent to participate, with assurances that their responses would remain confidential and not be shared with others.

To facilitate professional responses, data collection took place in the respondents' workplaces. To minimize the risk of omitting valuable information, interviews were audio-recorded and later transcribed.

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND AANAYSIS OF DATA

4.1. Introduction

This chapter is the central component of this study, offering a thorough analysis and interpretation of the data collected to investigate the implementation of current curricular practices in the Ethiopian Defense University. The study employed a concurrent triangulation mixed methods design, amalgamating quantitative and qualitative data to provide a comprehensive knowledge of the research topics (Nsengimana et al., 2024). The study examines the main challenges and opportunities within the current curriculum implementation, analyzes the effectiveness of its implementation, examines stakeholder engagement, and identifies strategies utilized by EDU to enhance curriculum execution (Chen & Chan, 2024). This chapter's results are based on empirical data obtained from surveys, interviews, focus group discussions and classroom observations, providing a detailed viewpoint on the factual basis of curriculum implementation in the specific context of Ethiopian military higher education. Thus, the subsequent sections outline the demographic characteristics of the respondents, followed by a comprehensive analysis according to each particular purpose of the study.

4.2. Participants' Background

4.2.1. Survey Participants

This subsection presented the demographic characteristics of students and instructors at the three institutions: the College of Engineering (CE), the College of Health Science (CHS), and the College of Resource Management (CRM). The data was organized by sex, age, and work experience for students, giving a comprehensive view of their military backgrounds. For instructors, the demographic characteristics looks at things like sex, age, academic rank, and work experience. This data provides important information about their professional status and possible roles in the process of curriculum implementation. The perspectives of both groups indicate that these demographic variables provide important information about how their backgrounds may influence the development, delivery, and support services of the curriculum.

Table 3: Demographic characteristics students by Sex, Age and Work Experience

Variable	Category	CE		CHS	CRM	Total Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Sex	Male	48		37	20	105	96.3	96.3	96.3
	Female	4		0	0	4	3.7	3.7	100.0
	Total	52		37	20	109	100.0	100.0	100.0
Age	Below 25	35		25	13	73	67.0	67.0	67.0
	30-35 years	8		7	5	20	18.3	18.3	85.3
	36-45 years	9		5	2	16	14.7	14.7	100.0
	Total	52		37	20	109	100.0	100.0	100.0
Work Experience	3-5 years	35		14	11	72	66.1	66.1	66.1
	6-8 years	8		5	4	26	23.9	23.9	89.9
	9-11 years	5		5	1	11	10.1	10.1	100.0
	15 years and above	4		3	1	8	7.3	7.3	100.0
	Total	52		37	20	109	100.0	100.0	100.0

CE (College of Engineering), CHS (College of Health Science), CRM (College of Resource Management)

As revealed in Table 3, the numbers indicate a very gender-skewed population where the male students make up 96.3% (105 students) of the student population, and the female students make up only 3.7% (4 students), all of whom are in the College of Engineering. The lack of female students in the Institutions of Health Science and Resource Management indicates that there is a serious gender skew among the institutions. In terms of age composition, most of the students (67%) belong to the 25-year group, followed by 18.3% belonging to the 30-35-year group, and 14.7% belonging to the 36-45 years group. This indicates that the students are mostly young, especially in the College of Engineering and College of Health Science, with hardly any seniors, most likely experienced individuals. Based on professional experience, 66.1% of the students have 3-5 years of professional experience, 23.9% have 6-8 years of professional experience, and 10.1% have gained 9-11 years of professional experience. In addition, a narrow 7.3% have 15 years or more of professional experience. All these results are indicating that even though the greatest number of the students is beginners, there is a large number of people with enormous practical backgrounds.

These demographic features have significant connotations with respect to curriculum implementation strategies. The glaring underrepresentation of female students necessitates the integration of gender-sensitive strategies in the curriculum so that women can be made inclusive

and promoted, particularly in traditionally male sectors like engineering and defense studies. Further, since the majority of students are very young, especially those under 25 years of age, curriculum teaching should focus on participatory, active, and experiential learning approaches that suit the tastes and likes of the student population. At the same time, there is also a necessity to cater to older and mature students by adjusting teaching styles such that they capitalize on their acquired experience and skills. The high rate of students with work experience having 3-8 years of experience offers a chance to incorporate experience-based pedagogies like project-based learning, problem-solving exercises, and case studies so that theoretical concepts can be associated with practical implications. Also, the curriculum should be attuned to the military experiences and working responsibilities of students to make the acquired content more applicable and useful. Finally, the span in experience and ages indicates the prospect for the establishment of mentorship systems, whereby senior students can guide junior students with less experience, enhancing group learning settings and the practical utility of the curriculum. Finally, gender imbalances need to be corrected, balance pedagogy with varied student profiles, and include experiential, inclusive, and practice-based pedagogical approaches to ensure effective curriculum implementation and achievement of desirable learning outcomes.

Table 4: Demographic Characteristics of Instructors by sex, age, academic rank and work experience

Variable	Category	CE	CHS	CRM	Total	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Sex	Male	20	16	12	48	94.1	94.1	94.1
	Female	2	0	1	3	5.9	5.9	100.0
	Total	22	16	13	51	100.0	100.0	100.0
Age	Below 30	5	4	3	12	23.5	23.5	23.5
	31-40 years	11	10	6	27	52.9	52.9	76.5
	41-50 years	6	2	4	12	23.5	23.5	100.0
	Total	22	16	13	51	100.0	100.0	100.0
Academic Rank	Ass. Lecturer	5	5	3	13	25.5	25.5	25.5
	Lecturer	14	9	11	34	66.7	66.7	92.2
	Ass. Professor	3	2	0	4	7.8	7.8	100.0
	Total	22	16	13	51	100.0	100.0	100.0
Work Experience	5-10 years	11	12	7	30	58.8	58.8	58.8
	11-15 years	4	5	5	14	27.5	27.5	86.3
	16-20 years	3	4	0	7	13.7	13.7	100.0
	Total	18	21	12	51	100.0	100.0	100.0

CE (College of Engineering), CHS (College of Health Science), CRM (College of Resource Management)

The demographic statistics of faculty in the College of Engineering (CE), College of Health Science (CHS), and College of Resource Management (CRM) show several significant trends relevant to the application of curriculum. The gender of faculty is predominantly male, with

94.1% of faculty being male and 5.9% female only. This gender disparity exists across all three institutions, where there are no female instructors at CHS and merely tiny female presence at CE and CRM. This sort of imbalance is indicative of greater gender disparities within the academic setting and has the potential to influence classroom dynamic, intellectual diversity, and the welcoming of learning spaces. With regards to age grouping, most of the instructors (52.9%) fall in the 31-40 years group, with a tie (23.5%) between the younger than 30 years and 41-50 years groups. This grouping reflects a somewhat young to middle-aged instructor's composition which may be a balance between current teaching modalities and professional maturity. Still, the comparatively low percentage of instructors above 40 may restrain the scope for elder mentoring as well as leadership development in the institutions.

Rank-wise, most of the faculties are Lecturers (66.7%), then Assistant Lecturers (25.5%), and an insignificant minority (7.8%) are Assistant Professors. With a very small percentage of higher-level faculties, i.e., no Assistant Professors, in CRM, academic leadership, research potential, and course coverage may be limited. Work experience statistics reveal that the majority of the instructors (58.8%) possess 5-10 years of work experience, followed by 27.5% with 11-15 years and just 13.7% with 16-20 years of experience. This reflects a moderately experienced faculty to recommend a scope for further faculty development to improve teaching quality and competence.

These demographic factors have far-reaching implications for curriculum implementation practice. The stark gender disparity requires aggressive efforts to advance gender sensitivity in hiring and retaining faculty. Infusing gender-sensitive pedagogies and developing positive settings for women faculty members would enhance the provision of curriculum and encourage diverse contributions. The predominance of mid-career faculty offers the prospect of optimizing their versatility through providing them with ongoing professional education in new teaching methods, i.e., student-centered instruction and technology-based instruction. The lack of upper rank teaching positions also highlights the need to generate leadership spots and succession plans to groom junior faculty for senior levels, so curriculum leadership remains continuous. The varied age and experience of the staff provide the opportunity to introduce mentorship programs, pairing junior staff with more senior members to facilitate knowledge sharing and collaborative teaching.

4.2.2. Interview Participants

This part presents the background profiles of the six educational leaders interviewed across the Defense University (DU) and its three constituent institutions: the College of Engineering, the College of Health Science, and the College of Resource Management. The table outlines key variables, including the number of participants, their sex, academic qualifications, and fields of study, current leadership responsibilities, and years of experience in higher education.

Table 5: Background Profile of the Interview Participant Educational Leaders

Variables	**DU Head Office (3)**			**College of Engineering**	**College of Health Science**	**College of Resource Management**
Number	1	1	1	1	1	1
Sex	Male	Male	Male	Male	Male	Male
Qualification	MA	PhD	PhD	PhD	MSc	PhD
Field of Study	Logistics & Supply Management	Industrial Management	International Comparative Education	Operational Management	Health Officer	Curriculum & Instruction
Responsibility	Commandant	Vice Commandant	Quality Assurance Director	Dean	Dean	Dean
Experience in Higher Education (Years)	8	9	10	8	6	10

As shown in Table 5, six educational leaders were interviewed at Defense University (DU) headquarters and its three constituent institutions: College of Engineering (CE), College of Health Science (CHS), and College of Resource Management (CRM). Participants are a representative sample of the leadership roles in the institution, e.g., Commandant, Vice Commandant, Director of Quality Assurance, and Deans of respective institutions. All the interviewed participants are male, and this reflects a gender imbalance at the managerial level. With regards to academic qualification, most of the participants were at the doctoral level (four out of six), and the remaining two participants were at the master's level. The area of specialization among the participants varies and includes Logistics & Supply Management, Industrial Management, International Comparative Education, Operational Management, Health Officer, and Curriculum & Instruction. This

academic heterogeneity is an indication of the diversified needs of the leadership functions in the institution and is beneficial in issues of curriculum design and institutional governance. The experience in higher education of the participants varies between six to ten years, which shows relatively experienced leadership with extensive experience in academic program management and guiding institutional functions. Their differing areas of work, together with experience, indicate a leadership team capable of impacting policy, curriculum implementation, and quality assurance procedures. The face-to-face interviews with these leaders took place in their own offices, where privacy was maintained and in-depth discussion was made easier. Interviews were carried out once permission had been obtained to ensure compliance with ethical standards. Each interview lasted between 30 minutes and more as participants spent time discussing common issues amid curriculum implementation and institutional issues. In systematic coding and to ensure confidentiality, the education leaders were coded using codenames. The researcher, for example, coded participants from the DU head office and institutions EL1, EL2, etc., depending on their level of participation. Data collected in these interviews were analyzed employing narrative analysis with emphasis on the narratives of the leaders, experiences, and their meanings for their roles and wider institutional context.

In gneral, the professional and demographic context of these leaders indicates that they have the qualitative experience and educational background to be of practical benefit to curriculum implementation practices. Still, female leadership deficits and over-concentration of qualifications in some areas suggest potential areas where diversification and capacity building are possible. These observations reinforce the value of leveraging participation.

4.2.3. Focus Group Participants

The table below presents an overview of the departmental leadership within various institutions at the institution. It outlines the specific departments under each college, the number of department heads assigned, and their corresponding qualifications. This information highlights the academic qualifications of department heads across the College of Engineering (CE), College of Health Science (CHS), and College of Resource Management (CRM).

Table 6: Background Data of Focus Group Discussion Participant

College	Departments	No of Dept. heads	Qualification
College of Engineering(CE)	Aeronautical Engineering	1	MSc
	Computer and Information Technology	1	MSc
College of Health Science (CHS)	Medical Laboratory	1	MSc
	Clinical Pharmacy	1	MSc
College of Resource Management (CRM)	Management	1	MA
	Journalism and communication	1	MA

Table 6 revealed a detailed overview of the academic qualifications and departmental leadership structures across three institutions: the College of Engineering (CE), College of Health Science (CHS), and College of Resource Management (CRM). Each college is represented by two departments, each led by a department head, for a total of six department heads across the three institutions, indicating a well-structured and distributed leadership system at the departmental level. In the College of Engineering (CE), the departments of Aeronautical Engineering and Computer and Information Technology are each headed by individuals with MSc degrees. This aligns with the highly technical nature of these fields, where advanced subject-specific knowledge is essential for guiding curriculum development and ensuring the rigor of academic programs. The MSc qualifications of the department heads are indicative of their capacity to lead specialized programs that demand expertise in both theoretical and practical aspects of engineering and technology. Similarly, two department heads, each holding an MSc, lead the College of Health Science (CHS). These qualifications are well-suited to the medical and health-related disciplines of Medical Laboratory and Clinical Pharmacy. An MSc is particularly relevant in these fields, as it ensures that the department heads possess the academic and professional expertise necessary to oversee the development of curricula that effectively integrate both scientific knowledge and hands-on clinical practice. This expertise is important for upholding the high standards required in healthcare education, where both theoretical understanding and practical application are vital. In the College of Resource Management (CRM), the department heads of management, journalism, and communication hold MA degrees. While MSc qualifications are often favored in more technical or scientific fields, the MA qualifications of the CRM department heads are well-aligned with the social sciences and humanities focus of these disciplines. The MA degree reflects the leadership capabilities required to direct academic programs that emphasize management theory,

communication strategies, and practical skills in these fields. These qualifications also suggest a strong foundation in research and theoretical frameworks, which are essential for guiding the development of curricula that respond to both academic and industry demands.

In general, the qualifications of the department heads across the three institutions are highly appropriate for their respective disciplines, reflecting the standards necessary for effective academic leadership. The combination of MSc and MA qualifications ensures that each department is directed by capable leaders with the expertise needed to maintain the integrity and relevance of the curriculum. This leadership structure is vital for adapting to the evolving educational and professional requirements within each academic field, fostering an academic environment that is responsive to both current trends and future challenges.

4.3. Effectiveness of Curriculum Implementation at the Ethiopian Defense University

Analyzing the effectiveness of curriculum implementation is crucial for understanding how well educational programs meet their intended goals, particularly within specialized institutions such as the Ethiopian Defense University. Table 7 provides detailed descriptive statistics reflecting the perceptions of both students and instructors on multiple dimensions of curriculum effectiveness. These dimensions include preparation for military careers, alignment with military values, practical skill application, and integration of technology, inclusivity, teaching methods, and infrastructural support, among others. By examining the mean scores and variability across these items, this analysis aims to identify key strengths and potential areas for improvement in curriculum delivery. Understanding these perceptions will help guide efforts to enhance the quality, relevance, and responsiveness of the curriculum to better serve the needs of military education stakeholders.

Table 7: Descriptive Statistics Regarding Effectiveness of Curriculum Implementation

No	EfCIm.	Students N=109		Instructors N=51		Total	
		M	SD1	M	SD2	CM	CS
1	Preparation for Military Careers	3.94	1.047	4.06	1.035	4.022	1.037
2	Alignment with Military Values and Goals	4.2	0.639	4.19	0.601	4.193	0.611
3	Practical Application of Skills	3.49	1.102	3.28	1.104	3.347	1.104
4	Integration of Technology in Learning	4.08	0.9	4.03	0.866	4.046	0.874
5	Inclusivity and Diversity Consideration	4.12	0.773	4.09	0.788	4.1	0.781
6	Use of Active Learning Strategies	4.29	0.782	4.21	0.746	4.236	0.756
7	Regular Curriculum Evaluation	3.9	1.044	3.97	0.947	3.948	0.976
8	Satisfaction with Curriculum Implementation	3.71	1.301	4.06	1.153	3.948	1.209
9	Professional Development for Staff	3.9	0.944	4.02	0.882	3.982	0.901
10	Modern Classroom Facilities	3.61	1.041	3.45	1.126	3.501	1.099
11	Teaching Competency in Subject Areas	3.96	0.958	3.92	0.904	3.933	0.919
12	Curriculum Adaptation for Context	4.08	0.688	4.18	0.58	4.148	0.616

Table 7 shows that students and instructors alike tend to view curriculum implementation at Ethiopian Defense University quite positively. In fact, the average mean score across the twelve measures sits above 4.0, suggesting a generally cheerful verdict. The item rated highest, Use of Active Learning Strategies (CM = 4.236, SD = 0.756), indicates that interactive, student-centered methods are both acknowledged and commonly used. Strong scores for Alignment with Military Values and Goals (CM = 4.193, SD = 0.611) and Curriculum Adaptation for Context (CM = 4.148, SD = 0.616) further suggest that course content aligns with institutional mission and speaks directly to defense-sector needs.

At the same time, the item Practical Application of Skills scored the lowest mean (CM = 3.347, SD = 1.104), pointing to a concern that theory is not translating into everyday capability. A similar worry emerges from the modest rating for Modern Classroom Facilities (CM = 3.501, SD = 1.099), which hints that infrastructure shortfalls may be holding teaching and learning back.The item Satisfaction with Curriculum Implementation (CM = 3.948, SD = 1.209) demonstrated the most significant variation, particularly between students (M = 3.71) and instructors (M = 4.06), suggesting inconsistencies in the implementation process and stakeholder experience.

Integration of technology into learning received a moderate rating (CM = 4.046), 4.100 was recorded for attention to inclusivity and diversity, regular curriculum evaluation came in at 3.948, and staff professional development scored 3.982. Although these means reflect positive institutional efforts, the pronounced variability particularly standard deviations exceeding 1.0 indicates that progress has not been uniform across departments or units. Teaching Competency in Subject Areas, rated 3.933 with a SD of 0.919, suggests that pedagogical approaches still contain pockets that could be strengthened.

Overall, table 7 shows that curriculum implementation is viewed as successful and appropriate for the environment; however, more attention needs to be paid to infrastructure, skill application, and consistent delivery. A more unified and successful implementation throughout the military education system would be made possible by increasing stakeholder participation in curriculum review and resource planning.

To deepen the quantitative findings shown in Table 7 about curriculum implementation at Ethiopian Defense University, this section incorporates qualitative evidence gathered from interviews and focus-group dialogues with senior University leaders. Participants included the University Commandant, the Director of Education Quality Assurance, three College Deans, and several Department Heads. Their lived experiences illuminate the numbers, exposing systemic dynamics and day-to-day practices that either support or hinder implementation. When combined, these testimonies create a richer, more nuanced picture of the forces shaping the success of the revised curriculum.

The evaluative interview focused on the effectiveness of curriculum implementation and involved the University Commandant (UC), the Education Quality Assurance Director (IQAD), the three College Deans (CD1-CD3), and six Department Heads (DH1-DH6) from the Institutions of Engineering (CE), Health Sciences (CHS), and Human Resource Management (CHRM). Thematic analysis of their comments pointed to five recurring themes: teaching methods, assessment practice, and student engagement, availability of infrastructure and resources, and collaboration with external partners.

A predominant theme was the instructional strategies used across institutions. The UC acknowledged that:

> *Instructors know innovative pedagogy is valuable but there is still moderate resistance mainly due to unfamiliarity and discomfort with digital tools, and CD1's observation that many of our faculty members are industry-trained engineers with little exposure to instructional design or learning psychology, which continues to support traditional lecture-based teaching.*

EQAD pointed out that pedagogical grounding is lacking in some disciplines, particularly in engineering and management, while health sciences have made more progress with simulation-based approaches.

> In this regard, CD2 said *in clinical subjects, instructors struggle to adapt to new pedagogies; while simulations are available, not everyone is confident using them.* CD3 noted that *despite faculty enthusiasm, lack of sustained support and technical know-how limits their ability to fully implement student-centered learning strategies.*
>
> DH2 from the College of Engineering said
>
> *To encourage active learning, infrastructure and instructional preparedness should be enhanced.* According to DH5 from CHRM, *active learning is becoming more popular, particularly in management fields where leadership development is achieved through interactive techniques like case studies and group discussions.*

Concerns regarding outdated assessment methods were also widely expressed. CD2 criticized the overreliance on paper-based examinations, stating that:

> *There is a gap in authentic assessments that mirror real-life HR scenarios.* EQAD confirmed this gap, s*tating that many instructors lack the necessary training to assess competencies beyond multiple-choice tests.*
>
> DH3 from CHS agreed, s*tating that deeper simulation-based assessments are needed to bridge the gap between theoretical learning and clinical competency.* CD1 said, *"Frequent and structured assessments have helped instructors align their teaching with learning outcomes,"* but some departments are making progress.

The UC also discussed student-related challenges, noting a general resistance to new learning methods and a decline in motivation.

> *Course content seems not relevant to real life."* EQAD added *that the lack of robust student support services, particularly for those facing language barriers, learning difficulties, or emotional stress, contributes to low academic engagement.*

CD1 mentioned language challenges for students in technical fields, saying,

> *Technical terms in English are a real barrier for students whose first language is not English."* CD2 said, *"Standardized clinical terminology minimizes language challenges in health sciences,"* but *"Student fatigue from intense training affects concentration and motivation."*

> CD3 noted that *"low motivation, especially among second-year students, is noticeable"* and stressed that they are still trying to start mentorship and counseling programs "*despite limited resources."*

All of the participants who took part agreed that a lack of resources makes it very hard to deliver an effective curriculum. The UC said that "*funding remains a major bottleneck*," affecting everything from the school's ability to make partnerships with businesses to the infrastructure and digital resources in the classroom.

EQAD went on to say that competition between institutions for limited funds often leads to challenges, such as engineering having challenges with old lab equipment and health sciences not having enough basic supplies.

DH1 from CE said, *"Our labs are out of date; some of the equipment has not been replaced in over ten years.* " In the same way, CD2 said that the department often does not have enough medical models and clinical supplies, which makes it harder to learn by doing. While CD3 stressed the importance of building partnerships in the industry, he also said that "*better frameworks and incentives"* are needed to close the gap that already exists.

Department heads were especially interested in the idea of working together with people outside the department. DH5 (CHRM) said that:

> *Internships or time spent in real work environments would be very helpful for our students, but we still do not work well with businesses*.

