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**DEPARTMENT OF AIR WARFARE
ARMED FORCES COMMAND AND STAFF COLLEGE
JAJI - NIGERIA**



SERVICE PAPER HANDBOOK

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“Reading maketh a full man, conference a ready man and writing an exact man”

– Francis Bacon

INTRODUCTION

1. The writing of Service papers is an important aspect of a staff officer's work. It is one of the traditional ways of presenting information used in analysis of a situation and problem solving. An important aid to decision making, Service papers help commanders and staff officers arrive at rational solutions on varied issues. From this perspective, a Service papers can be used to justify a course of action based on its well-argued points and sound deductions. Given its relevance in staff work, it is imperative for staff officers to develop the skills necessary to produce good Service papers. For this reason, instruction on the writing of Service papers is included in the training package of AFCSC staff courses.

2. A well written Service paper is the result of serious thinking and hard work. The final product would show evidence of research, make use of illustrative arguments and employ logical thinking to arrive at valid conclusion(s) which convince a reader. Understandably, composing such a Service paper is challenging; especially for students who focus on assessment and grades! The writing challenge is somewhat reduced by awareness that the rationale for writing a Service paper is either to inform the reader, or to present facts, opinions and arguments that support a conclusion or recommended action. A paper may also consider the past and present before making an extrapolation. It could provoke a discussion or review a situation. It could analyse a problem to consider a solution or options available. An author could also write a paper because he/she wishes to address an issue; more often, the paper will be written because the author has been tasked. Regardless of the reason for writing, a good Service paper must reason out the issue(s) in a manner that convinces the reader.

3. Experience shows that on arrival in AFCSC, many students are unable to write good Service papers. One reason is because they do not understand the rudiments of Chapter 6 of the Joint Service Writing Manual (JSWM). Moreover, Chapter 6 of the JSWM mostly provides basic

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instruction for writing Service papers focused on historical analysis and problem solving; i.e., papers tending towards conjecture, pure logic or theory. Whereas, students in AFCSC are routinely required to produce intricate Service papers based on the results of empirical research. Clearly, such Service papers transcend the basic guidance provided in Chapter 6 of the JSWM. Thus, without assistance from a Directing Staff (DS), even a good student may perform below par in this important aspect of AFCSC courses. The DS believe the performance of students will be greatly enhanced if they are self-taught in the production of Service papers which present the results of their research. It is for this purpose that the Department of Air Warfare Service Paper Handbook was developed. The handbook is complementary to the JSWM, and provides a stepwise procedure (with clarifications) for students to produce satisfactory research based Service papers. This handbook is written in a style that addresses students; and the self-disciplined ones who use it should, in time, write satisfactory Service papers based on their research work. Notwithstanding, students should bear in mind that writing is a skill that develops with constant practice. Knowledge of the JSWM is assumed; thus, this handbook covers preparatory work, stages of writing a Service paper and correcting the draft.

AIM

4. The aim of this handbook is to outline steps for producing Service papers that present the results of empirical research.

PREPARATORY WORK

5. Preparation always precedes success. The level of preparation would determine how much you will 'bleed' (i.e, DS red ink on your paper!). Preparation in Service paper writing involves reading, thinking and developing a basic framework. If the topic is one in which you have limited knowledge, the onus lies on you to read and accumulate knowledge on the subject. Bear in mind that familiarity with the subject helps; but it does not necessarily make the gathering of relevant material any easier. Note that sound knowledge precedes good papers, and that in this age of information technology, the knowledge on most subjects is a keyboard strike away. Be

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warned that the internet is a repository of both good and bad; for this reason, AFCSC advises that information from online sources are treated with doubt until it is validated. Quality materials can also be accessed from the library, magazines and manuals, or from primary sources such as individuals and research articles.

6. As one reads, ideas begin to form in the mind. It is advised that one writes down these ideas even if they seem disjointed. At this stage, it does not matter because your mind is only trying to process what you are feeding it. You must understand that every good paper will first be written in the mind; and if the mind does not grasp it, neither will the hand. It is in the mind that the structure of the paper is shaped. If the mind plays such an important role, a greater chunk of the time should be given to thinking. It is in doing so, that one owns the paper and develops the passion that is necessary to produce a good paper. It is in the mind that you will first identify the issues that need to be addressed. This would naturally lead you to more reading. As you think over the issues, ideas will be formed and you will begin to imagine a structure that your paper could take. A jotter is a valuable companion at this stage..., use it to record your thoughts! From the thinking process and the jottings you've made, a structure eventually emerges. It is from this structure that a framework is developed. The framework is like the skeleton on which the content of your paper will rest. A bad structure or framework equals a bad paper or at best, an unbalanced paper. The aim and sub-topics or scope of the paper are now known, or at least assumed to a predictable extent. Having determined the framework is suitable, you can confidently begin to write the paper proper.