DH3 (Engineering) agreed with this challenge, stating that *"outreach to technology companies has commenced but the university lacks a formal mechanism to sustain this kind of partnerships."* CD3 emphasized how valuable such partnerships are by stating that *"without structured exposure to the industry, experiential learning and curriculum relevance opportunities are not maximized."*

Complementing these institutional insights, the department heads offered reflections aligned with the quantitative findings presented in table 7. DH1 from CE highlighted the significance of preparation for military careers noting that:

> *We need to make our programs even better at combining technical skills with being ready to lead.* DH4 (CHS) agreed with the curriculum's focus on diversity and inclusion, saying that *"exposure to different points of view helps students learn how to work in multicultural military settings."*
>
> DH6 (CHRM) talked about how adaptable the curriculum is, saying that *"this strength should lead to modules that are tailored to the culture and operational needs of each service branch."* However, DH6 also said that *"curriculum evaluation is only effective when feedback is integrated dynamically,"* which shows that follow-up mechanisms need to be more responsive.

These qualitative insights support the statistical results in Table 7, especially the strengths in making the curriculum fit with military values, using active learning methods, and being open to all students. The insights also point out problems that are still happening, such as instructors not having enough experience, using outdated testing methods, students not being interested, not having enough resources, and not having strong enough partnerships with other groups. The data clearly show that we need to do the following: make smart investments in faculty development, improve assessment literacy, expand student support services, upgrade infrastructure, and set up formal ways for businesses to work together. These ideas are in line with the best ways to teach military and other practical skills. They show how important it is to have a successful plan and support for putting the curriculum into action.

Now that we have really looked at the data and understood it, it is time to stop just talking about it and start having a critical conversation about the results in light of the main research question: How is the curriculum being effectively implemented in the Ethiopian Defense University? This section will look at the results in light of ideas about how to teach a curriculum, what institutions want to achieve, and national standards for defense education. The researcher want to compare what he/ she already knows and what is expected by policy with real-world evidence to find out what the strengths, weaknesses, and underlying forces are that affect how these specialized institutions teach their subjects.

It is hard and always changing to put the curriculum into action in Ethiopian Defense University. They have to find a balance between the strict academic standards and the needs of military training. Ng (2018) says that these institutions want to make sure that their graduates are not only smart but also ready to handle the unique challenges of being a military leader and protecting the country. Pautler (1989) agrees with this point of view and says that it is very important for all institutions and training centers to stick to their plans.

Ethiopia's Education and Training Policy says that education is a key part of the country's growth and that the curriculum needs to be planned carefully (Gedifew, 2020). This fits with what we know. Our knowledge is the main goal of policy, but there are still problems with the system that make it hard to put a good curriculum into practice in EDU. Some of these problems are not having enough resources, having bad infrastructure, and not having enough instructors who are qualified. Both institutional reports and interviews with stakeholders revealed these problems, which continue to hinder students' access to a quality, useful education. Higher education is always changing, and this process is even harder because of changes in the world economy, society, and technology.

A closer examination of stakeholder perspectives reveals that Ethiopian Defense University (EDU) must strategically address five interrelated domains to ensure effective curriculum implementation: teaching methods, assessment approaches, student engagement, infrastructure and resources, and partnerships with external institutions such as military and defense-related businesses (Quijano, 2021). These areas are mutually reinforcing, collectively influencing both the quality and sustainability of curriculum delivery. Survey findings indicate that many curriculum implementers hold favorable views of the current curriculum, particularly with regard to the incorporation of active learning methods and the alignment of academic content with military values. However, persistent concerns remain about the adequacy of physical and technological infrastructure, as well as the practical application of theoretical knowledge.

Qualitative data derived from interviews and focus group discussions with key stakeholders, including the University Commandant (UC), the Education Quality Assurance Director (EQAD), College Deans (CD1, CD2, and CD3), and Department Heads, further illuminate these challenges. While instructors frequently report confidence in their ability to employ active learning strategies,

students express dissatisfaction with the limited opportunities for experiential learning and highlight a perceived disconnect between theoretical content and its relevance to real-world military contexts. This discrepancy underscores the importance of embedding continuous feedback mechanisms within curriculum implementation processes to ensure that institutional objectives remain aligned with student expectations and professional needs.

The integration of established theoretical frameworks provides a broader academic lens through which to interpret these findings. Fullan's Change Theory emphasizes the importance of stakeholder involvement and adaptive leadership in facilitating institutional transformation. Similarly, Rogan and Grayson's framework highlights the critical role of institutional culture and infrastructural capacity in shaping the success of educational reforms. Knowles' theory of andragogy emphasizes adult learners' preference for self-directed, experience-based, and goal-oriented learning, which is particularly relevant in military education, where learners often possess prior field experience and seek immediate applicability (Honeyman et al., 2021). Kolb's Experiential Learning Theory further reinforces the value of "learning by doing," suggesting the need for increased use of simulations, case studies, and field-based exercises.

A comparison of expected and actual instructional practices reveals both convergence and divergence. While many instructors perceive their methods as student-centered, students report insufficient exposure to hands-on learning. This misalignment signals the need to strengthen institutional cultures of critical reflection, peer support, and pedagogical coaching. In alignment with andragogical principles, adult learners are more motivated when instructional activities clearly articulate their purpose, demonstrate real-world relevance, and provide timely, actionable feedback. Yet, many students report limited opportunities to apply acquired competencies within anticipated military career contexts, suggesting deficiencies in experiential curriculum components.

Assessment practices constitute another area requiring improvement. Although some programs have begun adopting formative assessment strategies such as student projects and presentations, EQAD and several Department Heads acknowledge that summative, test-based assessments remain dominant. The variability and limited scope of these assessments hinder students' ability to demonstrate applied competencies. According to Anderson and Krathwohl's (2001) revision of

Bloom's Taxonomy, effective assessment must evaluate higher-order cognitive skills such as application, analysis, and synthesis. The current assessment structure thus falls short of supporting the attainment of desired learning outcomes.

Student engagement also emerged as a recurring theme. Instructors report efforts to promote active learning, yet students—particularly those from the College of Human Resource Management—express a need for more interactive and welcoming learning environments. Department Heads (e.g., DH3 and DH4) emphasize the importance of classrooms that encourage participation, foster student agency, and adapt to learners' interests and styles. Such environments are essential for enhancing motivation, fostering belonging, and promoting deeper learning.

Infrastructure and resource limitations pose significant barriers to curriculum implementation. EQAD and CD2 note that outdated facilities and insufficient technological resources impede the application of innovative teaching approaches. As DH6 from the College of Engineering indicates, limited laboratory access particularly constrains instruction in technically intensive courses. Thus, substantial investment in modern infrastructure, instructional technologies, and teaching materials is necessary to support curriculum effectiveness.

Collaboration with industry and military organizations is another critical factor. The UC stresses the importance of engaging with external partners to ensure curricular relevance and currency. However, CD1 and others observe that these partnerships are still in their nascent stages and require formalization through structured programs such as internships, faculty exchanges, and research collaborations. Such linkages would facilitate knowledge transfer between academia and the defense sector while expanding students' exposure to real-world military operations.

Overall, the findings highlight the need for a holistic and coordinated approach to curriculum implementation that addresses systemic, instructional, and contextual challenges. Professional development initiatives should focus on enhancing instructors' competencies in technology integration, assessment design, and experiential teaching strategies. The curriculum should be revised to embed structured experiential learning components that promote practical application. Furthermore, assessment systems should incorporate performance-based and real evaluation techniques aligned with defense sector requirements. Establishing systematic feedback channels

is also essential to identifying and addressing emerging issues, fostering transparency, and promoting shared ownership of the curriculum among students and instructors.

Ultimately, effective curriculum implementation depends on collective commitment, institutional accountability, and sustained improvement efforts. As Sepadi and Molapo (2024) assert, successful curriculum enactment empowers learners with meaningful skills to influence their environments. Similarly, Mafugu and Abel (2022) and Ngeno et al. (2021) emphasize that implementation is often hindered by limited instructor expertise and insufficient instructional support. Therefore, targeted investments, coherent policy frameworks, and visionary leadership are essential to overcoming these obstacles. While EDU faces substantial challenges in developing and executing an effective curriculum, findings from stakeholder consultations and focus group discussions offer valuable insights for continuous improvement. Grounded in theoretical frameworks, the results provide a roadmap for enhancing pedagogy, upgrading infrastructure, diversifying assessment practices, and strengthening industry linkages. A theory-informed, data-driven, and student-centered approach is essential to preparing military professionals who excel not only academically but also in operational environments.

4.4. Extent of Stakeholders' Engagement in the Existing Curriculum Implementation Process at the (EDU)

Effective curriculum implementation in the Ethiopian Defense University relies on the meaningful engagement of key stakeholders, particularly instructors and students. As both implementers and beneficiaries, their involvement significantly influences the success of educational programs. Understanding their engagement provides critical insights for fostering participatory and inclusive curriculum governance.

Thus, this section interprets findings from tables 8 to 9, which present statistical analyses including correlation coefficients, R and R^2 values, and p-values highlighting the strength, direction, and significance of relationships between stakeholder engagement and curriculum implementation. These results form the basis for evaluating stakeholder impact and identifying implications for institutional development and curriculum effectiveness.

4.1.1. Correlation and Regression Analysis of Extent of Stakeholders Engagement

Table 8: Relationships between Effective Curriculum Implementation and Stakeholders Engagement Regarding Students

Correlations			
		Effective Implementation of the Curriculum	Stakeholders Engagement
Effective Implementation of the Curriculum	Pearson Correlation	1	.378**
	Sig. (2-tailed)		.000
	N	109	109
Stakeholders Engagement	Pearson Correlation	.378**	1
	Sig. (2-tailed)	.000	
	N	109	109
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 9: Relationships between Effective curriculum Implementation and Stakeholders Engagement Regarding Instructors

Correlations			
		Effective Implementation of the Curriculum	Stakeholders Engagement
Effective Implementation of the Curriculum	Pearson Correlation	1	.410**
	Sig. (2-tailed)		.003
	N	51	51
Stakeholders Engagement	Pearson Correlation	.410**	1
	Sig. (2-tailed)	.003	
	N	51	51
**. Correlation is significant at the 0.01 level (2-tailed).			

The quantitative analysis in Tables 8 and 9 shows that there are statistically significant moderate positive correlations between stakeholder engagement and effective curriculum implementation. The Pearson correlation analysis showed a moderate positive relationship between student respondents ($r = .378$, $p < .01$, $N = 109$) and a slightly stronger relationship between instructors ($r = .410$, $p < .01$, $N = 51$). These results suggest that academic programs are delivered and implemented better when more stakeholders are involved.

The observed correlations are important because they back up what has already been written about the topic. Stakeholder engagement has been shown to be a key factor in the effectiveness of curricula in previous studies (Hwang & Wao, 2021; Xu, 2023), which supports the current findings. The instructors' slightly higher correlation may be because they are more directly involved in designing and implementing the curriculum, which may have given them a better understanding of how stakeholder contributions add value.

Qualitative findings give us a better understanding of the nature, scope, and perceived impact of stakeholder involvement than just the statistical ones. Interviews with institutional leaders, like the University Commandant (UC) and the Education Quality Assurance Director (IQAD), stressed the need to include a wide range of stakeholders, such as faculty, students, alumni, industry representatives, and regulatory bodies. These key informants say that this kind of diversity makes the curriculum more relevant and helps strong quality assurance systems work.

College Deans also talked about the formal ways that stakeholder views are included, such as through advisory boards and curriculum review panels. These structures help make sure that academic programs are in line with the strategic goals of national defense, which strengthens the alignment of the institution's mission.

Department Heads also stressed how regular and organized engagement practices are. For instance, DH1 said that consultations with stakeholders usually happen at least once a semester, especially when the program is being changed. DH2 also pointed out how important it is for industry partners to help keep the curriculum up to date with changing job market needs. All of these observations show that the institution values outside input as a way to make the curriculum more relevant and flexible.

There are still a number of problems, though, even though there are structured platforms for engagement. As CD1 pointed out, institutional limitations like not having enough resources or having to wait for procedures to finish often make it hard to quickly incorporate feedback from stakeholders. DH3 agreed with this point of view, saying that alumni and outside partners' feedback is not always acted on right away. This shows that there is a gap between what stakeholders say and what actually happens to the curriculum, which limits the potential impact of engagement practices.

To solve this problem, DH6 stressed how important it is to create good ways to close the feedback loop. To get the most out of stakeholder involvement, it is important to make sure that feedback is not only received but also turned into changes that can be made.

Another theme that came up in the qualitative data is the need for clear roles and responsibilities for all stakeholders. CD3 and DH2 both said that clearly defining these roles makes people more responsible and helps them work together better. For example, academic staff might be the best people to lead the design of lessons, while outside stakeholders could give strategic advice or confirm competency frameworks. This division of roles not only stops people from doing the same thing twice, but it also encourages people to work together in ways that make the most of their strengths and knowledge.

Furthermore, focus group discussions at different institutions showed that stakeholder engagement is specific to each field. People in the College of Health Sciences stressed how important it is to involve healthcare professionals and policymakers to make sure that service delivery meets needs. On the other hand, people from the College of Engineering talked about how technological and industrial changes have affected things, while people from Human Resource Management talked about how to get students ready for the workforce. These results show that strategies for involving stakeholders should be based on the goals and situations of each academic discipline in order to keep the curriculum relevant and useful.

Another important factor in curriculum development was student engagement. According to DH5, students are taking more and more part in course evaluations and curriculum review processes. This trend toward participation is part of a larger shift toward learner-centered education models, which is in line with what (Tesema & Enguday) found. More student involvement not only gives students more power, but it also helps academic programs get better all the time based on what students have experienced and what they expect.

To sum up, both the quantitative and qualitative results show that stakeholder involvement in curriculum implementation at EDU is moderately strong and becoming more institutionalized over time. The inclusion of a wide range of stakeholders, the creation of formal consultation processes, and the increasing involvement of students all point to a more mature system of collaborative governance. However, the fact that integration problems keep coming up, the need

for clearer role definitions, and differences in engagement by discipline show where things could be better.

To improve the effectiveness of the curriculum and the growth of the institution even more, EDU should improve communication, make feedback loops more efficient, and get more people involved from outside the institution. Not only will this improve the quality and responsiveness of the curriculum, but it will also help make sure that educational programs are in line with national development and security goals.

The next section goes into detail about what the results mean for the role of stakeholder engagement in the successful implementation of the curriculum in Ethiopian Defense University. The results give both theoretical and empirical information about how much and how stakeholders can affect curricular outcomes from the points of view of both students and instructors.

4.14. Regression Analysis of effective curriculum Implementation and Stakeholders Engagement (ni= 51, P< 0.05) Regarding Students and Instructors

Table 10: Coefficient of Determination (student)

Model Summary[b]									
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
					R^2Change	F Change	df1	df2	Sig. F Change
1	.410[a]	.168	.151	.38706	.168	9.877	1	49	.003
a. Predictors: (Constant), Stakeholders Engagement									
b. Dependent Variable: Effective Implementation of the Curriculum									

Table 11: Coefficient of Determination (student)

Model Summary[b]									
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
					R^2 Change	F Change	df1	df2	Sig. F Change
1	.378[a]	.143	.135	.37322	.143	17.787	1	107	.000
a. Predictors: (Constant), Stakeholders Engagement									
b. Dependent Variable: Effective Implementation of the Curriculum									

The regression analyses in tables 10 and 11 show that there is a statistically significant link between how well the curriculum is put into action and how involved stakeholders are. The model gave the student group (N = 109) R value of 0.378 and a R^2 value of 0.143. This means that the differences in how well the curriculum works can be explained by about 14.3% of the levels of stakeholder engagement. The model was statistically significant ($F = 17.787$, $p < 0.001$), which backs up Wilson et al.'s (2021) conclusion that there is a real positive link between how involved stakeholders think they are and how well the curriculum works.

The regression model for the instructor group also had an R value of 0.410 and a R^2 value of 0.168. This means that stakeholder involvement is to blame for 16.8% of the differences in how well the curriculum is put into action. This model was also statistically significant, which supports the idea that instructors believe they are important to reaching curricular goals (ELEMS-IKWEGBU, 2024). The instructor dataset has a slightly higher R^2 value. This could be because they are always and, in many ways, involved in planning, delivering, and evaluating the curriculum, which helps them understand what stakeholders bring to the table.

These results directly answer the main question of the study: How much have stakeholders been involved in putting the curriculum into practice in EDU? The statistical and qualitative data show that stakeholders are somewhat involved, but in a way that matters. This has real effects on how well the curriculum works. It is clear how engaged people are, but the effects are more complicated and depend on a number of situational and institutional factors.

Also, the results are in line with a growing body of research that supports using participatory and collaborative methods to make the curriculum. Ogunsanwo and Bukki (2023) and Anderson and Krathwohl (2001) say that when a lot of people, especially instructors and students, are involved in making decisions about the curriculum, it is more useful, relevant, and contextualized. As a result, this study has a number of real-world effects. The results might help instructors make their lessons, tests, and curriculum better so that they better meet the needs of all the people who care about them. Students may be more involved, responsible, and in charge of their learning outcomes if they know that they are co-creators in the design of their education.

If we look more closely at the results for each group, we can see that there are small differences between the different types of stakeholders. Instructors may have had a stronger

connection because they were involved in every step of putting the curriculum into action. According to Short and Hirsh (2020), instructors are the ones who keep interpreting, putting things in context, and changing the curriculum. They now have a better idea of how the process of putting something into action works and what it means. These results show that putting a curriculum into action is not a straight line or a set process; it is a changing and cooperative effort that needs to be coordinated at all levels of the school.

It is still important to look at these results in the larger context of how curriculum implementation works. The R^2 values we got are statistically important, but they are still low. This shows that getting stakeholders involved is just one part of a complicated system of factors that all work together. Leadership at the institution, how the administration is set up, how resources are available, and how policies are set up are some other important things that affect how well something is put into action. Also, in specialized fields like defense education, the curriculum should not only meet academic standards, but also operational, strategic, and professional goals (Anderson & Krathwohl, 2001). This makes it even harder to put into action.

Because of these problems, the study's real-world effects go beyond just making policies and plans for institutions and other organizations. For curriculum implementation to work, EDU should use a systems-thinking approach that includes getting input from stakeholders at every stage of the curriculum lifecycle, from design and piloting to delivery and evaluation. Advisory boards, structured consultations, and participatory planning models are all examples of institutional tools that can help make curriculum processes more open, adaptable, and welcoming. Digital technologies can help make engagement a part of everyday life by letting people give feedback in real time, plan together, and keep an eye on things (Ayas & Charles, 2024). These kinds of changes are needed to keep stakeholders interested and to make sure that curricula are flexible enough to meet new needs.

Even with these chances, it is still important to be aware of the problems that come up when you involve stakeholders. Ng (2018) says that people often lose interest in participatory curriculum design during the implementation phase because the system is not working well and people are not following through. People do not talk to each other enough, stakeholders do not work together well enough, or there are not enough resources. These are some of the reasons why these gaps happen.

The study's results show that stakeholder engagement can be a key way to close the implementation gap and make sure that the curriculum is followed correctly.

The next part looks at two ANOVA models that look at the things that affect how well the curriculum is put into place in Ethiopian Defense University. The first model looks at problems that institutions face, focusing on things that have to do with students, instructors, and resources. The second model sees stakeholder engagement as a separate factor that can predict outcomes. These models, which are based on Systems Theory and Implementation Science, show how systemic and participatory factors affect how well education works.

Table 12: ANOVA Result

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.791	3	1.597	13.319	.000[b]
	Residual	12.591	105	.120		
	Total	17.382	108			
a. Dependent Variable: Effective Implementation of the Curriculum						
b. Predictors: (Constant), Student Related Challenges, Resource Related Challenges, Instructors Related Challenges						

Table 13: ANOVA Result

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.480	1	1.480	9.877	.003[b]
	Residual	7.341	49	.150		
	Total	8.821	50			
a. Dependent Variable: Effective Implementation of the Curriculum						
b. Predictors: (Constant), Stakeholders Engagement						

The first ANOVA model (Table 12) demonstrates a statistically significant differences between institutional challenges and curriculum implementation ($F = 13.319$, $p = .000$). The model explains a considerable portion of the variance (Sum of Squares = 4.791), indicating that these challenges, when combined, substantially affect curriculum delivery. Specifically, unprepared students, overburdened and under-supported instructors, and limited resources function interactively, compounding barriers to effective implementation.

These findings align with Systems Theory**,** which conceptualizes educational institutions as interconnected systems where deficiencies in one area can disrupt overall functioning (Tessema & Abebe, 2011). Additionally, Implementation Science reinforces the need for contextually informed reforms that consider institutional readiness (Jansen, 1989).

Conversely, the second model (table 13) shows that stakeholder engagement, though assessed independently, is also a significant predictor ($F = 9.877$, $p = .003$), though it accounts for less variance (Sum of Squares = 1.480). This confirms that inclusive governance through involvement of students, faculty, administrative leaders, and external partners positively contributes to curriculum implementation by fostering shared ownership and aligning educational objectives with contextual needs (Short & Hirsh, 2020).

A comparative analysis reveals that institutional challenges collectively exert a stronger influence than stakeholder engagement alone. However, this does not negate the value of stakeholder involvement. Rather, it suggests that addressing systemic barriers may be a prerequisite for stakeholder engagement to reach its full potential. In this context, engagement functions more effectively as a complement to, rather than a substitute for, institutional reform.

Theoretically, the findings reaffirm that successful curriculum implementation depends on both internal institutional coherence and external collaboration. Thus, policy measures should be dual-pronged: investing in foundational resources and capacity-building, while also embedding participatory structures that ensure stakeholder input and feedback at all levels. Only through this integrated approach can EDU achieve sustainable curriculum reform that meets both institutional goals and the broader demands of defense education.

The next section explores the role of stakeholder engagement in shaping effective curriculum implementation within Ethiopian Defense University, drawing on regression analyses presented in tables 14 and 15. The discussion interprets these statistical results through the lenses of Systems Theory and Implementation Science, linking them to practical implications for defense education.

Table 14: Regression Coefficient

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.858	.262		10.897	.000
	Stakeholders Engagement	.294	.070	.378	4.218	.000
a. Dependent Variable: Effective Implementation of the Curriculum						

Table 15: Regression Coefficient

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.756	.380		7.248	.000
	Stakeholders Engagement	.322	.102	.410	3.143	.003
a. Dependent Variable: Effective Implementation of the Curriculum						

To begin with, both regression models indicate that stakeholder engagement exerts a statistically significant and positive influence on curriculum implementation. Specifically, the unstandardized coefficients (B = 0.294 in Table 14 and B = 0.322 in Table 15) demonstrate that increased stakeholder involvement correlates with tangible improvements in implementation outcomes. Additionally, the standardized beta values (0.378 and 0.410, respectively) point to a moderate to strong effect, with the second model revealing a slightly more pronounced impact.

Furthermore, the robustness of these findings is affirmed by low p-values (.000 and .003) and high t-values (4.218 and 3.143), indicating strong statistical significance (Wonglorsaichon et al., 2014). Although the constants in both models differ slightly (2.858 vs. 2.756), this variation may reflect baseline differences across institutional contexts, suggesting that other unmeasured factors such as organizational culture or leadership dynamics might also influence implementation effectiveness.

From a theoretical perspective, these findings align with Systems Theory, which conceptualizes curriculum implementation as a product of dynamic interactions among various

institutional components. In this context, stakeholder engagement functions as a systemic integrator, harmonizing institutional inputs, feedback mechanisms, and strategic objectives (Tessema & Abebe, 2011). Likewise, Implementation Science underscores the necessity of context-sensitive strategies and inclusive stakeholder participation to facilitate the effective adoption of educational reforms (Jansen, 1989).

In the specific domain of defense education, such stakeholder involvement is particularly crucial. It ensures that curricular content remains responsive to shifting national security imperatives and evolving defense strategies. Consequently, EDU should institutionalize mechanisms such as advisory boards, periodic stakeholder consultations, and feedback loops throughout the curriculum lifecycle. These strategies will help ensure that curricula remain agile, responsive, and strategically aligned.

Moreover, curriculum content should strike a balance between global competencies required of military professionals and the specific developmental realities of Africa. According to Ayas and Charles, (2024) addressing regional challenges necessitates academic programs that are infused with African-centered perspectives, leadership training, and mission-readiness frameworks tailored to local contexts.

Nevertheless, it is important to recognize the study's limitations. While a strong association between stakeholder engagement and curriculum effectiveness has been established, causality cannot be inferred from the current analysis. Therefore, future research should investigate how mediating variables such as faculty characteristics, institutional culture, and leadership practices shape this relationship. Longitudinal studies would be particularly valuable in uncovering how stakeholder engagement influences educational outcomes over time.

In conclusion, the findings highlight the critical role of stakeholder engagement as both a strategic and systemic lever for effective curriculum implementation in EDU. Sustained, contextually grounded engagement is not merely beneficial it is essential for aligning educational efforts with national defense priorities and regional development goals.

4.4.1. Summary of Regression Analysis on Stakeholder Engagement

The regression analyses presented in Tables 10, 11. 12, and 13 demonstrate a statistically significant and positive relationship between stakeholder engagement and curriculum implementation effectiveness in Ethiopian Defense University. For the student cohort (N = 109), the model yielded an R value of 0.378 and an R^2 of 0.143, indicating that approximately 14.3% of the variance in curriculum effectiveness can be explained by levels of stakeholder involvement. This relationship was statistically significant ($F = 17.787$, $p < 0.001$). Similarly, the regression model for the instructor group showed an R value of 0.410 and an R^2 of 0.168, suggesting that 16.8% of the variance in implementation effectiveness is attributable to stakeholder engagement, with a statistically significant outcome ($p = 0.003$). The instructors have a slightly higher R^2 value because they are more consistently and in many ways involved in the whole curriculum lifecycle, from planning and delivery to evaluation.

Tables 14 and 15 show regression coefficients that support this conclusion. The unstandardized B values are 0.294 and 0.322, and the standardized beta values are 0.378 and 0.410, in that order. These results, along with high t-values and low p-values, show that they are very strong. The data show that more involvement from stakeholders leads to better curriculum outcomes, especially when it comes to encouraging shared ownership, making things relevant to real life, and making sure that they fit with the institution. Systems Theory sees institutions as interconnected systems, and Implementation Science stresses the need to use strategies that are appropriate for the situation and include people in reform efforts. Both of these ideas support the findings.

There is a positive correlation, but the R^2 values are still low. This means that stakeholder engagement is only one of many things that affect how well the curriculum works. Important factors also include the quality of leadership, the institution's structure, the sharing of resources, and the policy frameworks. Also, when it comes to defense education, the way the curriculum is taught should also meet operational, strategic, and professional needs, which makes things even more complicated.

Based on these factors, the study recommends a systems-thinking approach to curriculum reform in EDU that involves all stakeholders at every stage, from design to evaluation. Setting up

advisory boards, talking to stakeholders on a regular basis, and using digital platforms to get feedback in real time and make things better are all excellent ideas. These tools can help keep curricula flexible and able to change when needs change. The study does, however, point out some issues that can make it challenging for stakeholders to stay involved, like poor coordination between institutions, inconsistent communication, and a lack of resources.

Finally, the regression analysis shows that getting stakeholders involved is crucial for improving how curriculum is put into practice in EDU. It is not the only thing that matters, but it is important to strategically integrate it into institutional processes so that educational outcomes are in line with national defense priorities and regional development goals. Longitudinal studies should look into how things like faculty characteristics and the culture of the institution affect this relationship over time.

4.5. Opportunities and Challenges of Curriculum Implementation

Students and instructors were asked to rate the opportunities of curriculum implementation in their respective institutions.

4.5.1. Opportunities of Effective Curriculum Implementation at the EDU

Table 16 provides a quantitative overview of the opportunities identified by students and instructors for effective curriculum implementation at Ethiopian Defense University. By analyzing responses across six thematic areas, the table reveals varying levels of agreement between the two groups, highlighting both commonalities and divergences in perception. This analysis seeks to interpret these patterns to better understand the potential leverage points for enhancing curriculum effectiveness within EDU.

Table 16: Descriptive Statistics Regarding Opportunities of Effective Curriculum Implementation

No	**Item**	**Group**	S. Agree		Agree		Neutral		D. agree		S. D. agree		Total	
			F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**
1	Leveraging Emerging Technologies & Research	Student	12	11	63	57.8	12	11	20	18	2	2	109	100
		Instructor	3	5.9	19	37.3	8	16	14	28	7	14	51	100
2	Experiential Learning (Simulations & Field Exercises)	Student	28	25.7	45	41.3	21	19	11	10	4	4	109	100
		Instructor	6	11.8	17	33.3	19	37	6	12	3	6	51	100
3	International Partnerships & Collaborations	Student	24	22	51	46.8	4	3.7	19	17	11	10	109	100
		Instructor	8	15.7	19	37.3	10	20	11	22	3	6	51	100
4	Learning from Other Institutions & Organizations	Student	17	15.6	37	33.9	10	9.2	16	15	29	27	109	100
		Instructor	8	15.7	17	33.3	11	22	12	24	3	6	51	100
5	Utilizing Faculty and Student Expertise	Student	1	17.4	30	27.5	17	16	10	9.2	33	30	109	100
		Instructor	22	43.1	17	33.3	7	14	3	5.9	2	6	51	100
6	Practical Skill Application in Curriculum	Student	9	23.9	41	37.6	6	5.5	12	11	2	22	109	100
		Instructor	9	17.6	13	25.5	14	28	13	26	2	4	51	100

Table 16 shows how students and instructors at Ethiopian Defense University view different opportunities to effectively implement the curriculum. Students were more likely to have a positive view on most things than instructors were. For instance, 68.8% of students said that using new technologies and research makes it easier to teach the curriculum, but only 43.2% of instructors agreed. It is interesting that 42% of instructors disagreed, which could mean that they are worried about access, familiarity, or institutional support for using technology in the classroom. Many students (67%) also agreed with experiential learning methods like simulations and field exercises. On the other hand, only 45.1% of instructors agreed, and 37% were neutral. This lack of opinion may stem from uncertainty or limited involvement in experiential teaching. 68.8% of students thought that international partnerships and collaborations were good, but only 53% of instructors agreed. Instructors expressed greater hesitation, as evidenced by their more neutral and disagreeing responses. Their hesitation could be because they did not have strong ties to the institution or because it was hard to put these kinds of collaborations into practice. Both groups had mixed answers when asked about chances to learn from other institutions and groups. 49.5% of students agreed with the possible benefit, but 27% strongly disagreed. 49% of instructors agreed with the idea, while 30% disagreed. These answers show that people are doubtful about how useful

or effective external benchmarking is. There was a big difference in how people thought about using the knowledge of faculty and students. 76.4% of instructors thought the opportunity was a great chance, but only 44.9% of students agreed. This gap suggests that institutions may not fully explain or show how they use their knowledge to design the curriculum. For practical skill application, 61.5% of students agreed on its importance, while 22% strongly disagreed. This disparity shows that people have different experiences or expectations. There was still a lot of disagreement among instructors, with 43.1% agreeing and 30% disagreeing. These results show that both groups see important opportunities, but instructors are often more hesitant, probably because of limitations at their institutions, a lack of support, or not having enough resources.

Overall, students and instructors see many good ways to improve how the curriculum is taught at EDU, especially by using technology, hands-on learning, and the knowledge of staff members. But there are gaps in perception, especially between students' optimism and instructors' caution. This shows that these opportunities need better communication, training, and institutional support to be fully realized.

In addition to the numbers in 8 about curriculum implementation opportunities at the Ethiopian Defense University (EDU), this section brings together qualitative information from interviews with the University Commandant, the director of education quality assurance, College Deans, and focus group discussions with department heads. These stories add more depth to the survey results by giving us a more nuanced view of how important people see curriculum changes as chances to change institutions and education.

Interviews and focus group discussions with important people from Ethiopian Defense University showed that curriculum reform offers several strategic opportunities. Thematic groups of these opportunities include modernizing teaching, advancing research, learning through doing and experiencing, working together as institutions, and having a say in how things are run.

The reform process has modernized classrooms with digital technologies. The University Commandant (UC) said that the reform is a good time to make sure that academic delivery is in line with both global trends and changing military needs. He said that while students want to use new tech, instructors are often reluctant because they lack the skills or infrastructure. UC said,

> *This hesitation shows us where we need to focus our development efforts. The reform process is a great chance to put money into training instructors and building up the digital infrastructure. If we can do this, our learning environments can become dynamic, innovation-driven platforms that meet the needs of the modern military.*

DH1 from the College of Engineering backed this idea up by saying that even though some departments had already set up smart classroom systems, the reform process should be considered a chance to fix differences between departments. He stressed that making digital infrastructure more accessible to everyone is important for making sure that technology-enhanced learning is used consistently throughout the school.

Along with new ways to improve teaching, the reform agenda has also opened up new ways to improve research at institutions. The Internal Quality Assurance Director (IQAD) stressed that EDU could become a research-heavy school. Instead of seeing the current limits on faculty research output as problems, he saw them as chances for academic growth. As EQAD said,

> *This includes setting up special research facilities, rewarding academic work, and including inquiry-based learning in the curriculum. These kinds of projects would greatly help us reach our goal of becoming a knowledge-producing institution that assists with national defense strategy.*

To make this point even stronger, DH2 from the College of Health Sciences said that adding research elements to instructional design, especially in clinical and operational settings, could help create a stronger academic research culture across the whole institution.

Stakeholders also see the institutionalization of practical, field-based learning as another important chance. CD1 stressed how important it is to make sure that theoretical lessons are in line with real-life situations. He said,

> *Through thoughtful implementation, we can embed simulations, case-based learning, and field exercises more systematically into our programs.*

CD2 said that while some academic units have made good progress in using experiential learning tools, there are still some big problems with how they are used. He said,

Some academic units have already set a good example by using real-world tools in their teaching." But this moment gives institutions a chance to make sure everything is consistent. Reform helps us find gaps, move resources around, and train instructors how to use active learning methods.

Even though there were practical problems, like not having enough equipment and not enough time to coordinate, CD3 stayed positive. He said, *"This part of the curriculum rollout is a chance to push for making these practices a part of the school system."*

People in the focus group said the same things during the discussion. DH3 from the College of Health Sciences said that hands-on clinical training, even though it is hard to set up, has a clear effect on how engaged and prepared students are. DH4 from the College of Human Resource Management also stressed that experiential learning is important not just for developing skills, but also for building leadership and decision-making skills that are useful in defense settings.

The reform process was also considered a great way to increase international cooperation and institutional benchmarking. CD1 strongly supported partnerships across borders, saying,

This is an ideal time to pursue strategic international collaborations. These are not symbolic gestures they are concrete avenues through which we can enhance our programs by learning from others.

EQAD agreed with this perspective and stressed how important it is to formalize benchmarking practices. He said,

We've reached a point where benchmarking should evolve into a formalized and institutionalized process. Curriculum reform provides the perfect opportunity to build mechanisms that convert institutional visits and partnerships into actionable knowledge.

People in the focus group agreed with this perspective. DH5 from the College of Human Resource Management stressed the need for consistency, saying,

Historically, benchmarking has occurred in an ad hoc manner. Now, with the momentum of curriculum change, we have a timely opportunity to make it systematic.

In the same way, DH6 said that structured and institutionalized benchmarking frameworks would help EDU better adapt international models to its academic and military settings.

Stakeholders also saw the reform agenda as a beneficial chance to improve inclusive governance and make feedback systems stronger. UC stressed the need to involve both faculty and students more in making decisions about the curriculum. They said,

> *Faculty involvement has increased, but we should go further and make sure that student voices are also meaningfully included.*

CD2 backed the statement up by pointing out the special ways that students can help improve the curriculum. *"Students provide significant feedback, particularly regarding the delivery and grading processes."* Implementation gives us a chance to change how we give feedback so that it gets student input and makes sure that input leads to changes.

EQAD also pushed for formal structures that encourage collaborative planning, saying that the process should go beyond informal consultations. This is the right time to make regular planning meetings with both faculty and students a part of the school.

DH5 raised a common concern about the use of feedback during focus group discussions. Instructors usually think that their knowledge, especially in military areas, is valued, but students often say they are disappointed that their input is not acted on. He said,

> *This time of reform gives us a chance to fill that gap. We build a more accountable academic culture and strengthen trust by being responsive.When you look at all of these points of view, they show how the curriculum reform process offers many different kinds of opportunities.*

The University Commandant put together these ideas and said that implementing the curriculum was not just an administrative task but a way for the institution to change. He said,

> *Implementing the curriculum at EDU is much more than just updating the procedures. It gives us a chance to fully align our academic programs with the changing needs of the defense industry. It helps us rethink how we use our resources, support research, encourage teamwork, and make sure that various voices are heard in decision-making.*

He said; these efforts will only work if the process is open to all and the institution can act quickly on stakeholder feedback. This will make EDU a top institution in defense education.

Therefore, we have shown the quantitative and qualitative results about the perceived opportunities for curriculum implementation at Ethiopian Defense University, it is time to look at these results more closely in the context of theory and institutions as a whole. The next discussion combines survey data and opinions from stakeholders, along with important educational theories and writings, to explore the strategic effects of these opportunities and to gain a clearer understanding of how they can support long-term curriculum changes in EDU.

To fully understand the chances of successfully implementing a curriculum in Ethiopian Defense University, you need to look at both the numbers from surveys and the opinions of people who work at the institutions. Combining these data sources reveals several strategic areas for reform efforts. The results show that EDU have a lot of potential to modernize how education is delivered, improve the research capabilities of their institutions, and make sure that teaching methods are in line with military and national goals, even though there are some problems. Some of the most important opportunities that have been found are: using technology, experiential learning, working with people from other countries, using the expertise of people within the organization, and participatory governance. Putting these themes together not only builds on what is already strong, but it also gives institutions a clear path to follow for targeted growth.

Digital technologies are one of the best ways to improve how the curriculum is put into practice. Quantitative data show a big difference between what students and instructors think: 68.8% of students think that new technologies make the curriculum more effective, but only 43.2% of instructors agree. This gap suggests that faculty members are worried about digital readiness, access, or how well their teaching methods fit with the technology (Aslam et al., 2024). Also, 42% of instructors said they did not agree, which could mean they were worried about their technical skills, the lack of infrastructure, or the lack of support from their school.

Qualitative findings offer essential context to this observation. The University Commandant emphasized the urgency of addressing technological disparities, remarking that *"this hesitation highlights where we should concentrate our development efforts… there is an important opportunity here to invest in instructor training and digital infrastructure."* DH1 from the College of Engineering similarly observed that digital tools such as smart classrooms are unevenly distributed, reinforcing the need for equitable infrastructure investment.

These insights aligns with Constructivist Learning Theory, which says that technology can help students learn actively and focus on their own learning when it is used the right way (Poth, 2018). Zou et al. (2025) and Alenezi and Akour (2023) also say that digital transformation in higher education should include using new tools, making plans for the future, building faculty capacity, and giving ongoing technical support. Digital technologies are not just a way to make things more modern; they can also help instructors and students learn better and come up with new ideas for the school.

Stakeholders saw curriculum reform as a way to improve the institution's research capabilities, along with digital transformation. The numbers show that people think internal knowledge generation is helpful to a moderate degree, but the interviews show that people want more. The Internal Quality Assurance Director (IQAD) did not see the current issues with research output as problems. Instead, they saw them as chances to get better. He said that the institution's goal of becoming a research-driven, defense-focused academic body can only be reached by "establishing dedicated research facilities, incentivizing scholarly output, and embedding inquiry-based learning."

DH2 from the College of Health Sciences agreed with this point of view. They said that adding research to clinical and operational modules makes the education better and keeps it up to date with the needs of the military and the health sector. Fullan's Educational Change Theory says that leadership, ongoing support, and a desire to change from within are all important for institutional change (Fullan, 2007). These points of view back this up. Changing the curriculum is a way to strategically move EDU to a place where it makes knowledge and helps with the development of national defense strategy and policy.

Another chance is to make learning from experience better. The survey found that a lot of students (67%) liked field-based learning methods like simulations and hands-on activities. Only 45.1% of instructors agreed, and 37% did not have an opinion. This level of neutrality means that the person may not be sure or may not have used applied teaching methods much, which is a good sign for professional growth.

In qualitative interviews, CD1 articulated the importance of practical learning, stating that *“through thoughtful implementation, we can embed simulations, case-based learning, and field*

exercises more systematically." CD2 and CD3 echoed these sentiments, while also acknowledging logistical and capacity-related barriers. Nevertheless, both viewed curriculum reform as a timely opportunity to institutionalize experiential learning. Likewise, DH3 and DH4 emphasized its role in promoting student engagement, decision-making, and operational readiness particularly in military contexts.

These findings are well-supported by Constructivist Theory, which highlights the value of authentic, real-world learning experiences in building deep understanding and transferable skills. As Mtshali et al. (2020) explain, experiential methods improve student retention and competency development by situating learning in contexts that mirror professional and field-based realities.

Another opportunity identified through both data sources involves the expansion of international partnerships and institutional benchmarking. While 68.8% of students view international collaboration as beneficial, only 53% of instructors agreed, with a notable proportion indicating uncertainty or skepticism. This discrepancy may be attributed to bureaucratic complexities, limited exposure to external institutions, or concerns about the feasibility of aligning curricula across contexts.

In the qualitative narratives, CD1 described this as *"an ideal time to pursue strategic international collaborations… not as symbolic gestures but as avenues to learn from others."* EQAD advocated for a more formalized approach to benchmarking, and DH5 and DH6 emphasized the need to integrate international models systematically. These views are consistent with Systems Theory, which underscores the value of inter-organizational learning and structured feedback loops for continuous institutional improvement (Ng, 2018).

Therefore, while interest in international engagement is evident, realizing this opportunity will require dedicated structures, resources, and leadership to manage cross-border collaborations effectively.

The final opportunity pertains to participatory governance and leveraging internal expertise. While 76.4% of instructors affirmed the value of faculty and student contributions in curriculum design, only 44.9% of students agreed, suggesting that students may not perceive their input as meaningfully acknowledged or acted upon.

This concern was echoed in the interviews. The University Commandant emphasized the importance of inclusivity, stating that *"we should go further and ensure that student voices are also meaningfully included."* Similarly, CD2 and EQAD called for institutionalizing collaborative platforms, with EQAD noting that *"this is the right time to establish regular joint planning sessions that include both faculty and students."* DH5 further remarked that responding to student feedback is crucial for building trust and fostering a culture of accountability.

These views are in line with the ideas behind Professional Learning Communities (PLCs), which say that institutions can get better by working together, sharing leadership, and thinking about their own work (Poth, 2018).

Promoting participatory governance not only makes curriculum development more democratic, but it also makes sure that changes are based on what instructors and students have learned. The study found a lot of chances that have a big impact on leadership, capacity building, and governance in EDU. Leaders should make a clear plan for change, back new ideas, and give money to help faculty grow and improve the school's digital infrastructure. According to Chigbu and Makapela's (2025) study, participatory governance and collaboration between different fields are needed for lasting change in specialized institutions.

It is also important to invest in digital systems, create ways for institutions to get feedback, and have faculty training programs that follow national curriculum frameworks. Institutions should also make sure that their students have the tech skills they need and that their instructors have the tools they need to use new teaching tools (Nițǎ & Guțu, 2023; Morales et al., 2021).

Digital transformation is not just about changing technology; it is also about changing the way things are set up and how people work together. To make this happen, there needs to be clear plans, strong leadership, and coordination across systems (Alenezi & Akour, 2023; George & Wooden, 2023). Institutions that carefully plan, include everyone in the decision-making process, and give regular feedback are better able to make the most of these chances and get military professionals ready for the complicated, tech-driven security environment of the future.