STAGES OF WRITING A SERVICE PAPER

7. The writing of a Service paper requires much thought, analysis and preparation, a little writing, a lot of editing and a hefty amount of self-criticism. There are 9 distinct stages to writing a Service paper. These 9 stages are critical to the development of good Service papers and must be considered by every staff officer with the task of producing acceptable Service papers. It is advisable that these stages are followed chronologically

to ensure that no necessary requirement of a good paper is omitted. These stages are:

- a. The introduction.
- b. Formulating the aim.
- c. Selecting a topic.
- d. Development of a framework.
- e. The discussion.
- f. The conclusion.
- g. The recommendation(s).
- h. Referencing.

THE INTRODUCTION

8. The 'Introduction' is compulsorily the first heading in a Service paper. It should do what its name says – introduce the paper. The introduction provides the general background essential for understanding both the theme and why the paper was written. A good illustrative analogy would be the introduction of a guest lecturer in Danjuma Hall. The introduction that is read out is not his entire biography but essential highlights of who he/she is especially with respect to the lecture that he is about to deliver. The introduction should just 'whet the appetite in preparation for the meal'. A good introduction should urge the reader to continue reading, taking into account the reader's knowledge and experience.

9. Many students find it difficult to begin writing their papers. An acceptable structure for the introduction is the inverted triangle or funnel structure. The base of the triangle begins with a broad statement but gradually narrows down the range and scope to the apex, and should naturally point one to the aim. The opening sentence(s)/ paragraph of the introduction should present the general or global view of the subject, while subsequent sentences/paragraphs 'funnel' down to a specific theme. The introduction should be as brief as possible. However, it should be sufficiently comprehensive to provide a background and historical record of the subject matter. In deciding how much to include, remember that a reader should be

able to get the essence of a Service paper by reading only the introduction, aim and conclusion.

10. The introduction prepares the way for a statement of the aim of the paper. It should not pre-empt discussion or anticipate conclusions, thus, introductions should not have deductions. As a general rule, the length of the introduction should be about 10 per cent of the whole paper.¹ The components of a good introduction include background information, an assessment of previous papers on the subject, relevant definitions and authorities consulted, statement of the problem, justification of the study, purpose of the paper, the scope of the paper, assumptions and limitations.

a. **Background Information.** The background information tells the 'story' behind the paper. It is a broad reference to what prompted the issue at stake. This segment of the introduction usually requires the telling of some history and the chronological development of major events related to the subject. This segment familiarizes the reader with how the issue came about. The essence of this component is to provide the necessary backdrop for the reader to appreciate the condition, circumstance and factors that have given rise to the problem under investigation. In a Service paper presenting the outcome of research, this section may consider previous authors' approach to the issue in a manner akin to the literature review of an academic paper. However, unlike an academic project, the writer is not bound by any mandatory headings. The main considerations when reviewing past papers would be previous authors' focus, objectives, how, when and where the studies were done. The interpretation of the findings and the deductions from the study should also be mentioned. Always keep in mind the need to be brief, and the need to use primary and secondary sources. Primary sources are original materials on which research can be based. They are usually the first formal appearance of results in physical, print or electronic format. Examples include journals and articles published in peer-reviewed publications, keynote addresses and interviews. On the other hand secondary sources are interpretations and evaluations of primary sources. Secondary sources

¹. Note that this rule was not applied in this handbook.

are not evidence, but rather commentaries on and discussion of evidence. Primary sources of information provide the most credible and authentic source of information on which a writer could safely base the premises in his/her paper. **To enhance credibility, it is recommended that articles reviewed should be within the last 10 years.** A careful assessment of the background information, previous positions on the subject and current realities would reveal some issues that merit attention. Some of such will be obvious paradoxes, but others may be more subtle.