In conclusion, the study of how to implement the curriculum at EDU shows that there are many chances, but they can only be taken if the gaps in understanding are closed, the system is

fixed, and everyone is involved. This study shows that we need to take strategic action that combines quantitative trends and qualitative insights and puts them in the context of relevant theories. EDU should make the most of these opportunities by making planned changes that put technology, hands-on learning, research development, and working together to run things at the top of their list of things to do. This will help them reach their goal of giving people a higher education that is relevant to the defense industry in a world that is always changing.

4.5.2. Challenges of Effective Curriculum Implementation

In an effort to gain insights into the impediments affecting the successful implementation of curricula within Ethiopian Defense University, respondents were asked to identify and elaborate on the key challenges they have encountered in this regard. The data gathered from their responses have been systematically analyzed and are presented in Table 17. This table provides a comprehensive overview of the various factors perceived to hinder effective curriculum implementation, thereby offering a foundation for further discussion and analysis of institutional and pedagogical constraints within the defense education context.

Table 17: Descriptive Statistics Regarding Challenges of Effective Curriculum Implementation

No.	Item	Student N=109		Instructors N=51		Total	
		M	SD1	M	SD2	CM	CS
1	Instructor Resistance to Change	3.61	1.162	3.61	1.185	3.61	1.166
2	Lack of Pedagogical Knowledge & Skills	3.64	1.11	3.12	1.243	3.47	1.176
3	Integration of New Technologies	3.52	1.077	3.29	1.238	3.45	1.132
4	Diverse Student Accommodation	3.42	1.242	3.25	1.294	3.37	1.257
5	Language Barriers	3.23	1.176	3	1.536	3	1.301
6	Limited Evaluation & Assessment	3.47	1.214	3.14	1.371	3.35	1.271
7	Limited Access to Resources	3.64	1.076	4	0.849	3.36	1.020
8	Lack of Funding	3.67	0.972	3.9	0.9	3.75	0.953
9	Budget Constraints	3.39	1.114	3.94	0.904	3.74	1.080
10	Limited Industry Collaboration	3.5	1.068	3.82	0.91	3.57	1.028
11	Insufficient Student Support Services	3.56	1.031	3.76	0.862	3.60	0.982
12	Student Resistance to Change	3.39	1.114	3.67	1.071	3.62	1.105
13	Low Student Motivation	3.58	1.039	3.49	1.12	3.48	1.063

Table 17 presented the overall situation of the challenges to implementing the curriculum at the Ethiopian tertiary institutions based on both students' (N=109) and instructors' (N=51) views. Instructor-based challenges are particularly pronounced, both groups placing the mean score of 3.61 on "Instructor Resistance to Change," which attests to the shared acknowledgment of resistance towards embracing new pedagogical approaches. There is a split in the rating assigned to "Lack of Pedagogical Knowledge and Skills," as students rated this item more highly (M=3.64) than instructors (M=3.12), which might indicate a possible gap in self-evaluation among faculty. In the case of the "Integration of New Technologies," students indicated a higher mean (M=3.52) than instructors (M=3.29), showing that students might be facing more severe issues with integrating technology into the learning process.

In the student-related factors, "Diverse Student Accommodation" was scored by students at M=3.42 and by faculty members at M=3.25, indicating a shared understanding of the intricacies involved in responding to differences in learning needs. "Language Barriers" was found to be moderately significant for both groups, students at M=3.23 and faculty members at M=3.00, which points towards recurrent communication problems in multicultural environments. The "Limited Evaluation & Assessment" issue was rated as a higher issue by students (M=3.47) than by faculty (M=3.14), and it may be inferred that students perceive that current methods of assessment are not wholly capturing the extent of their learning.

Resource-related problems are evidently prioritized, where instructors assigned a higher mean rating (M=4.00) to "Limited Access to Resources" compared to students (M=3.64), indicating that instructors may more specifically feel the constraints borne by scarce resources. Similarly, "Budget Constraints" were also rated higher by instructors (M=3.94) compared to students (M=3.39), indicating the financial constraints on curriculum delivery. More tellingly, perhaps, "Lack of Funding" was also cited as being slightly more important by students (M=3.67) compared with instructors (M=3.90), which indicates students too are aware of the finance concerns concerning their learning. Both also identified "Limited Industry Collaboration" as an issue, on instructors' M=3.82 and students' M=3.50, which illustrates the necessity for more industry-academia collaboration to enable work-related learning. To provide supporting information and add to the figures given in Table 4.6 regarding challenges to implementing curriculum policies, qualitative data were collected using in-depth interviews with the University

Commandant and College Deans, and group discussions with departmental heads. The following provides the significant findings of the latter in detail, giving a broad description of challenges encountered in Ethiopian Defense university related to policies, teaching, and operations.

Based on information from the University Commandant (UC), Education Quality Assurance Director (IQAD), three College Deans (CD1, CD2, CD3), and six department heads (DH1–DH6) across the Institutions of Engineering, Health Sciences, and Human Resource Management, five general thematic challenges are highlighted: pedagogical innovation resistance, legacy assessment practices, issues with student engagement, resource limitation, and few external partnerships. One of the most pervasive challenges reported across all institutions was the resistance to pedagogical innovation. Although there is widespread institutional acknowledgment of the value of contemporary teaching practices, many instructors continue to rely on traditional, lecture-centered methods. As UC explained,

> *While lecturers identify the importance of new pedagogy, moderate resistance exists primarily because of unfamiliarity and discomfort with technology tools.*

Apart from this, the problem is not equally spread across study fields. For example, EQAD noted that:

> *Our surveys indicate that some lecturers, particularly in engineering and management, are non-pedagogically motivated. Although health sciences have been enhanced using simulation-based learning, others fall behind.*

This was supported by CD1 (Engineering), who had put the blame on instructors' academic background:

> *Our professors are predominantly industry-trained engineers who have little exposure to instructional design and learning psychology. Consequently, they employ lecturing rather than interactive or student-centered pedagogies.*

Conversely, CD2 (Health Sciences) offered specific institutional initiatives to develop teaching capacity: *We've had recurrent faculty growth programs, more specifically in the area of clinical simulation instruction. However, the catch is keeping tools of assessment updated to properly capture learning outcomes.* However, CD3 (Human Resource Management) did mention

a crucial limitation: *We observe motivation on our part of the faculty to innovate but the absence of consistent support and technical expertise prevents them from embarking on full-scale student-centered learning methods.*

Instructors recognize the significance of innovative pedagogy, yet there is moderate

Department heads follow suit in the focus group interviews. For instance, DH1 (Engineering) said,

> *Some instructors are technically advanced in their area of practice but not trained to use effective pedagogies. This can be seen in their teaching practice, where they are more formulaic and lecture-based."* DH3 (Health Sciences) further contributed, *"Lecturers teaching clinical courses struggle to change pedagogies to newer ones. Although there are simulators, not all are comfortable using them."*

Aside from pedagogical issues, respondents uniformly named out-of-date and artificial testing methodologies as a serious impediment. In every college, overdependence on old-fashioned, written examination practice was prevalent, usually at the expense of competency- and experience-based assessment methods. DH6 (HRM),

We rely too much on paper tests. There is not enough use of real tests with real-life situations from actual HR practice. Furthermore, similar concerns were raised within health sciences. DH4 explained,

The research skill beyond mere multiple-choice answer."

These results indicate a systemic call for change in assessments that aligns assessment practices with learning outcomes along with professional expectations. In addition to faculty issues, student engagement and support as a very critical matter affecting curriculum implementation was found. As per UC,

> *Resistance to new learning paradigms is also greater among students. Most of them are used to passive learning methods. Motivation is also a problem if course material appears not to relate to practical application in real life.*

In addition, EQAD attributed such behavioral problems to more institutional constraints in that they asserted:

> *Student services to assist language-challenged, learning-disabled, or emotionally disturbed students are few in number. They are the cause of disengagement.*

Language problems especially were acutely pronounced in the College of Engineering. As CD1 has mentioned,

> *Technical vocabulary in English is indeed a definite stumbling block for non-English language students. It impacts understanding, particularly in core courses. CD2 (Health Sciences), however, observed that language problems were minimal but noted that "Student fatigue from intensive clinical training impacts concentration and motivation."*

Adding further depth to this issue, CD3 (HRM) emphasized psychological fatigue, particularly among mid-level students:

Low motivation, especially among the second years, is apparent. They begin well but fail. We are attempting to reverse such cases through guidance and counselling but lack resources.

These issues were always endorsed by department heads. DH6 (HRM) stated,

> *We are experiencing low motivation, especially among the mid-level students. They want to be spoon-fed and are less engaged in independent learning. DH1 (Engineering) reported, Students shun group or project-based work. They know formulas and exams but protest when they should apply.*

Language issues were also demonstrated by DH2 (Engineering), who described,

Some of the students are not able to understand when technical phrases are presented in English. This is particularly more obvious in the first cohorts. Even in the case of the health sciences, DH4 mentioned that "Language barriers still arise during theory-heavy courses, particularly if instructors talk too fast or use jargon."

All of these views point to the need for more inclusive teaching practices, strong mentorship initiatives, and student support services that are designed to meet both cognitive and motivational needs. In a similar vein, financial and infrastructure constraints were seen as ongoing deterrents to the provision of quality curriculum. UC highlighted the severity of the problem by asserting,

> *Funding remains a major bottleneck. It affects everything from classroom facilities to digital resources and even the ability to attract industry partners.*

Similarly, EQAD described the implications of resource competition

> *The institutions often compete for limited funds, which creates disparities. For instance Engineering, struggles to maintain outdated laboratory equipment, while health sciences need a constant supply of consumables for practical.*

Each college had their own inadequacies of resources. CD1 (Engineering) explained the following,

> *Our laboratory facilities are old. Some are more than a decade old, and they hinder the scope of practical training and demotivate trainers and students. Similarly, CD2 (Health Sciences) mentioned, "We are frequently short of clinical materials and medical models. Even with hospital collaboration, practical work within the college is constrained due to inadequate budgets."*

Meanwhile, CD3 (HRM) described the structural limitations in partnership development, noting,

> *We are trying to establish partnerships with public and private HR institutions, but there's still a gap. We need better frameworks and incentives to encourage external collaboration.*

These institutional issues had their department-level counterpart. DH6 (CHRM) stated,

> *Restrictions on the budget impact everything from professional development to provision of basic classroom supplies. There's hardly any room for creativity."* DH4 (Health Sciences) also mentioned, *"Compliance activities take up most of our budget. There's really nothing for capacity building or changing the curriculum."* DH1 (Engineering) had a more negative concern: *"We still work with laboratory equipment that does not match what's now used in the industry. This affects instruction as well as student confidence."*

Lastly, the lack of structured outside partnership was also discovered to be an important shortfall curtailing curriculum provision's applied relevance. DH6 (HRM) puts it as follows,

> *Our students would benefit significantly from internships or exposure to live HR working conditions, but industry partnership is weak and opportunistic.*

This sentiment was shared by DH1 (Engineering), who stated,

> *We have tried reaching out to technology organizations, but the university lacks a formal mechanism for sustained partnerships.*

The lack of robust industry ties not only limits experiential learning but also undermines efforts to fine-tune academic programs toward labor market needs.

Overall, findings suggest a group of systemic and interrelated challenges in the adoption of effective curricula. Among them are pedagogic innovation resistance, dated assessment practices,

student disengagement with language and motivation, deficient infrastructure and resources, and absent formalized external networks. All combined, they demand collective institutional responses that address staff development, student-focused support systems, fair funding, assessment reforms, and sustainable industry links. Mitigating such constraints is imperative in furthering the quality and strategic relevance of curriculum delivery in the defense higher education system of Ethiopia. The above section hence provided a critical examination of quantitative information obtained from lecturers and students regarding the effectiveness of curriculum implementation in Ethiopian Defense University

The findings revealed contextual strengths that included the military values embedded in the curriculum, engaged learning methods and responsiveness to need as well as contextual weaknesses such as the application of skills and facilities for learning, and while these were very interesting indicators as to the attitudes of the stakeholders, further research was needed to identify influences that resulted in these findings. In an attempt to provide an answer to this, the subsequent discussion directly engages with the main research question, namely, what are the main challenges and opportunities for the current curriculum to be implemented in the Ethiopian Defense University? By translating the findings into institutional habit, resources and policy regimes the analysis aims to focus on both the constraining conditions which create challenges on effective implementation of the curriculum and the enabling conditions that can be leveraged to provide opportunities for it be fully realized.

Implementation of curricula in EDU is a complex challenge, due to pedagogic limitations, infrastructure restrictions, and institutional complexities. In spite of curriculum renewal efforts that seek to harmonize the delivery of education with national defense and security needs, an eye-opening policy-practice gap continues to exist. According to Ng (2018), such disconnect is typically attributed to weak implementation mechanisms and low instructional readiness levels. In EDU, though, this misalignment is particularly consequential because it exists in the high-stakes context of military training and leadership.

Firstly among the major challenges undermining effective curriculum implementation is the low pedagogical competence of instructors. The majority of lecturers do not have methodological training and pedagogical strategies that they should use in order to educate with contemporary,

student-focused methodologies (Mafugu and Abel, 2022). The challenge also becomes more profound through resistance to pedagogy innovation, as revealed through survey data and qualitative reports. Usually, instructors stick to lecture-based approaches and shun active learning approaches out of unfamiliarity or hesitation in using technology (Aslam et al., 2024). The University Commandant states that "*ongoing professional development for instructors"* is important to fill this gap, which is in line with the perceptions of the EQAD and College Deans, who together pointed to the systematic lack of specialized pedagogical instruction.

In addition to boundary restrictions, the assessment format of traditional testing methods has major drawbacks and limitations. EDU still over rely on final written-style tests which do not assess whether students can apply what they've learnt in practical practice contexts. Students and instructors themselves stated they disliked current assessments, with a preference for assessments that are valuable informative feedback, practical, and measure skills. DH6 (HRM) as reported that final written exams are the assessments relied on way too much, and need to integrate actual HR situations into assessments; DH4 (Health Sciences) commented that formative practice assessments were another area that they do not sufficiently employ feedback methods to measure skill. Therefore, in their current state, assessments do not support student learning intentions of the redesigned courses.

In addition, student engagement and academic support are also key factors relating to the success of the realization of the curriculum. Findings from student surveys and focus groups showed that several students are experiencing low motivation, learning fatigue, and language challenges, particularly for technical programs offered in English. In the words of UC "there is a growing resistance to new learning modalities by students," and referenced specifically a lack of relevance between academic teaching and the applied operational reality when resisting the new learning. Also, EQAD made the point that neglect of the support service for students items who are struggling academically, psychologically, etc. all contribute to disengagement. These items show that there was value in the use of inclusive teaching practice and university infrastructure to support learner engagement and resolve resilience issues related to the challenging environment of defense education.

In addition to these pedagogical and student-centered challenges, limitations related to infrastructure and funding are still problematic for EDU' operational capacity. Survey evidence indicated a lack of access to instructional technology, lab equipment, and learning spaces. Additionally, interviews with qualitative participants overwhelmingly revealed that institutional leaders identified funding as a perennial barrier. For example, CD1 said, "our labs are outdated," and CD2 indicated, "Medical models, and clinical supplies are often delayed as a result of procurement issues." Without sufficient infrastructure, innovative approaches to teaching regardless of how effectively designed cannot be substantively engaged. Consequently, resource investment needs to be regarded as a fundamental aspect of a successful curriculum.

Equally important, the absence of formalized and sustained external collaboration emerged as a recurring theme. While academic-industry partnerships are critical for aligning curricula with labor market demands, EDU have yet to institutionalize such linkages. DH6 (HRM) commented on the lack of internship opportunities and practical training exposure, while DH1 (Engineering) noted the difficulty of engaging with private firms due to the absence of structured partnership frameworks. This weak external integration limits experiential learning and reduces the practical relevance of academic content, ultimately diminishing graduates' readiness for real-world military and administrative roles.

To contextualize these findings, several theoretical perspectives offer valuable explanatory insights. Fullan's Educational Change Model emphasizes that successful curriculum reform requires a shared institutional vision, stakeholder engagement, and continuous support mechanisms (Nevenglosky et al., 2019; Sandar & Kálmán, 2022). Meanwhile, Constructivist Learning Theory advocates for active, student-centered learning environments, which are currently hampered by both pedagogical resistance and infrastructural inadequacies (Darling-Hammond et al., 2017). Systems Theory reinforces the notion that curriculum implementation is not an isolated task but one dependent on the coordination of interrelated subsystems ranging from assessment and teaching practices to institutional governance and external partnerships (Moja, 2008).

Furthermore, aligning these challenges with recent empirical studies strengthens the validity of the findings. For instance, Anderson and Krathwohl's (2001) revised Bloom's Taxonomy serves as a useful framework for rethinking assessment design, promoting the development of higher-

order thinking skills. Gedifew (2020) and Mtshali et al. (2020) emphasize the need for context-specific curricula that respond to both national development priorities and the diverse needs of learners. Moreover, Chigbu and Makapela (2025) highlight the centrality of data-driven leadership and resource equity in advancing institutional transformation.

When comparing the qualitative and quantitative datasets, points of convergence affirm the reliability of the findings. Both faculty and students identified instructor readiness and resource availability as critical barriers to curriculum implementation. Likewise, both groups acknowledged the lack of structured industry collaboration as an impediment to practical learning. However, divergences also surfaced particularly regarding perceptions of assessment efficacy and instructional quality indicating the need for tailored, stakeholder-specific interventions that address these differential experiences.

Given these findings, several policy and institutional implications emerge. First, comprehensive faculty development programs should be designed and implemented to enhance pedagogical competencies, particularly in the areas of technology integration and learner-centered instruction. Second, assessment reform is imperative, focusing on the design and application of authentic, performance-based evaluations. Third, EDU should invest in digital and physical infrastructure, ensuring that instructors and students alike have access to the tools necessary for effective teaching and learning. Fourth, student support systems including mentorship, academic advising, and psychological services should be expanded to foster motivation and persistence. Lastly, a formalized framework for industry and inter-institutional collaboration should be established to align curriculum content with real-world demands and national defense priorities.

In conclusion, the effective implementation of curricula within EDU is impeded by a constellation of interconnected challenges, including limited pedagogical innovation, outdated assessment practices, weak student engagement, infrastructural deficits, and insufficient external collaboration. These challenges highlighted through both quantitative and qualitative data reflect systemic limitations that require coordinated, theory-informed, and context-sensitive solutions. By fostering institutional collaboration, investing in professional development, reforming assessment, and aligning educational strategies with national priorities, EDU can significantly enhance their

curricular effectiveness and better prepare graduates for leadership roles within the defense and security sectors.

4.5.3. Correlation Analysis on Challenges of effective curriculum Implementation

This section presents an analysis of the relationships between various challenges Instructors Related Challenges (IRC), Resource Related Challenges (RRC), and Student Related Challenges (SRC) and the Effective Implementation of the Curriculum (EfImC) within Ethiopian Defense University. The analysis draws upon data from both students and instructors, as detailed in Tables 18 and 19 respectively.

Table 18: Relationships between Challenges (IRC, RRC, and SRC) and EffectiveCurriculum Implementation (EfImC) Regarding Students

Correlations					
		IRC	RRC	SRC	EfImC
Instructors Related Challenges	Pearson Correlation	-.360**	-.258**	-.412**	1
	Sig. (2-tailed)	.000	.007	.000	
	N	109	109	109	109
Resource Related Challenges	Pearson Correlation	1	.121	.322**	-.360**
	Sig. (2-tailed)		.209	.001	.000
	N	109	109	109	109
Student Related Challenges	Pearson Correlation	.121	1	.028	-.258**
	Sig. (2-tailed)	.209		.773	.007
	N	109	109	109	109
Effective Implementation of the Curriculum	Pearson Correlation	.322**	.028	1	-.412**
	Sig. (2-tailed)	.001	.773		.000
	N	109	109	109	109
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

Table 19: Relationships between Challenges (IRC, RRC, and SRC) and Effective curriculum

Correlations					
		IRC	RRC	SRC	EfrimC
Instructors Related Challenges	Pearson Correlation	1	.169	.249	-.479**
	Sig. (2-tailed)		.237	.078	.000
	N	51	51	51	51
Resource Related Challenges	Pearson Correlation	.169	1	.076	-.316*
	Sig. (2-tailed)	.237		.595	.024
	N	51	51	51	51
Student Related Challenges	Pearson Correlation	.249	.076	1	-.384**
	Sig. (2-tailed)	.078	.595		.005
	N	51	51	51	51
Effective Implementation of the Curriculum	Pearson Correlation	-.479**	-.316*	-.384**	1
	Sig. (2-tailed)	.000	.024	.005	
	N	51	51	51	51
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

The results of the correlation analysis presented in Tables 18 and 19 reveal statistically significant negative relationships between three categories of implementation challenges Instructor-Related Challenges (IRC), Resource-Related Challenges (RRC), and Student-Related Challenges (SRC) and the effectiveness of curriculum implementation (EfImC). These findings underscore the multifaceted nature of barriers that hinder curriculum effectiveness in educational contexts. Most notably, Student-Related Challenges demonstrated the strongest negative correlation in the overall sample ($r = –0.41$, $p < .001$), highlighting the substantial role that student engagement, preparedness, and participation play in shaping the success of curricular efforts (Short & Hirsh, 2020). This is consistent with the broader literature suggesting that curriculum implementation is not only a technical process but also a socio-pedagogical endeavor influenced by the interplay of instructor capacity, institutional support, and student characteristics (Ng, 2018; Albayati et al., 2024).

Moreover, the negative correlation coefficients across all three challenge categories ranging from –0.26 to –0.41 in the full sample suggest a moderate but meaningful inverse relationship. As the intensity of these challenges increases, the perceived effectiveness of curriculum implementation decreases. These findings support prior scholarship emphasizing that effective implementation is highly contingent on institutional readiness, stakeholder engagement, and the capacity to bridge the gap between curricular intentions and actual practice. Ng (2018) aptly notes that curriculum adoption often begins with enthusiasm but diminishes during the implementation phase due to structural and operational gaps. The present findings empirically reinforce that assertion, pointing to the specific domains in which those gaps are most acutely felt.

In addition, the analysis of the instructor-only subsample ($N = 51$) reveals even stronger negative correlations particularly with IRC ($r = –0.48$, $p < .001$) indicating that instructors perceive these challenges as more pronounced and impactful than the general sample. This distinction is expected, given instructors' direct involvement in curriculum delivery, classroom management, and interaction with institutional resources (Wang et al., 2017). Their vantage point allows for a more granular understanding of the barriers that impede effective implementation. The elevated correlation values suggest that when instructors encounter constraints whether due to inadequate training, limited instructional resources, or student disengagement the resulting impact on implementation is more severe. These insights are in alignment with the view that instructors are not passive transmitters of curriculum but active agents whose efficacy is shaped by contextual factors such as support structures, institutional expectations, and learner responsiveness (Çelik et al., 2017; Wan et al., 2020).

Consequently, the implications of these findings are manifold. First, they highlight the urgent need for targeted interventions aimed at mitigating the identified challenges. Addressing Instructor-Related Challenges requires a robust commitment to professional development that extends beyond generic training to include pedagogical coaching, differentiated instruction strategies, and classroom management skills. Institutional support structures should facilitate collaboration among instructors, offer mentorship opportunities, and provide feedback mechanisms to promote continuous improvement (Nevenglosky et al., 2019).

Furthermore, the significant negative correlation between RRC and EfImC points to the importance of resource allocation and infrastructure readiness. Educational institutions should ensure that instructors have access to appropriate teaching materials, technological tools, and physical infrastructure conducive to effective instruction Strategic investment in these areas not only enhances delivery but also boosts instructors' morale and efficacy.

Equally important, the strong inverse relationship between SRC and EfImC emphasizes the importance of learner-centered approaches. Addressing Student-Related Challenges necessitates a systemic approach involving early identification of at-risk students, personalized learning plans, and comprehensive support services, including academic advising, mental health resources, and co-curricular engagement (Ruesch & Sarvary, 2024). In addition, efforts to promote student voice and agency in curriculum-related decisions can increase motivation and alignment with learning objectives (Breazeal et al., 2024).

Given the interconnected nature of these challenges, interventions should not be piecemeal but rather integrated, recognizing the intersectional of challenges. For example, inadequate resources can exacerbate instructor frustration, which in turn may reduce their capacity to effectively engage students. Thus, reforms should address the ecosystem of curriculum implementation holistically. Institutional strategies should be tailored to context, particularly in specialized settings such as defense education, where curricular objectives should balance academic rigor with mission-specific competencies.

Looking ahead, these findings suggest important avenues for future research. Longitudinal studies could track the evolution of implementation challenges over time and examine their cumulative effects on learning outcomes. Mixed-methods approaches may also provide deeper insights into how instructors and students perceive and respond to these barriers in real time. Moreover, exploring the role of mediating factors such as leadership practices, institutional culture, or technological integration could illuminate pathways to more effective implementation (Eisman et al., 2020).

In conclusion, the significant negative correlations between implementation challenges and curriculum effectiveness offer a compelling argument for systemic change. Acknowledging these barriers is a critical first step, but meaningful progress will depend on the ability of

educational institutions to design responsive, inclusive, and adequately resourced strategies. By addressing these challenges through evidence-based practices, institutions can enhance both the fidelity and impact of curriculum implementation.

4.5.3.1. Regression Analysis on Challenges of effective curriculum Implementation

To assess the impact of various challenges on the effective implementation of the curriculum (EfImC) within Ethiopian Defense university, regression analyses were conducted for both student and instructor cohorts. These analyses aimed to quantify the extent to which specific challenges namely, Instructor-Related Challenges (IRC), Resource-Related Challenges (RRC), and Student-Related Challenges (SRC) predict the effectiveness of curriculum implementation. The findings, presented in tables 20 and 21 offer valuable insights into the factors influencing curriculum delivery from both student and instructor perspectives.

Regression Analysis of effective curriculum Implementation Challenges (ni= 109, P< 0.05) Regarding Students and Instructors

Table 20: Coefficient of Determination (Students)

Model Summary[b]									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.525[a]	.276	.255	.34628	.276	13.319	3	105	.000
a. Predictors: (Constant), Student Related Challenges, Resource Related Challenges, Instructors Related Challenges									
b. Dependent Variable: Effective Implementation of the Curriculum									

Table 21: Coefficient of Determination (Instructors)

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.597[a]	.357	.316	.34741	.357	8.694	3	47	.000
a. Predictors: (Constant), Student Related Challenges, Resource Related Challenges, Instructors Related Challenges									
b. b. Dependent Variable: Effective Implementation of the Curriculum									

The regression analyses presented in Tables 20 and 21 provide valuable insights into the multifaceted challenges affecting the effective implementation of curriculum from the perspectives of students and instructors. The models examined reveal statistically significant relationships between the categories of challenges namely, instructor-related, resource-related, and student-related and the dependent variable, which is the effective implementation of the curriculum.

From the students' perspective, the multiple correlation coefficient ($R = 0.525$) indicates a moderate association between the independent variables and curriculum implementation. The corresponding R-squared value of 0.276 suggests that approximately 27.6% of the variance in students' perceptions of curriculum effectiveness can be explained by the combined influence of the three categories of challenges. Although this leaves a substantial proportion of variance unexplained, it nevertheless underscores the critical role these specific challenges play in shaping students' educational experiences. The adjusted R-squared value (0.255), which accounts for the number of predictors in the model, slightly refines this estimate downward, indicating that the inclusion of multiple predictors does not lead to model over fitting. Moreover, the significance value ($p < 0.001$) associated with the F-change statistic confirms that the model is statistically robust and that the predictors, as a set, contribute meaningfully to explaining variations in curriculum implementation effectiveness.

The instructor dataset reveals a comparatively stronger relationship, as evidenced by a higher multiple correlation coefficient ($R = 0.597$). The R-squared value of 0.357 indicates that 35.7% of the variance in effective curriculum implementation is attributable to the predictors, while the adjusted R-squared value of 0.316 suggests that the model maintains its explanatory strength even after adjusting for potential over-specification. This heightened explanatory power may reflect instructors' closer proximity to, and more direct involvement in, the logistical and pedagogical dimensions of curriculum delivery. Similar to the student model, the significance level ($p < 0.001$) confirms that the predictors collectively exert a statistically significant effect on the dependent variable.

These findings suggest that both students and instructors recognize the influence of instructor-related, resource-related, and student-related challenges on curriculum outcomes, though the magnitude of perceived impact differs slightly across groups. Notably, instructors

perceive a greater degree of influence, possibly due to their direct engagement with instructional planning, resource allocation, and student management.

While the R-squared values in both models indicate a meaningful degree of explained variance, they are not close to 1.0, implying that other unmeasured variables may also contribute to the effectiveness of curriculum implementation. These could include institutional policies, assessment practices, administrative support, or broader socio-economic factors. Consequently, future research should aim to incorporate additional covariates to build a more comprehensive model.

Finally, the computation of explained variance for each covariate, as suggested by Viktorisson et al. (2023), would provide a measure of relative importance, allowing policymakers and educational stakeholders to prioritize interventions. For instance, if instructor-related challenges emerge as the most influential factor, targeted professional development and capacity-building efforts could be prioritized.

In summary, the findings of this study emphasize the multidimensional nature of curriculum implementation and the need for systemic approaches to address the interplay of challenges faced by both educators and learners. The statistical significance and moderate explanatory power of the models affirm the importance of the identified variables, while also highlighting the need for broader exploration to capture the full complexity of curriculum implementation dynamics.

Table 22: ANOVA Result (Students

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.791	3	1.597	13.319	.000[b]
	Residual	12.591	105	.120		
	Total	17.382	108			
a. Dependent Variable: Effective Implementation of the Curriculum						
b. Predictors: (Constant), Student Related Challenges, Resource Related Challenges, Instructors Related Challenges						

Table 23: ANOVA Result (Instructors)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.148	4	1.049	8.694	.000[b]
	Residual	5.673	47	.121		
	Total	8.821	51			
a. Dependent Variable: Effective Implementation of the Curriculum						
b. Predictors: (Constant), Student Related Challenges, Resource Related Challenges, Instructors Related Challenges						

The regression findings, as revealed by the ANOVA results in tables 22 and 23 provide a statistically robust and conceptually rich foundation for understanding the multifaceted factors influencing effective curriculum implementation in higher education. The statistically significant *F*-statistics obtained in both models confirm that the predictor variables specifically student-related, resource-related, and instructor-related challenges exert a meaningful influence on the variance observed in curriculum implementation outcomes. These results affirm the adequacy of the specified models and underscore the importance of these predictors within the broader institutional context.

In the model examining student-related challenges, the *F*-statistic of 13.319 ($p < .001$) indicates that the regression model is statistically significant, affirming that the included variables significantly predict the effectiveness of curriculum implementation (Stergiopoulos et al., 2009). The coefficient of determination (R^2) further suggests that a substantive proportion of the variance in curriculum implementation can be explained by student-related factors. This finding aligns with the literature emphasizing that student motivation, academic preparedness, adaptability, and engagement play critical roles in the success of curricular initiatives (Sukdee et al., 2017). The statistically significant association confirms that learners are not passive recipients of instruction but rather active agents whose characteristics and experiences can either enable or constrain the success of educational reforms.

Equally important are the findings from the regression model focused on instructor-related challenges, which also yielded a statistically significant *F*-value with a *p*-value well below the .001 threshold (Schneider & Preckel, 2017). The structure of the model including the associated degrees

of freedom, mean square values, and regression coefficients suggests a strong explanatory capacity for variables related to instructors' professional context. Specifically, pedagogical preparedness, content mastery, instructional autonomy, and access to continuous professional development emerge as key determinants of effective curriculum implementation. These results are consistent with prior research asserting that instructors serve as the principal mediators between curricular intent and classroom practice (Ng, 2018). Even well-designed curricular frameworks are unlikely to succeed in the absence of adequately supported educators who possess both the will and the capacity to enact reforms.

The interpretation of these regression models offers further validation of the conceptual stance that curriculum implementation is inherently complex and context-sensitive. It is not simply a matter of content transmission but a systemic process involving a constellation of interrelated factors organizational, instructional, infrastructural, and personal (Wang et al., 2017; Short & Hirsh, 2020). Faculty attitudes toward change, the quality and relevance of instructional materials, and alignment between institutional expectations and classroom realities all significantly influence the fidelity and efficacy of curriculum delivery. In particular, the role of institutional support through professional development, collaborative planning structures, and responsive leadership emerges as a critical enabling condition for successful implementation.

Furthermore, the regression results highlight the significance of student- and resource-related variables, not merely as peripheral considerations but as central determinants of implementation outcomes. In contemporary higher education settings, especially in increasingly hybrid and digitally mediated learning environments, students' psychosocial readiness, access to learning technologies, and digital literacy are crucial to curricular effectiveness (Jelińska & Paradowski, 2021). As such, a holistic institutional approach is required one that integrates pedagogical innovation with infrastructure investment, learner support services, and inclusive policy design. This integrated perspective is essential for addressing disparities in access and ensuring that curriculum reforms translate into meaningful learning opportunities for all students.

Taken collectively, the explanatory strength of the regression models affirms the theoretical proposition that curriculum implementation is a dynamic and iterative process, deeply influenced by the interplay of institutional conditions, educator readiness, and student engagement.

These findings correspond with calls in the literature for a systemic approach to educational reform, one that emphasizes long-term planning, collaboration, and sustained capacity-building at multiple institutional levels (Aliazas et al., 2021). They also reflect the increasing demands placed on higher education institutions to adapt to shifting societal expectations, labor market imperatives, and technological transformations all of which demand agility in both policy and practice.

In conclusion, the ANOVA based regression analyses underscore the statistically significant and practically consequential roles played by student-related, instructor-related, and resource-related factors in determining the success of curriculum implementation in higher education. These findings offer compelling evidence for the necessity of evidence-informed, contextually grounded interventions that address the structural, pedagogical, and resource-based challenges faced by both educators and learners. Institutions should prioritize faculty empowerment through training, provide adequate instructional resources, and foster a culture of collaboration and responsiveness. Only through such comprehensive strategies can the full promise of curricular reforms be realized namely, the enhancement of student learning, institutional effectiveness, and societal advancement.

Table 24: Regression Coefficient (Students)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	2.756	.380		7.248	.000
	Stakeholders Engagement	.322	.102	.410	3.143	.003
a. Dependent Variable: Effective Implementation of the Curriculum						

Table 25: Regression Coefficient (Instructors)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.381	.290		18.564	.000
	Instructors Related Challenges	-.307	.101	-.372	-3.040	.004
	Resource Related Challenges	-.162	.083	-.232	-1.956	.056
	Student Related Challenges	-.170	.075	-.274	-2.269	.028
a. Dependent Variable: Effective Implementation of the Curriculum						

The regression analyses in tables 24 and 25 show all the things that affect how well higher education curriculums are put into place. The data show things that bring students and instructors together and things that keep them apart when it comes to the results of reforms.

From the students' point of view, getting stakeholders involved was a statistically significant positive predictor of how well the curriculum would be put into action. The unstandardized coefficient (B = 0.322) and the standardized coefficient (β = 0.410, p = .003) both show that there is a moderately strong and reliable link. These results are in line with what other studies have found. They show how important it is to involve all stakeholders, such as parents, community leaders, and institutional actors, in making curricula more legitimate and relevant to students (Steghöfer et al., 2018; Short & Hirsh, 2020). This kind of involvement makes students feel like they own and are responsible for their own work, which in turn makes them more motivated, involved, and successful in school (Zhang, 2022; Raza et al., 2019).

The instructor regression model, on the other hand, shows how important institutional and pedagogical constraints are. The worst effects came from problems with instructors (B = -0.307, β = -0.372, p = .004), followed by problems with students (β = -0.274, p = .028). The problems with resources were almost statistically significant (t = -1.956, p = .056), which means that there might be a cumulative effect that needs to be looked into more. These results show that institutional barriers, lack of pedagogical support, lack of autonomy in teaching, and students not being interested make it hard for instructors to carry out curricular reforms (Emiru & Gedifew, 2024).

When you look at the data for both students and instructors, you can see a big difference: outside engagement helps students, but instructors are limited by the way their institutions are set up. This difference is due to bigger problems in higher education, such as institutions being too rigid, faculty not getting enough training, and not having enough resources, which make it harder to make changes (Çelik et al., 2017; Schneider & Preckel, 2017). Ng (2018) says that everyone involved in the curriculum should see it as a shared responsibility that needs to be in line with everyone's goals and abilities.

Also, the fact that both student-related and resource-related factors are important shows how important it is to change education in a way that looks at the whole person and the whole system. You cannot separate the use of a curriculum from the larger systems of institutions. Instead, successful reform depends on combining faculty development, student support systems, infrastructure investment, and consistent administration (Wang et al., 2017; Short & Hirsh, 2020). In hybrid and digitally mediated learning environments, it is even more important to deal with differences in access and readiness head-on (Jelińska & Paradowski, 2021).

These results show that institutions need to plan and make decisions in a certain way. First, getting stakeholders involved should not just happen when there is a problem; it should be a normal part of policy. Second, faculty development programs should be made to help instructors fill in the gaps in their teaching, especially when it comes to changing the curriculum, coming up with new ways to teach, and using technology. Third, when deciding how to use resources, not only should curriculum design be a top priority, but also its implementation, with special support systems for instructors in places where resources are limited.

At the policy level, we need to start putting money into systems that help the curriculum. This means making long-term plans, figuring out how to pay for things that will last, and making rules that hold people accountable and make them respond. Policies should understand that faculty capacity and student engagement are connected and work to find solutions that help both. Hoover (1990) and Eisman et al. (2020) say that this interdependence is important for institutions to be good at both academics and socializing.

In conclusion, the regression analyses show that implementing the curriculum has two sides: getting stakeholders involved makes things better for students, but operational and

institutional problems make things harder for instructors. These results show how important it is for everyone in the institution to be dedicated to changing the curriculum at all levels and in all areas of human, structural, and systemic life. The main goal of good curriculum implementation should always be to help students learn more, make institutions more adaptable, and make sure that institutions are open to everyone and ready for the future.

4.5.4. Summary of Regression Analysis on Challenges to Effective Curriculum Implementation

The regression and ANOVA analyses presented in Tables 14 through 1 offer a robust, data-driven understanding of the factors influencing curriculum implementation in higher education. The models reveal that student-related, instructor-related, and resource-related challenges significantly affect the effectiveness of curriculum reforms.

From a statistical perspective, both regression models were significant, indicating strong explanatory power. The student-focused model showed that stakeholder engagement is a key positive predictor of implementation success, affirming the role of inclusive, participatory approaches in enhancing student motivation, engagement, and ownership. Conversely, the instructor-focused model highlighted internal institutional barriers particularly those related to pedagogy, autonomy, and resources as the most significant constraints.

This dual perspective reveals a critical divergence: students benefit from external support and collaborative engagement, while instructors are hindered by internal structural limitations. These contrasting influences underscore the complexity of curriculum implementation as a systemic and context-dependent process.

The findings call for a holistic, institution-wide approach that aligns student support, faculty development, and infrastructural investment. Effective curriculum reform should not only address design but also support implementation through professional development, responsive policies, and adequate resources.

At the policy level, long-term planning, sustainable funding, and governance structures are essential. Institutions should recognize the interdependence between student engagement and faculty capacity, and adopt integrated strategies that support both.

In conclusion, the data affirm that successful curriculum implementation depends on addressing both human and structural factors. A comprehensive strategy that fosters collaboration, enhances institutional responsiveness, and ensures equitable learning environments is vital for realizing the goals of curricular reform in higher education.

4.6. Strategies to Enhance the Existing Curriculum Implementation at the EDU

Table 26 presents descriptive statistics on various strategies aimed at enhancing the effective implementation of the curriculum, incorporating perspectives from both students (N=109) and instructors (N=51). The data include mean scores and standard deviations for each strategy, offering insights into their perceived effectiveness and the variability of responses among the two groups. Analyzing these statistics allows for the identification of strategies that are both highly regarded and consistently valued across respondent groups, as well as those where perceptions diverge, thereby informing targeted interventions to bolster curriculum implementation effectiveness.

Table 26: Descriptive Statistics Regarding Strategies to Overcome Effective Implementation of Curriculum

No	Strategies	**Students N=109**		**Instructors N=51**		Total	
		M	SD1	M	SD2	CM	CS
1	Professional Development for Instructors	3.79	3.79	3.53	3.53	3.71	0.987
2	Integration of New Technologies in Curriculum	1.063	1.063	0.809	0.809	3.34	1.165
3	Student Support Services	3.38	3.38	3.25	3.25	3.66	0.985
4	Incorporation of Diverse Perspectives	1.104	1.104	1.309	1.309	3.61	1.124
5	Opportunities for Experiential Learning	3.72	3.72	3.53	3.53	3.41	1.047
6	Ongoing Curriculum Evaluation & Assessment	0.961	0.961	1.02	1.02	3.52	1.145
7	Promotion of Collaboration & Teamwork	3.74	3.74	7	7	3.54	1.076
8	Alignment of Curriculum with Institutional Goals	1.125	1.125	3.31	3.31	3.85	1.005
9	Curriculum Implementation Based on Student Needs	3.5	3.5	1.122	1.122	3.58	1.051
10	Leadership Support for Curriculum Implementation	1.111	1.111	3.2	3.2	3.74	1.072
11	Monitoring & Evaluation of Curriculum Practices	3.5	3.5	0.895	0.895	3.64	1.065
12	Student Involvement in Curriculum Implementation	1.168	1.168	3.57	3.57	3.5	1.112
13	Frequent Assessment of Learning Outcomes	3.71	3.71	1.1	1.1	3.69	1.181
14	Instructor Access to Resources & Materials	1.083	1.083	3.08	3.08	3.34	1.099
15	Student Engagement and Motivation in Curriculum	3.99	3.99	1.055	1.055	3.63	1.134

The results presented in table 26 provide insight into the perceptions of students and instructors regarding key strategies to enhance the effective implementation of curriculum in Ethiopian Defense University. The data were gathered from 109 students and 51 instructors, with each strategy evaluated based on its perceived importance, measured through mean (M) scores, and the degree of consensus, measured via standard deviations (SD).

To begin with, among the strategies, Professional Development for Instructors was identified as one of the most highly endorsed interventions, with a combined mean (CM) score of 3.71 and a relatively low combined standard deviation (CS) of 0.987. This indicates a strong consensus between students and instructors about the critical role that continuous faculty development plays in ensuring quality teaching and effective curriculum delivery. Similarly, Frequent Assessment of Learning Outcomes (CM = 3.69, CS = 1.181), Student Support Services (CM = 3.66, CS = 0.985), and Monitoring and Evaluation of Curriculum Practices (CM = 3.64, CS = 1.065) also received high ratings. These findings underscore a shared prioritization of instructional quality, student support mechanisms, and systematic curriculum evaluation as essential elements in driving educational effectiveness within EDU.

In addition, another highly regarded strategy was Student Engagement and Motivation in Curriculum, which received a CM of 3.63 and was rated highest by students individually (M = 3.99). This suggests that learners view their own active involvement as vital to the success of curriculum implementation. Furthermore, the strategy Incorporation of Diverse Perspectives (CM = 3.61, CS = 1.124) garnered substantial support, reflecting recognition of the importance of inclusivity and relevance in curriculum content. Likewise, Curriculum Implementation Based on Student Needs (CM = 3.58, CS = 1.051) highlights stakeholder interest in adaptive and responsive teaching practices.

Moreover, moderately rated strategies such as Promotion of Collaboration and Teamwork (CM = 3.54, CS = 1.076) and Ongoing Curriculum Evaluation and Assessment (CM = 3.52, CS = 1.145) suggest a generally positive reception but indicate some divergence in perception, possibly due to inconsistencies in implementation or differences in academic culture and expectations. Opportunities for Experiential Learning, with a CM of 3.41 and CS of 1.047, also showed moderate support. While experiential learning is acknowledged as beneficial for developing real-world

problem-solving skills, its lower relative score implies it may not be fully integrated or accessible within the current institutional framework.

Conversely, several strategies, including Integration of New Technologies in Curriculum and Instructor Access to Resources and Materials, received lower combined mean scores (CM = 3.34 for both) and relatively high standard deviations (CS = 1.165 and 1.099, respectively). This suggests varying levels of technological literacy or access, differences in implementation across departments, or disparities in institutional resource distribution. Furthermore, Student Involvement in Curriculum Implementation (CM = 3.50, CS = 1.112) exhibited both moderate endorsement and considerable variation in responses, pointing to inconsistencies in student participation in curriculum-related processes.

Notably, Alignment of Curriculum with Institutional Goals appears to have received the highest combined mean score (CM = 3.85, CS = 1.005). However, due to apparent inconsistencies in the reported mean and standard deviation values for students and instructors in the original table, this result should be interpreted cautiously and may warrant data verification before being included in conclusive analysis.

While the quantitative data from Table 26 offer a broad overview of student and instructor perceptions regarding the effectiveness of various curriculum implementation strategies, a more profound understanding of these findings requires insight into the contextual and institutional dynamics that shape them. To this end, qualitative data were gathered from key institutional leaders through in-depth interviews, providing rich, narrative accounts that elaborate on the statistical trends. These perspectives reveal not only the rationale behind stakeholder priorities but also the systemic challenges and practical realities that influence curriculum practices within Ethiopian Defense University.

The following qualitative findings complement the survey results by offering grounded explanations, highlighting areas of alignment and discrepancy, and illuminating the nuanced experiences that inform strategic decision-making at the leadership level.

Professional development is widely recognized as a cornerstone for strengthening curriculum implementation. The University Commandant emphasized its strategic importance, stating,

> *Without question, continuous professional development for our instructors has been the most impactful. We've institutionalized in-service training and workshops, and the difference in instructional planning, classroom delivery, and assessment practices is evident. Our instructors are more reflective and adaptive.* However, this progress is tempered by challenges in faculty engagement.

EQAD noted the uneven commitment across instructors, explaining,

> *Some instructors are committed and proactive, while others remain resistant to change or lack the time due to administrative responsibilities. That limits the system-wide impact of our initiatives.*

Despite these disparities, stakeholders agree on the critical role ongoing training plays in fostering effective instructional practices. Additionally, DH1 from the College of Education reinforced this point by emphasizing the need for continuous professional development aligned with evolving educational standards.

Building upon the importance of professional growth, institutional leaders also highlighted the value of robust assessment and monitoring systems as essential tools for curriculum refinement and accountability. EQAD shared that,

> *Monitoring and evaluation mechanisms have been particularly effective. We've started linking course evaluations directly to student performance data and graduate competencies. This has helped us fine-tune curriculum content and delivery in real-time, not just during formal reviews."* Supporting this, CD1 from the College of Engineering remarked,

> *Frequent and structured assessments have significantly improved how instructors align their teaching with learning outcomes. It also keeps students engaged and gives instructors early warning signs when concepts aren't being grasped.*

Furthermore, DH6 from the College of Human Resource Management advocated for ongoing evaluation to ensure curriculum responsiveness to institutional goals and student needs. Nonetheless, a persistent barrier to effective implementation is the lack of equitable access to instructional technologies and teaching resources. As CD2 from Health Sciences observed,

> *One of the persistent issues is the lack of uniform access to instructional technologies. Some departments have smart classrooms and learning management systems, while others still rely on outdated tools. This creates serious inconsistencies in the quality of delivery."* EQAD echoed these concerns, stating,

The lack of digital tools affects how consistently we can train and up skill our instructors.

In light of these challenges, the University Commandant stressed the urgency of addressing digital disparities, calling for improved infrastructure and a dedicated budget for teaching and learning resources:

These should not be treated as optional or supplementary.

Similarly, DH2 from the College of Education emphasized the necessity of embracing digital tools to meet the evolving demands of both students and industry. In addition to technological barriers, structural tensions and organizational challenges were also identified as hindrances to effective curriculum implementation. For instance, CD3 from Military Science

> *There's a structural tension between academic and military training objectives. The defense agenda evolves rapidly, but our academic curricula don't always reflect these shifts, partly due to bureaucratic delays in curriculum reform.*

While leadership support at the strategic level is evident, the University Commandant acknowledged a gap in operational execution:

> *Leadership sets the tone and provides strategic direction, but execution often breaks down at the departmental level. There's a need for stronger vertical and horizontal communication. Policies are in place, but mechanisms for follow-through and accountability need strengthening."* In agreement, CD1 added that:

> *There is institutional alignment in principle, but operationally, we still function in silos. For example, institutional goals related to innovation or problem-based learning are not consistently reflected in departmental curriculum design.*

Equally important is the role of students in curriculum development, which remains limited and largely informal. EQAD underscored this issue, stating,

> *Instructors are central; they design, deliver, and assess learning. But without student engagement, the curriculum cannot succeed. Unfortunately, we don't yet have strong feedback mechanisms that allow students to formally influence curriculum design or delivery.*

CD2 reinforced this concern, noting, *Students are highly motivated, especially in applied fields, but their voices are not institutionalized. When they give feedback, it's often informal or ignored. There's a real opportunity to enhance relevance by formally involving them in curriculum evaluation.*

Moreover, DH3 from the College of Health Sciences highlighted the importance of academic support services, stating that

> *Tailored support mechanisms directly contribute to improved learning outcomes."* DH4 added another layer of insight by emphasizing that *"incorporating diverse perspectives within curriculum content prepares students to function effectively in multicultural environments.*

In response to these challenges, several participants emphasized the necessity of pedagogical reform toward more integrated, student-centered learning. As CD3 from Human Resource Management asserted,

> *We need a more integrated approach to student-centered learning. This includes incorporating experiential learning, leadership training, and critical thinking into the core curriculum, which is especially important in a military context."* Echoing this sentiment, DH5 from the same college emphasized that *"hands-on experiences are vital for student motivation and competency development.*

To address these multifaceted issues comprehensively, stakeholders proposed a range of strategic measures. The University Commandant prioritized infrastructural and budgetary support, advocating for *"improving digital infrastructure across all institutions"* and ensuring that educational resources are not *"treated as optional or supplementary.*

EQAD suggested that improving governance could be achieved by involving students in curriculum reviews and using data from learning analytics, which would greatly help in putting plans into action. Ultimately, department heads collectively concluded that collaboration among faculty, leadership support, and student involvement are pivotal in sustaining a dynamic and relevant curriculum.

Building upon the data presented in the preceding section, which identified both the challenges and areas of promise in curriculum implementation across Ethiopian Defense University, the following discussion critically examines the strategies proposed to address these challenges. By integrating quantitative findings with qualitative insights from institutional stakeholders, and situating them within relevant theoretical frameworks, this section explores how EDU can effectively overcome systemic, pedagogical, and infrastructural barriers to ensure successful and sustainable curriculum reform.

To begin with, one of the most consistently emphasized strategies for overcoming implementation barriers is investing in sustained, structured professional development for instructors. Survey data indicate strong consensus among both students and instructors regarding the value of faculty training in enhancing curriculum delivery, assessment practices, and learner engagement. This finding is further corroborated by qualitative responses from institutional leaders, who emphasized the need to equip instructors with contemporary pedagogical skills.

As the University Commandant observed, *"our most impactful reforms have stemmed from continuous in-service training and reflective teaching practices."* This perspective aligns with Fullan's (2007) theory of educational change, which highlights professional learning as a core driver of sustainable reform. Furthermore, Aslam et al. (2024) stress that consistent professional development empowers instructors to adopt learner-centered strategies and adapt to evolving curriculum demands. Therefore, professional learning communities (PLCs), which foster collaborative planning, mentorship, and shared practice among faculty, should be institutionalized to support continuous improvement.

Equally critical is addressing the persistent technological disparities that hinder uniform curriculum implementation. The survey data revealed a pronounced gap between student enthusiasm and instructor apprehension toward digital tools, with 68.8% of students affirming the value of educational technology compared to only 43.2% of instructors. This discrepancy suggests not only infrastructure gaps but also a lack of technical preparedness among faculty.

Qualitative interviews with IQAD and college representatives underscored this challenge, pointing to uneven access to smart classrooms, limited connectivity, and insufficient training as key barriers. For example, DH1 from the College of Engineering noted that "while some departments are equipped, many still rely on outdated methods, creating inconsistency." In this regard, Oswal et al. (2025) argue that successful technology integration requires a two-pronged strategy: upgrading digital infrastructure and offering targeted faculty development programs. Institutions should, therefore, prioritize investments in broadband access, modern learning management systems, and continuous technical support. Additionally, embedding digital literacy into professional development curricula will help bridge skill gaps and promote technology-enhanced instruction as a standard practice.

Another vital strategy is the integration of experiential and applied learning methods to bridge the gap between theoretical instruction and operational realities. While students widely supported this approach (67% agreement), instructor responses were more varied, reflecting possible discomfort or inexperience with hands-on teaching methods. Nevertheless, qualitative findings strongly reinforced the importance of applied instruction in military education.

As CD1 remarked, *"embedding simulations and field exercises allows cadets to internalize concepts in ways that are directly transferable to future deployments."* CD3 acknowledged logistical constraints but emphasized that reform provides "an opportunity to institutionalize these practices." Such alignment with Constructivist Learning Theory underscores the need for curriculum models that facilitate real-world engagement, problem-solving, and leadership development (Poth, 2018; Mtshali et al., 2020).

To operationalize this, institutions should integrate structured field activities, case-based scenarios, and simulation labs into course design. Faculty should also be trained in experiential pedagogy to ensure consistent application across departments. In doing so, EDU can foster both academic competence and mission-oriented readiness among their graduates.

A fourth strategy involves enhancing participatory governance and feedback systems to ensure that curriculum implementation is informed by diverse stakeholder perspectives. While instructors overwhelmingly recognized the value of utilizing internal expertise (76.4%), only 44.9% of students agreed signaling disconnect between institutional intentions and student perceptions.

This disparity was also evident in the qualitative narratives. The University Commandant acknowledged that *"faculty engagement has improved, but student voices should be better integrated."* EQAD proposed institutionalizing joint planning platforms, asserting that *"this is the right time to formalize collaboration between faculty and students."* Similarly, CD2 highlighted the importance of redesigning feedback mechanisms so they not only collect student input but translate it into tangible improvements.

Such recommendations align with Systems Theory, which advocates for feedback loops and the alignment of subsystems in fostering institutional coherence (Ng, 2018). By establishing

structured student representation in curriculum committees and incorporating their feedback into instructional reviews, EDU can strengthen transparency, accountability, and instructional responsiveness.

In addition to internal reforms, external benchmarking and international collaboration offer promising strategies for institutional improvement. Although student survey responses reflected enthusiasm for cross-border partnerships (68.8% agreement), instructor support was comparatively lower (53%), suggesting concerns over feasibility or relevance.

Nevertheless, qualitative interviews emphasized the strategic value of such collaborations. CD1 noted that *"international partnerships are more than symbolic they allow us to learn from and adapt global best practices."* EQAD similarly advocated for formalizing benchmarking procedures, while DH5 proposed embedding them into regular curriculum review cycles.

These perspectives are consistent with comparative education literature, which emphasizes that international engagement can enhance curriculum relevance, standardization, and innovation (Chigbu & Makapela, 2025). For EDU, establishing long-term partnerships with peer institutions, participating in defense education networks, and institutionalizing benchmarking protocols can offer valuable insights into aligning military curricula with global standards.

Finally, effective leadership and institutional coordination are indispensable in overcoming systemic barriers to curriculum implementation. Both data sources identified structural fragmentation and weak horizontal and vertical communication as critical obstacles. The University Commandant admitted that *"execution often breaks down at the departmental level,"* and CD1 added that *"we remain operationally disparate despite institutional alignment in principle."*

To address this, leaders should articulate a unified vision, foster cross-departmental collaboration, and build accountability mechanisms that monitor progress toward curriculum goals. According to Systems Theory, the alignment of leadership, resources, and organizational culture is essential to achieving systemic transformation (Ng, 2018). Moreover, as Tessema and Abebe (2011) and Niţă and Guțu (2023) suggest, institutional responsiveness is greatly enhanced when leadership embraces data-informed planning and adaptive governance structure.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

This study examined how curriculum is implemented within Ethiopian Defense University, focusing on the challenges, opportunities, stakeholder engagement, and strategies shaping its delivery. Guided by a convergent mixed-methods approach, the research combined quantitative and qualitative insights to explore the systemic, pedagogical, and institutional factors influencing implementation. Framed by key educational theories including Change Theory, Systems Theory, and Constructivist Learning the study offers a contextualized understanding of curriculum practices in the defense education sector. This final chapter synthesizes the major findings and discusses their implications for institutional reform, policy development, and future research. The study specifically answered the following research questions:

1. Howis the curriculum being effectively implemented at the Ethiopian Defense University s?
2. Towhat extent have the stakeholders been engaged in the existing curriculum implementation process atEthiopian Defense University?
3. Whatare the opportunities and challenges in implementing the current curriculum within Ethiopian Defense University?
4. Whatstrategies do the Ethiopian Defense University use to enhance the existing curriculum implementation?

5.1. Summary of Findings

This study investigated the effectiveness of curriculum implementation in Ethiopian Defense University using a comprehensive mixed-methods approach. By using both numbers and personal insights from people involved, the study gave a clear picture of the chances and difficulties for changing the curriculum in military higher education.

The results demonstrated that while EDU are working to implement curricula, significant infrastructure, pedagogical, and systemic problems continue to impede full and effective implementation. It was discovered that there were statistically significant negative correlations between the effectiveness of curriculum implementation and three primary categories of

challenges: those related to instructors, students, and resources. Notably, there was the strongest negative correlation between implementation effectiveness and student-related challenges ($r = –0.41$, $p < .001$), suggesting that student participation, engagement, and readiness are critical determinants of academic success. Instructor-related challenges have a strong influence ($r = –0.48$, $p < .001$ in the instructor-only subsample), indicating an urgent need for enhanced pedagogical capacity and instructional readiness.

The systemic nature of these barriers was further elucidated by qualitative findings. A recurring issue is that many faculty members continue to use traditional lecture techniques because they have not received adequate training in learner-centered and technology-enhanced instructional strategies. The study also discovered that the majority of assessment techniques still rely on paper and final exams, which means they are ineffective at measuring the knowledge and practical skills required for defense education. Students frequently cited a lack of inclusive teaching strategies, a lack of practical application of the content, and language barriers as reasons for their low levels of engagement. The study also identified widespread infrastructure flaws, such as restricted access to labs, digital resources, and modern classroom environments, as major obstacles to implementing modern teaching techniques.

Another significant finding was the absence of systematic and continuous cooperation with defense and industry institutions. Lack of collaboration limits students' exposure to practical, field-based experiences and reduces the relevance of academic content to operational and leadership roles in the military. Furthermore, inconsistent policy execution and instructional practices were the result of fragmented governance and inadequate horizontal and vertical institutional coordination.

Despite these challenges, the study identified several opportunities for strategic reform. These include the potential for digital transformation, the growth of global partnerships, the incorporation of experiential learning, the enhancement of participatory governance, and the development of research capabilities. The study emphasized that the only way to effectively capitalize on these opportunities is to implement a coordinated, system-wide strategy grounded in relevant theoretical frameworks. Theoretical models like Fullan's Educational Change Model,

Constructivist Learning Theory, Systems Theory, and adult learning principles provided valuable insights into how barriers and supports are connected.

In conclusion, a complex interplay of instructional, institutional, and environmental factors shapes the way EDU implement their curricula. Significant reform is underway, but these efforts will only succeed if they strategically invest in inclusive governance, faculty development, infrastructure, and stakeholder engagement. To ensure that EDU produce graduates who are academically proficient and prepared for the workforce, their teaching methods should adapt to the changing demands of defense education by utilizing a comprehensive, theory-based, and evidence-based

5.2. Conclusion

In line with the findings and conclusions of this study a number of recommendations can be made to improve curriculum implementation in in EDU.

Conclusion 1: Ethiopian Defense University Curriculum Implementation as a Multi-Dimensional and Systemic Process

The outcomes of the current study determine the process of applying curriculum in Ethiopian Defense University that is compounded by the interaction between student-related, instructor-related, and institutional factors. Student motivation is influenced not only by pedagogical practices but also by the institution's culture and the presence of support systems (Aslam et al., 2024; Ayas & Charles, 2024). Equally, the quality of instruction is dependent on resource access, professional autonomy, and institutional support (Quijano, 2021). Such dependencies call for an organized, comprehensive approach to the redesign of curriculum, especially of defense training, whose alignment with national security requirements is of paramount importance (Sepadi & Molapo, 2024).

Conclusion 2: Structural and Technological Limitations Seriously Undercut Curriculum Implementation

This research underscores that effective curriculum implementation in Ethiopian Defense university primarily relies on sufficient structural and technological infrastructure. Despite this,

the long-standing issues such as aging structures, non-accessibility to digital machines, and minimal linkages with defense industries make it difficult to provide hands-on training required for military readiness.

Low student and instructors digital literacy levels and the digital divide also hinder technology application in teaching, rendering it challenging to acquire operationally relevant skills (Mugabi et al., 2021; Camacho et al., 2024). This is further compounded by a lack of strategic policies, poor digital culture, and a lack of institutional interaction with external stakeholders (Onyango & Ondiek, 2021).

Conclusion 3: There is a Gap between Teaching Intentions and Student Experience.

The research discovered that there was an evident discrepancy between what instructors intends to do in class and what students are actually experiencing. The majority of instructors feel they are adopting student-centered pedagogies like active learning and teamwork (Sagy et al., 2019) but the students frequently report that the courses are still too theoretical and fail to be relevant to the field of actual military operations (Anderson & Krathwohl, 2001; Pomerantz & Brooks, 2017). This disparity diminishes the students' interest and motivation and restricts them from acquiring the applied skills they need in military environments. It also points to an overarching issue wherein regular teaching does not always yield the intended outcomes of the curriculum. Conclusion

Conclusion 4: Structural and Technological Challenges Weaken Curriculum Delivery

Implementation of the curriculum in Ethiopian Defense University is significantly inhibited by ancient infrastructure and lack of digital technologies. Issues of this sort hinder experiential, hands-on learning and an integral aspect of military education in which preparedness and technological competence is at the forefront (Khan et al., 2023; Zou et al., 2025). Furthermore, most students and instructors do not possess digital literacy to adequately apply contemporary learning instruments (Camacho et al., 2024). This is exacerbated by a general reluctance to embrace new technologies and a lack of intentional strategy or interactions with external agents, e.g., defense industry participants (Onyango & Ondiek, 2021).

Conclusion 5: Stakeholder Engagement Is Essential but Not Effectively Implemented

The finding revealed that involving stakeholders such as students, alumni, faculty, and external experts is crucial to the success of curriculum reform. However, despite the existence of formal structures such as advisory boards and curriculum review committees, their use is often infrequent or inconsistent (Tesema & Enguday, 2024). As a result, many stakeholders have little real influence on key decisions. The lack of clearly defined roles and irregular feedback processes further weakens the effectiveness of stakeholder involvement (Lindsten et al., 2019). For engagement to have a meaningful impact, institutions should go beyond symbolic participation. They need to ensure that stakeholders are actively and consistently involved in every stage of the curriculum process from design and implementation to ongoing evaluation and revision.

Conclusion 6: Existing reform initiatives hold significant potential for driving positive change; however, their impact is compromised by a lack of systemic integration.

The research points out that even though the large potential of continuous reform efforts in higher education to facilitate successful change is considerable, their impact is enormously limited by the absence of systemic coordination (Cheng, 2018). Efforts like implementing adult learning principles, connecting the curriculum with learning outcomes, and institutionalizing innovations driven by faculty are noteworthy. Nevertheless, these efforts would most likely be disconnected from each other with little institutional or departmental coordination. Consequently, the majority of reforms have been constrained to pilot programs or departmental projects at the local level, lacking inclusive institutional backing, long-term strategic guidance, and scalability mechanisms. This patchwork hinders their long-term viability and curtails their potential for country-wide adoption within Ethiopian Defense University (EDU).

Conclusion 7: Strategic interventions are promising, but they are still fragmented and need to be integrated harmoniously for optimal impact.

This study shows that the introduction of a curriculum in Ethiopian Defense University (EDU) is an organized, sophisticated procedure much beyond individual efforts. Its execution largely depends upon numerous interdependent factors, e.g., those concerning students, instructors, and the institution too. The two factors play a significant role towards building the

educational situation. Notably, student engagement is not just influenced by the approach to teaching but also by the institutional culture and availability of support systems (Aslam et al., 2024; Ayas & Charles, 2024). The performance of instructors is also influenced by how available they are to resources, the level of professional autonomy they have, and how much institutional support they have (Quijano, 2021).

With the unequivocal intention of EDU being the development of military leadership for national security, effective implementation of curriculum has to be contextual. This research emphasizes that it is crucial that such institutions apply the holistic approach because actions addressing a single factor are unlikely to cause enduring, qualitative change (Sepadi & Molapo, 2024).

Conclusion 8: Institutional leadership and governance were the primary drivers of reform initiative success in higher education, especially in Education-Driven Ethiopian Defense University **(EDU).**

This research highlights that institutional governance and leadership were some of the main drivers towards success and sustainability of reforms in Education-Driven Higher Education Institutions (EDU). Pedagogical progress and technological innovation are most important, yet the quality of leadership and governance integrity are the deciding factors in translating reform dreams into real achievements. Managerial shortcomings such as deficient communication channels and inefficient institutional frameworks continue to inhibit effective implementation (Mincu, 2022).

To achieve meaningful and sustainable change, EDU should accord utmost priority to the creation of visionary leadership, intensify strategic coordination, and solidify governance institutions. Institutional leaders are critical in this respect to converge reform agendas with realistic implementation, reconcile multiple stakeholder interests, and promote inclusive, participatory decision-making culture (Saguin & Ramesh, 2020).

In addition, even though national policy guidelines are aimed at availing necessary direction, institutional autonomy for grant-awarding institutions is paramount in ensuring reforms are adaptive and responsive to the context. Finally, leadership development and reform of governance should be at the heart of EDU' higher education transformation policy.

Conclusion 9: National security and successful military leadership in the new world require curricular reform in EDU

This research has reaffirmed the strategic and critical imperative for holistic curriculum transformation within Ethiopian Defense University. As they are crème-de-la-crème institutions for the nurturing of future military commanders, they have a key role to play in facilitating national defense preparedness and furthering the larger developmental agenda of the country. The effectiveness and use of curriculum application continue to heavily depend on a country's capacity to respond to changing security threats and ensure strategic stability (Ayas & Charles, 2024).

With this directive, contemporary revision of EDU curricula should be undertaken as a strategic, long-term effort toward harmonization of military education with global trends. To ensure consistency and efficacy, there is a need for the incorporation of innovative pedagogical processes and advanced technology. These tools play a key role in developing critical thinking, flexibility, and complexity problem-solving skills required in navigating the complexity of contemporary defense environments (Ayas & Charles, 2024).

5.3. Proposed Model for Effective Curriculum Implementation at Ethiopia Defense University

Ethiopian Defense University has a central role in the development of human resources that the nation requires in its defense and overall development. The university has the responsibility of providing military professionals with the knowledge, skills, and values that are essential to effectively deal with the dynamics of contemporary warfare and assist in the overall development of society. In spite of their vital strategic role, most Ethiopian Higher Education institutions have not given ample attention to the creation of favorable conditions for successful pedagogical activity and academic communication (Teshome, 2018). Due to the dynamic charac ter of military science and the complexity of modern security challenges, modernization of defen se related curricula becomes essential. Modernization should incorporate local epistemologies al ongside Western educational systems to be socially relevant and culturally meaningful (Yeseraw et al., 2023). Solving the challenges highlighted above entails the utilization of a holistic and co ntext specific mechanism of curriculum implementation that is purposely designed to meet the sp

ecific demands of higher education in the Ethiopian defense sector and can respond to the system ic challenges uncovered in this sector (Bishaw & Melesse, 2017).

However, such change of the transformative kind cannot be implemented in a vacuum. Implementation of such change can be made only with the participation of policymakers, institutional administrators, military strategists, and other stakeholders. Only through ongoing discussions and collective effort can an effective, forward-looking curriculum be implemented. Moreover, to keep curricula flexible enough to accommodate changes in military science, technology, and changing geopolitical dynamics, a culture of ongoing assessment and improvement is essential (Singai et al., 2020).

Therefore, Ethiopian Defense University curriculum reform is not only an improvement in pedagogy but a national strategic necessity crucial for the development of effective military leaders, improving national defense, and making defense education adaptive to a fast-paced global world.

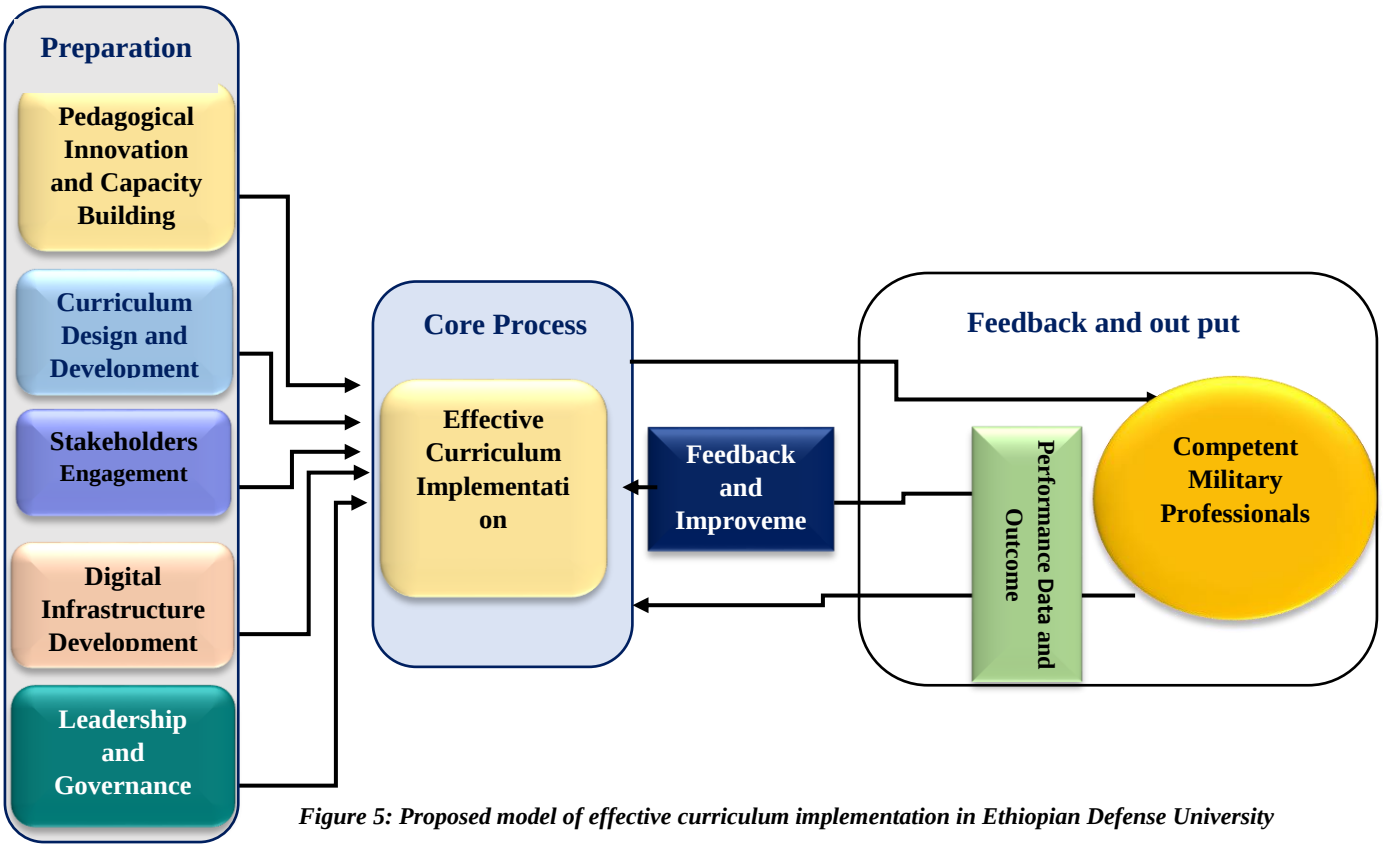

Figure 5: Proposed model of effective curriculum implementation in Ethiopian Defense University

The suggested model for putting a curriculum into action has parts that work together to make both the institutions and the students learn better. The main goal of the framework is to get everyone involved, including faculty, students, military leaders, and policymakers, in shaping and reviewing the course content. These groups are part of the conversation in the model, which helps to get a variety of opinions, make everyone feel like they have a stake in the outcome, and make sure that everyone in the organization is responsible (Anderson & Krathwohl, 2001; Gedifew, 2020). The second pillar, contextual adaptation, says that the curriculum should be based on the Ethiopian Defense Force's daily tasks, such as its specific security threats, cultural norms, and budget limits. This kind of localization makes the curriculum more useful and keeps it closely linked to the goal of national defense.

Another important part of the model is feedback loops. These systems are there to help collect and analyze feedback from students, faculty, and other interested parties in a structured way about how well the curriculum works. After that, the feedback is used to change the curriculum, which makes it flexible and able to meet new needs. The model also puts a lot of emphasis on capacity building, which is about helping instructors grow professionally by giving them targeted training, mentoring, and new ways to teach. This part is very important to make sure that instructors can teach hard things well. Lastly, the model includes ongoing monitoring to check on things like graduation rates, student learning outcomes, and job placements. These numbers tell us a lot about how the curriculum is affecting students as a whole and help us make smart changes.

It is both planned and necessary for this model to meet the needs of Ethiopian higher education institutions that train defense personnel. Putting contextual adaptation at the center of the model makes sure that the curriculum stays relevant to the problems the Ethiopian defense forces face, like modern warfare and providing healthcare services. Getting stakeholders involved helps people work together and shows how military organizations are both hierarchical and cooperative. This makes the curriculum more legitimate and gets more people to support it.

There are a number of steps that need to be taken in order to put this model into action. Institutions should set up curriculum development committees with members from all the main stakeholder groups to help with the review and revision process (Anderson & Krathwohl, 2001). These groups will make sure that everyone can see and understand how decisions are made. After that, institutions need to do a full needs assessment to find out what defense workers need to know,

be able to do, and be able to do. This evaluation should look at both current and future security threats, as well as how new technologies are changing the way the military works. Also, faculty members should have access to ongoing professional development opportunities to learn more about modern military science and improve their teaching skills.

Some of the benefits that are expected from using this model are better student learning, more effective faculty, and a curriculum that is more relevant and adaptable. But the process has some problems. One big problem is that instructors who are used to teaching the old way might not want to change. Change management strategies need to be proactive to get around this resistance. These are some of the things that need to happen: making the benefits clear, including everyone in the decision-making process, and getting long-term support from the institution.

The suggested model for putting the curriculum into practice in Ethiopian defense University is a structured and contextually aware way to deal with problems that have been around for a long time in the sector. The model's goal is to build a responsive and effective educational system that can meet the changing needs of national defense. It does this by involving stakeholders, adapting to different situations, providing feedback, building capacity, and keeping an eye on things all the time.

5.4. Justification for the Proposed Curriculum Implementation Model

The proposed model of curriculum implementation is based on limitations retrieved in the current model which is being followed by Ethiopian Defense University (EDU) significantly influenced by the Model of Educational Change by Fullan. Although the model of Fullan has been shown to be successful in facilitating educational change in most general education institutions, it is not adequate to the contextual requirements, strategic focus and organizational limitations of institutions particularized to the military environment like the EDU. Specifically, it does not have a granular planning, performance monitoring, and mission-based adaptability, which is essential into syncing educational programs with changing priorities of the Ethiopian National Defense Forces (ENDF).

To fill these lapses, the model offered integrates a broad-perspective, mission-specific model that would focus on five mutually supportive foundations, including stakeholder involvement, situational flexibility, defined feedback cycles, instructor capacitation, and continuous performance tracking. In comparison to the traditional theories like in Objectives-Based Model by Tyler that focuses on identifying the learning outcomes in advance and the sequence of instruction being linear (Tyler, 1949), the proposed model is more dynamic and open. Although Tyler model has been beneficial in guaranteeing content-objective compatibility, in more advanced and dynamic situations like in defense education, where curricular objectives have to be constantly updated with regards to real time response, and expanding national security requirements, it is not that useful.

Likewise, even though the model developed by Fullan presents the principles of the systemic change and the presence of leaders as well as the concept of institutionalization (Fullan, 2001), it is mostly theoretical and universal in its practice. It consists of sparse operational recommendations on how to carry out curricula in hierarchical and mission based institutes like EDU. Conversely, the suggested model makes the stakeholder engagement formal during all phases by involving the faculty, students, military commanders, and policymakers in the curriculum research and revision. Such systematic inclusion increases transparency, accountability and ownership by the institution which is critical in the legitimacy and sustainability of curriculum initiatives in the institutions of defense.

One of the peculiarities of the proposed model is that it is focused on adaptation to the context, and the process of curriculum development is based on the current reality operating within the ENDF, taking into account threats to security, shortage of resources, cultural factors, and technology (Gedifew, 2020). Such localized model guarantees relevance in practical applicability and strategic relevance that is lacking in the generalized models. Feedback loop incorporation enables uninterrupted gathering, analysis and implementation of stakeholder input making needed curriculum changes quickly and in an amicable manner. Such versatility plays a critical role in ensuring relevance to curricula within fast evolving defense settings.

In addition, the model focuses on capacity building of the instructors as it involves specific professional development, mentorship, and exposure to the current educational practices.

This aspect is of special concern in military education, when teaching personnel tend to need new content knowledge and instructional methods to teach complex and niche sensitive matter and coursework. Addition of performance-based elements of monitoring like monitoring student learning outcomes, graduation rates, and graduate employability gives EDU strong set of features to assess effectiveness of curricular modifications and increase evidence-based efforts.

In summary, the proposed model offers a superior alternative to existing frameworks by combining the strengths of classical models with innovative, context-specific strategies tailored to the unique needs of defense education. It transcends the limitations of Tyler's linear structure and Fullan's abstract orientation by embedding continuous improvement, strategic alignment, and stakeholder accountability into every phase of curriculum implementation. As such, the model provides a structured yet adaptable framework capable of transforming EDU's educational offerings into more relevant, responsive, and results-oriented programs, thereby justifying its adoption as a more effective approach for curriculum implementation in Ethiopian defense University.

5.5. Recommendations

Based on the findings of this study, a targeted set of recommendations is offered to support effective curriculum rollout and reform across Ethiopian Defense University.

First, a cohesive yet adaptable National Curriculum Reform Framework specifically for EDU should be established, ensuring military instruction stays in lockstep with broader defense priorities. Developed in collaboration with the Ministry of Defense, the Ministry of Education, and Ethiopian Defense University academic professionals, the framework should clearly define core learning outcomes such as analytical reasoning, pressure-tested decision-making, ethical leadership, and operational agility. Equally important, it should grant individual institutions enoughautonomy to adjust course material in response to local security contexts and institutional missions. To that end, interdisciplinary topics like cyber defense, peace operations, and conflict resolution deserve early integration, while traditional Ethiopian doctrines and indigenous knowledge safeguard cultural relevance and national unity.

Given the study's findings on persistent pedagogical deficits and reliance on traditional instructional models, the establishment of a Military Pedagogical Development and Innovation

Center (MPDIC) is imperative. This center should serve as the national institutional anchor for enhancing instructional capacity, fostering pedagogical research, and disseminating best practices across EDU. The MPDIC would be responsible for designing and delivering structured professional development programs focused on learner-centered instruction, digital teaching methodologies, and military-specific simulation-based education. It should also support collaborative teaching innovation, peer mentoring, and classroom-based action research. By institutionalizing pedagogical excellence, the MPDIC will close the gap between instructional intentions and actual student learning experiences, thereby advancing both academic quality and military preparedness.

Recognizing that structural and technological limitations severely constrain curriculum delivery, a national Defense Education Infrastructure and Digital Transformation Initiative should be launched. This initiative should focus on upgrading physical learning environments, developing modern training and simulation laboratories, and ensuring reliable campus-wide internet connectivity. Parallel to this, digital learning platforms and virtual learning environments should be deployed across EDU to enable flexible, blended, and remote learning formats. A key component of this initiative should be capacity-building in digital literacy for both instructors and students, as well as the creation of centralized digital repositories for defense-relevant content. Institutional collaboration with defense industries and ICT partners is necessary to ensure technological tools and resources align with the operational needs of modern warfare. Strategic resource allocation, policy incentives, and phased implementation plans will be essential to maximize institutional readiness for digital transformation.

Effective curriculum implementation requires the systematic involvement of all relevant stakeholders. Therefore, EDU should be mandated to embed stakeholder engagement structures directly within their governance frameworks. This entails creating and operationalizing formal advisory boards, curriculum review panels, and participatory planning committees that include students, alumni, instructors, military practitioners, and academic experts. These bodies should be assigned clear roles, decision-making authority, and regular schedules for consultation to ensure continuity and accountability. Stakeholder participation should not be symbolic but rather substantive facilitated through transparent channels, inclusive dialogue, and structured feedback mechanisms. Involving diverse voices in the curriculum cycle from design and implementation to

monitoring and revision will improve relevance, enhance institutional legitimacy, and foster collective ownership of reform outcomes.

The sustainability and impact of curriculum reforms hinge on the presence of a robust Monitoring, Evaluation, and Learning (MEL) system tailored to the defense education context. A national MEL framework should be developed to guide all EDU in tracking the implementation fidelity, instructional effectiveness, student achievement, and institutional performance. This framework should include both formative and summative indicators, utilizing mixed methods to capture quantitative trends and qualitative insights. MEL data should be integrated into decision-making processes, feeding into policy adjustments, resource allocation, and accreditation decisions. Additionally, EDU should be required to submit annual MEL reports and conduct internal curriculum audits. Investing in MEL personnel training, digital analytics infrastructure, and feedback utilization mechanisms will ensure that reforms are continuously evaluated, adaptively refined, and strategically aligned with evolving defense requirements.

Finally, the effectiveness of curriculum implementation and reform depends fundamentally on strong institutional leadership and coherent governance structures. EDU should be supported to restructure internal management systems to enhance strategic coordination, interdepartmental collaboration, and transparent decision-making. Leadership development programs should be introduced to equip institutional leaders with the skills necessary to lead transformative change, negotiate stakeholder interests, and navigate complex educational-military interfaces. Furthermore, institutional autonomy should be increased in academic and operational matters to allow for greater contextual responsiveness. However, this autonomy should be accompanied by a system of performance-based accountability, linked to reform outcomes, leadership effectiveness, and compliance with national strategic priorities. Governance reforms should thus prioritize not only managerial efficiency but also inclusivity, integrity, and strategic foresight.

These collectively address the systemic, pedagogical, technological, and governance-related dimensions of curriculum implementation in EDU. They provide a coherent policy foundation for transforming defense higher education in Ethiopia to better respond to contemporary security challenges and prepare future military leaders.

5.6. Implications for Further Research

The evolving landscape of defense education in Ethiopia calls for continuous curriculum reform to align with contemporary military and academic imperatives. Although this study had provided valuable insights into effective curriculum implementation within Ethiopian Defense University, several critical gaps remain that merit further investigation. A key area for future research is the impact of instructor competency development on curriculum outcomes. While the current study identified pedagogical shortcomings, it did not examine how structured faculty development programs particularly in military pedagogy, digital instruction, and experiential learning affect teaching effectiveness and student achievement. Similarly, although the importance of stakeholder involvement is acknowledged, the potential of stakeholder co-creation in curriculum design remains insufficiently explored. Future research should thus investigate the multifaceted nature of curriculum reform in EDU, with particular attention to how military pedagogical training influences instructional quality and learner performance. Moreover, evaluating the impact of digital transformation through the integration of simulation technologies, e-learning platforms, and digital literacy initiatives could yield significant insights into enhancing curriculum delivery and student engagement. Investigating stakeholder governance mechanisms, such as the role of advisory boards and curriculum committees, is also essential to understanding how participatory structures shape reform legitimacy, decision-making processes, and curriculum relevance.

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APPENDICES - A

ADDIS ABEBA UNIVERSITY
SCHOOL OF GRADUATE STUDUIES
COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

Questionnaire to be filled by Students

Dear Students:

The purpose of this questionnaire is to gather relevant and appropriate data to conduct a study entitled ***"An Analysis of Curriculum Implementation Practices in Undergraduate Programs at Ethiopian Defense University".***

Therefore, you are selected and kindly requested to provide relevant, appropriate, and genuine responses. Dear respondents, don't worry; all answers you provide will be used only for research purposes and kept confidential. I do believe that the findings from this study contribute to the efforts being exerted to improve the Defense higher education sector.

Thank you very much for your cooperation!

Part I: Background Information

Direction: Please complete this part of the questionnaire by putting a tick mark (x)

Institution: _____

1. The name of your institution - _____
2. **Sex** – Male ☐ Female ☐
3. **Age** – Below 20 ☐ 26-30 years ☐
   21-25 years ☐ 31-35 years ☐
4. Years of experience in Ministry of Defense
   Below 3years ☐ 6-8 years ☐ 12-14 years ☐
   3-5 years ☐ 9-11 years ☐ 15 years and above ☐

Part I: Effective Implementation of the Curriculum						
S/N	**Items**	**SA**	**A**	**N**	**D**	**SD**
1	The curriculum prepares the students well for their military career.					
2	The curriculum aligns with the values and goals of the military institution					
3	The curriculum provides opportunities for the practical application of skills					
4	The curriculum incorporates technology such as online learning platforms and digital resources to enhance the effectiveness of curriculum implementation and support students					
5	The curriculum is inclusive and respectful of the diversity of the military community.					
6	The curriculum is regularly evaluated to measure its effectiveness in achieving the desired outcomes.					
7	I am satisfied with the curriculum implementation in my military higher education institution.					
8	My institution has modern classroom facilities that are conducive to the effective implementation of curriculum.					
Part II: Opportunities and Main Challenges of Effective Curriculum Implementation						
Theme 1. Opportunities		**SA**	**A**	**N**	**D**	**SD**
9	Your institution is positioned to leverage emerging technologies and research to enhance curriculum implementation.					
10	Your institution can enhance the curriculum by incorporating more experiential learning opportunities, such as simulations and field exercises.					
11	International partnerships and collaborations can enhance the curriculum implementation at your institution.					
12	Your institution has opportunities to engage with and learn from other institutions and organizations to enhance the quality and effectiveness of their curriculum implementation.					
13	Your institution can leverage the unique experiences and perspectives of its faculty and students to enhance the implementation of the curriculum.					
14	The curriculum provides opportunities for the practical application of skills learned.					
Theme 2- Resource Related Challenges						
15	Limited access to resources is a challenge for effective curriculum implementation in your institution.					
16	Lack of funding is a challenge in curriculum implementation at your institution					
17	Budget constraints are a challenge in curriculum implementation practices at your institution.					

18	Limited collaboration with industry partners is a challenge for effective curriculum implementation at your institution.					
19	Time constraints are a challenge for effective curriculum implementation in your institution					
20	Insufficient support services for students are a challenge for effective curriculum implementation in your institution.					
21	Resisting change is a challenge for effective curriculum implementation in your institution					
22	Student's motivation is a challenge for effective curriculum implementation in your institution					
23	Lack of incorporation of current and emerging trends and technologies related to military service curriculum is a challenge for effective curriculum implementation in your institution					
Theme 4- Instructors Related Challenges						
24	Resisting change is a challenge for effective curriculum implementation in your institution.					
25	Lack of pedagogical knowledge and skill is a challenge for effective curriculum implementation in your institution					
26	Integration of new technologies into the curriculum is a challenge for effective curriculum implementation in your institution.					
27	Accommodating a diverse student population is a challenge in curriculum implementation at your institution.					
28	Language barrier is a challenge for effective curriculum implementation in your institution					
29	Limited evaluation and assessment practices are a challenge for effective curriculum implementation in your institution.					
Part IV: Stakeholders Engagement on Effective Curriculum Implementation **Please, rate the degree of stakeholder's engagement in curriculum Implementation process in your institution.** **Response Rating: 5= Very high; 4 = high; 3= Moderate; 2 = Low; 1 = Very Low**						
Extent Of Stakeholders Engagement		5	4	3	2	1
30	The level of military personnel and civilian experts involved in providing feedback on the effective implementation of the curriculum					
31	The frequency of providing opportunities for staff to engage with external stakeholders in your institution for effective curriculum implementation					
32	The level of ongoing evaluation and feedback from stakeholders in your institution					

33	The extent of incorporating the diverse viewpoints of stakeholders into the curriculum development and implementation in your institution					
34	The extent of resources and support provided by the institution to the staff to facilitate stakeholder engagement in curriculum development and implementation					
35	The extent of stakeholder engagement in your institution to identify emerging trends or changes in industry is reflected in the curriculum.					
36	The extent of your belief in stakeholder engagement to improve the overall quality of the curriculum					
37	The importance of stakeholder engagement for effective implementation of curriculum in military higher education					
38	Your level of satisfaction with stakeholder engagement for effective curriculum implementation in the institution					
39	The extent of stakeholder involvement in the development and selection of teaching aids for effective curriculum implementation in your institution					
40	The degree to which you believe in the use of active learning methods in the curriculum implementation to develop students critical thinking and problem-solving skills					
41	The level of your belief in the curriculum's alignment with the practices of active learning pedagogy					
42	The level of your thinking on continuous assessment as an effective tool for monitoring curriculum implementation					
43	Please state anything else you would like to mention about stakeholder's engagement _____ _____ _____					
Please, rate the degree to which the following stakeholders have involved in curriculum implementation process. **Respo54nse Rating: 5= Very high; 4 = high; 3= Moderate; 2 = Low; 1 = Very Low**						
Key Internal Stakeholders		5	4	3	2	1
44	The level of instructors (Trainers) involvement on the effective implementation of the curriculum					
45	The level of students involvement on the effective implementation of the curriculum					
46	The level of administrative staffs involvement on the effective implementation of the curriculum					
Part VI: Strategies to Enhance effective Curriculum Implementation						

	Item	SA	A	N	D	SD
47	My university provides ongoing professional development opportunities for teaching staff to enhance their teaching skills and knowledge of new teaching methodologies and technologies.					
48	Your institution incorporates new technologies, such as online learning platforms, video conferencing, and simulations, to enhance curriculum delivery, student engagement, and learning outcomes.					
49	Your institution provides support services, such as tutoring and mentoring, to help students succeed in the curriculum.					
50	Your institution incorporates diverse perspectives and voices into the curriculum to promote critical thinking and problem-solving skills among students.					
51	Your institution provides opportunities for experiential learning, such as internships and fieldwork, to enhance student learning outcomes and prepare them for their military careers.					
52	Your institution conduct an ongoing evaluation and assessment of the curriculum to identify areas for improvement and guide future development efforts.					
53	Your institution encourages collaboration and teamwork among students to promote their engagement and success in the curriculum.					
54	In your institution, the curriculum implementation strategies align with the goals and mission of the institution.					
55	In your institution, the curriculum implementation is based on the needs and interests of the students.					
56	Your leaders provide clear guidance and support for effective curriculum implementation					
57	Your institution regularly monitors and evaluates the curriculum implementation practices to improve student learning outcomes.					
58	Your student's involvement in the curriculum implementation process enhances their engagement and motivation to learn.					
59	You frequently assess your students learning outcomes to evaluate the effectiveness of the curriculum implementation strategies.					
60	I have an access to the necessary resources and materials to implement the curriculum effectively.					
61	Your students feel engaged and motivated by the curriculum implementation strategies used in the classroom					

Response scale - Strongly Agree (SA), (Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD)

APPENDICES - B

ADDIS ABEBA UNIVERSITY
SCHOOL OF GRADUATE STUDUIES
COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

Questionnaire to be filled by Instructors

Dear Instructors:

The purpose of this questionnaire is to gather relevant and appropriate data to conduct a study entitled ***"Undergraduate program Curriculum implementation Practices in Ethiopian Defense University***

Therefore, you are selected and kindly requested to provide relevant, appropriate, and genuine responses. Dear respondents, don't worry; all answers you provide will be used only for research purposes and kept confidential. I do believe that the findings from this study contribute to the efforts being exerted to improve the Defense higher education sector.

Thank you very much for your cooperation!

Part I: Background Information

5. The name of your institution _____
6. Sex – Male ☐ Female ☐
7. Age – Below 25 ☐ 36-45 years ☐
   26-35 years ☐ 46-55 years ☐
8. Your qualification or academic rank
   Assistant Lecturer ☐ Associate Professor ☐
   Lecturer ☐ Professor ☐
   Assistant Professor ☐
9. Years of work experience as instructor in higher education institutions
   Below 3-5 years ☐ 6-8 years ☐ 12-14 years ☐
   3-5 years ☐ 9-11 years ☐ 15 years and above ☐

Part I: Effective Implementation of the Curriculum						
S/N	**Items**	**SA**	**A**	**N**	**D**	**SD**
1	The curriculum prepares the students well for their military career.					
2	The curriculum aligns with the values and goals of the military institution					
3	The curriculum provides opportunities for the practical application of skills					
4	The curriculum incorporates technology such as online learning platforms and digital resources to enhance the effectiveness of curriculum implementation and support students					
5	The curriculum is inclusive and respectful of the diversity of the military community.					
6	I always used effective teaching and learning strategies, such as active learning, problem-based learning, and experiential learning.					
7	The curriculum is regularly evaluated to measure its effectiveness in achieving the desired outcomes.					
8	I am satisfied with the curriculum implementation in my military higher education institution.					
9	Professional development activities at my institution empower staff to effectively implement the curriculum.					
10	My institution has modern classroom facilities that are conducive to the effective implementation of curriculum.					
11	I am currently teaching the subjects I am competent in, and this makes me implement the curriculum more effectively and successfully.					
12	I always modify the planned curriculum during implementation to ensure that it suits the context in which it is implemented (mutual adaptation)					
Part II: Opportunities and Main Challenges of Effective Curriculum Implementation						
Theme 1. Opportunities		**SA**	**A**	**N**	**D**	**SD**
13	Your institution is positioned to leverage emerging technologies and research to enhance curriculum implementation.					
14	Your institution can enhance the curriculum by incorporating more experiential learning opportunities, such as simulations and field exercises.					
15	International partnerships and collaborations can enhance the curriculum implementation at your institution.					
16	Your institution has opportunities to engage with and learn from other institutions and organizations to enhance the quality and effectiveness of their curriculum implementation.					
17	Your institution can leverage the unique experiences and perspectives of its faculty and students to enhance the implementation of the curriculum.					
18	The curriculum provides opportunities for the practical application of skills learned.					

Theme 2- Resource Related Challenges						
19	Limited access to resources is a challenge for effective curriculum implementation in your institution.					
20	Lack of funding is a challenge in curriculum implementation at your institution					
21	Budget constraints are a challenge in curriculum implementation practices at your institution.					
22	Limited collaboration with industry partners is a challenge for effective curriculum implementation at your institution.					
23	Time constraints are a challenge for effective curriculum implementation in your institution					
24	Insufficient support services for students are a challenge for effective curriculum implementation in your institution.					
25	Resisting change is a challenge for effective curriculum implementation in your institution					
26	Student's motivation is a challenge for effective curriculum implementation in your institution					
27	Lack of incorporation of current and emerging trends and technologies related to military service curriculum is a challenge for effective curriculum implementation in your institution					
Theme 4- Instructors Related Challenges						
28	Resisting change is a challenge for effective curriculum implementation in your institution.					
29	Lack of pedagogical knowledge and skill is a challenge for effective curriculum implementation in your institution					
30	Integration of new technologies into the curriculum is a challenge for effective curriculum implementation in your institution.					
31	Accommodating a diverse student population is a challenge in curriculum implementation at your institution.					
32	Language barrier is a challenge for effective curriculum implementation in your institution					
33	Limited evaluation and assessment practices are a challenge for effective curriculum implementation in your institution.					
Part IV: Stakeholders Engagement on Effective Curriculum Implementation **Please, rate the degree of stakeholder's engagement in curriculum Implementation process in your institution.** **Response Rating: 5= Very high; 4 = high; 3= Moderate; 2 = Low; 1 = Very Low**						

	Extent Of Stakeholders Engagement	5	4	3	2	1
34	The level of military personnel and civilian experts involved in providing feedback on the effective implementation of the curriculum					
35	The frequency of providing opportunities for staff to engage with external stakeholders in your institution for effective curriculum implementation					
36	The level of ongoing evaluation and feedback from stakeholders in your institution					
37	The extent of incorporating the diverse viewpoints of stakeholders into the curriculum development and implementation in your institution					
38	The extent of resources and support provided by the institution to the staff to facilitate stakeholder engagement in curriculum development and implementation					
39	The extent of stakeholder engagement in your institution to identify emerging trends or changes in industry is reflected in the curriculum.					
40	The extent of your belief in stakeholder engagement to improve the overall quality of the curriculum					
41	The importance of stakeholder engagement for effective implementation of curriculum in military higher education					
42	Your level of satisfaction with stakeholder engagement for effective curriculum implementation in the institution					
43	The extent of stakeholder involvement in the development and selection of teaching aids for effective curriculum implementation in your institution					
44	The degree to which you believe in the use of active learning methods in the curriculum implementation to develop students critical thinking and problem-solving skills					
45	The level of your belief in the curriculum's alignment with the practices of active learning pedagogy					
46	The level of your thinking on continuous assessment as an effective tool for monitoring curriculum implementation					
47	Please state anything else you would like to mention about stakeholder's engagement _____ _____ _____					
Please, rate the degree to which the following stakeholders have involved in curriculum implementation process. **Respo54nse Rating: 5= Very high; 4 = high; 3= Moderate; 2 = Low; 1 = Very Low**						
	Key Internal Stakeholders	5	4	3	2	1
48	The level of instructors (Trainers) involvement on the effective implementation of the curriculum					

49	The level of students involvement on the effective implementation of the curriculum					
50	The level of administrative staffs involvement on the effective implementation of the curriculum					
51	The level of military leaders(commandants) involvement on the effective implementation of the curriculum					
Part VI: Strategies to Enhance effective Curriculum Implementation						
	Item	SA	A	N	D	SD
52	My institution provides ongoing profession55al development opportunities for teaching staff to enhance their teaching skills and knowledge of new teaching methodologies and technologies.					
53	Your institution incorporates new technologies, such as online learning platforms, video conferencing, and simulations, to enhance curriculum delivery, student engagement, and learning outcomes.					
54	Your institution provides support services, such as tutoring and mentoring, to help students succeed in the curriculum.					
55	Your institution incorporates diverse perspectives and voices into the curriculum to promote critical thinking and problem-solving skills among students.					
56	Your institution provides opportunities for experiential learning, such as internships and fieldwork, to enhance student learning outcomes and prepare them for their military careers.					
57	Your institution should conduct an ongoing evaluation and assessment of the curriculum to identify areas for improvement and guide future development efforts.					
57	Your institution encourages collaboration and teamwork among students to promote their engagement and success in the curriculum.					
58	In your institution, the curriculum implementation strategies align with the goals and mission of the institution.					
59	In your institution, the curriculum implementation is based on the needs and interests of the students.					
60	Your leaders provide clear guidance and support for effective curriculum implementation					
61	Your institution regularly monitors and evaluates the curriculum implementation practices to improve student learning outcomes.					
62	Your student's involvement in the curriculum implementation process enhances their engagement and motivation to learn.					

63	You frequently assess your students learning outcomes to evaluate the effectiveness of the curriculum implementation strategies.					
64	I have an access to the necessary resources and materials to implement the curriculum effectively.					
65	Your students feel engaged and motivated by the curriculum implementation strategies used in the classroom					
66	Please state anything else you would like to mention about the strategies for effective curriculum implementation. _____ _____					

Response scale - Strongly Agree (SA), (Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD

APPENDICES - C

ADDIS ABEBA UNIVERSITY
SCHOOL OF GRADUATE STUDUIES
COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

Interview Guiding Questions for Key Participants

Part I: Interview Questions

1. What are the main challenges to the implementation of the existing curriculum in your institutions?
2. To what extent have the stakeholders been engaged in the existing curriculum implementation process in your institution?

    a. What are the key stakeholders for your institution?
    b. What are the main role of stakeholders in curriculum implementation process?
    c. How frequently have stakeholders been involved in issues of the curriculum implementation?
    d. Have the stakeholders had the opportunity to provide feedback or make recommendations regarding the curriculum?
3. How is the curriculum being effectively implemented in your institution?

    a. How has the curriculum been effective in supporting the ongoing professional development of military personnel?
    b. How has the curriculum been effective in preparing military professionals to work in complex and diverse environments?
    c. How has your institution assesse and evaluate the effectiveness of the curriculum?
4. What strategies do your institution use to enhance the existing curriculum implementation?

    a. Does your institution provide an ongoing professional development opportunities for teaching staffs in enhancing their teaching skills and knowledge of new teaching methodologies?
    b. Does your institution provide new technologies to enhance curriculum implementation to student engagement and learning outcomes?

APPENDICES - D

ADDIS ABEBA UNIVERSITY
SCHOOL OF GRADUATE STUDUIES
COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES
Focus Group Discussion Interview Guide with Department Heads

1. Effectiveness of Curriculum Implementation

a. How is the curriculum being effectively implemented in your institution?
b. In what ways has the curriculum supported the professional growth and development of military personnel?
c. How well does the curriculum prepare military professionals to operate in complex, multicultural, and diverse environments?
d. How does your institution assess and evaluate the success and effectiveness of the curriculum?
e. Are there formal evaluation mechanisms, feedback systems, or performance metrics in place?

6. Challenges in Curriculum Implementation

a. What are the primary challenges your institution faces in implementing the current curriculum?
b. Are there issues related to resources, instructor readiness, infrastructure, student engagement, or institutional support

3. Stakeholder Engagement

a. How involved are different stakeholders (e.g., faculty, administration, students, military leadership) in the implementation of the current curriculum?
b. What ways have they contributed or been consulted in the curriculum planning and implementation processes?

4. Strategies for Enhancing Curriculum Implementation

a. What strategies does your institution use to improve and strengthen the implementation of the existing curriculum?
b. Are there ongoing professional development programs available to instructors to help them stay current with new teaching methods and enhance their instructional effectiveness?
c. What role does technology play in supporting curriculum delivery, student engagement, and learning outcomes?
d. Are there tools or platforms introduced to support teaching and learning?

APPENICES – E

Ethical Clearance Certificate

Ref: CEBS_IRC_C&I_003/2024
Date: January 29, 2024

COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES
ADDIS ABABA UNIVERSITY
CEBS's INSTITUTIONAL REVIEW BOARD (IRB)
Ethical Approval Certificate
Graduate Students

Form: CEBS_IRC_Template_Form_001

IRC Approval Reference No.: CEBS_IRC_C&I_003/2024

To: Tesema Mamo (Principal Investigator)

Advisor(s): Dr. Enguday Ademe

From: Teshome Tola, (PhD) Chair, Department of Curriculum and Instruction

Re: Approval of a Research Ethics

Protocol Title	Curriculum Implementation Practices in Ethiopian Defense Higher Education Institutions
Protocol Number	CEBS_IRC_C&I_003/2024
Principal Investigator	Tesema Mamo
Institute	Department of Curriculum and Instruction, College of Education and Behavioral Studies, Addis Ababa University
Study Site(s)	Addis Ababa and Places where the Defense Higher Education Institutions are Located (EDU, EWA, EDCSC, EMA, and MBPTI)
Decision	Permitted to conduct the study taking ethical issues into account.
Date the approval was issued	January 29, 2024

Expiry of this approved certificate (*Not exceeding 1 year*)	January 28, 2025

Additional notes (If any) to the PI:

Advised to conduct the study within the time given and considering the university's Ethical codes strictly.

Ethiopian Defense University is mentioned as sponsor of the research, but the purpose is not mentioned in the application. Whether this will cause conflict of interest has to be explained as well.

Remark:

Information on what has to be fulfilled after approval

The name of the university Advisor: Dr. Enguday Ademe

Signature:

Date: Jan 28 2024

For Academic Unit IRC

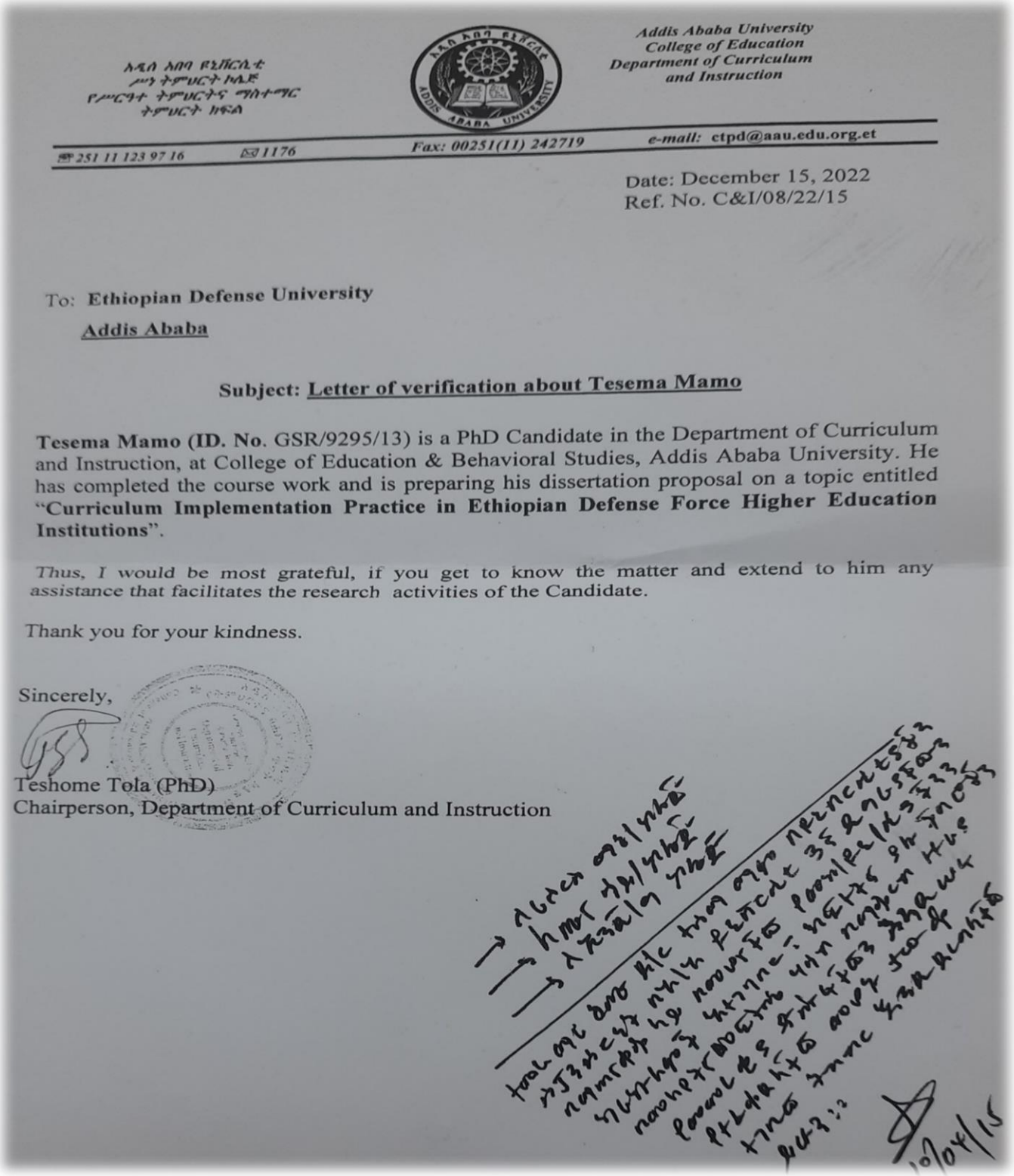
Signature:

Date: Feb 02/2024

For CEBS-IRC

APPENDICES – F

Letter of Verification



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Addis Ababa University
College of Education
Department of Curriculum
and Instruction

☎ 251 11 123 97 16 ✉ 1176 Fax: 00251(11) 242719 e-mail: ctpd@aau.edu.org.et

Date: December 15, 2022
Ref. No. C&I/08/22/15

To: **Ethiopian Defense University**
Addis Ababa

Subject: Letter of verification about Tesema Mamo

Tesema Mamo (ID. No. GSR/9295/13) is a PhD Candidate in the Department of Curriculum and Instruction, at College of Education & Behavioral Studies, Addis Ababa University. He has completed the course work and is preparing his dissertation proposal on a topic entitled "**Curriculum Implementation Practice in Ethiopian Defense Force Higher Education Institutions**".

Thus, I would be most grateful, if you get to know the matter and extend to him any assistance that facilitates the research activities of the Candidate.

Thank you for your kindness.

Sincerely,

Teshome Tola (PhD)
Chairperson, Department of Curriculum and Instruction