b. **Definitions and Authorities Consulted.** After stating the background, one should dovetail and provide the relevant definition of terms that would be employed in the paper including the definitions of key terms in the topic. This section provides the definitions of terminologies used in the study that do not have a common meaning or those terms that have the possibility of being misunderstood. These terms should be operationally defined or explained; that is, you must clarify how these terms are used in your study. If you use the definitions adopted by others, be sure to include the authoritative source(s). This section of the introduction provides the theoretical framework within which the rest of the discourse will take place. It enables relevant concepts or variables employed in the paper, particularly in the topic, to be put in proper perspective. In order to properly develop this section, the writer must be familiar with relevant literature. It is essential that the writer has clear insight into related works that have been done previously on the subject. A student/staff officer may discover that varied or contradictory notions of the conceptions of the variables abound from previous studies. He should by way of summary, state which of the concepts he subscribes to and is therefore adopting for the paper. Any adopted concepts or definitions should be stated and reasons provided for such preference. Where authorities are consulted, they should be stated. This helps to put your work in context. However, **frequent definitions should be avoided as this tends to disrupt the flow of the paper.**

c. **Statement of the Problem.** The statement of the problem tells the reader the issues that were observed that led the writer to put pen to paper. It could also be referred to as the identified 'gap' that the writer intends to fill. It is the driving force of the paper and in principle, should state the relationship between the variables. A good Service paper must identify a problem whose solution requires a research. This implies that not all problems require the systematic collection, analysis and interpretation of data to answer certain questions or solve a problem. For a problem to deserve a research, the following 3 conditions must exist. Firstly, there should be a perceived difference between what exists and the ideal or planned situation. Secondly, the reason for the difference must be unclear and lastly, there should be more than one possible solution to the problem. Accordingly, a problem statement consists of 3 parts: the ideal, the reality, and the consequences. The ideal describes a desired goal or ideal situation; the reality describes a condition that prevents the goal, state, or value from being achieved and the consequences identifies the proposed way to improve the current situation. Note that parts one and 2 are connected with the use of words such as 'but, however, in spite of, unfortunately' etc. The statement of the problem is therefore a brief elaboration upon the information implied in the topic. It should be short and lucid. An example of a problem statement is; *'According to the XY University mission statement, the University seeks to provide students with a comfortable, safe and healthy learning environment. However, Blocks A, B and C are poorly ventilated and do not have air conditioning units. During the hot seasons, room temperatures in these blocks often exceed 40 °C. As a result, many students have reported inability to do homework in their rooms'.*

d. **Justification for the Study.** The justification for the study is related to the statement of the problem. It tells of the need to resolve the issues raised in the statement of the problem. One must be careful not to introduce unnecessary argument and deductions when stating the justification. The justification must never say the 'how'. That is the job of the paper itself. Some writers do not differentiate between the statement of the problem and justification since they usually follow one

another. However, the wording of the justification for the study must not leave the reader in doubt. For example, a justification that may follow the example of a problem statement given above could be: *'In view of this, our study seeks to investigate several options for making the hostels more hospitable'*

e. **Purpose.** The purpose of the paper defines the relevance of the paper to the reader or audience. It tells the reader why the paper is important to him. *It therefore articulates the reasons why it is important for the study to be done, what the value of the work is, and to whom it should be most relevant.* A purpose statement is a declarative sentence which summarizes the specific topic and goals of a document. It is typically included in the introduction to give the reader an accurate, concrete understanding of what the document will cover and what can be gained from reading it. To be effective, a statement of purpose should be guided by *3 considerations: It should be specific and precise (not general, broad or obscure); secondly, it should be written in one or 2 sentences; and lastly, it should be goal oriented and stated in terms of desired outcomes.* A purpose statement should therefore have an outcome based verb such as *assess, determine, disprove, describe, propose, suggest, establish* etc at the beginning of the sentence. Verbs such as *"understand", "explore", "investigate", "examine" and "discuss"* are poor verbs as they describe processes, not outcomes. For instance, a subject can be discussed endlessly without having to make recommendations, draw conclusions or offer a result. You might be exploring, examining or discussing as part of your process, but they cannot be the end result of the research. The purpose of a study, which is the solution to the statement of problem, should be more tangible. An example of a purpose is *"This paper will describe 4 common causes of co-worker conflict in organizations and explain how to use a 5-step procedure to constructively manage this conflict."* This purpose statement is very specific about what aspects of conflict will be discussed. It is precise about how much information will be given. It is also clear about what the reader will learn. In contrast, an example of an ineffective purpose is "The purpose of this report is to discuss the eating disorders of Anorexia and Bulimia." This

statement of purpose is too vague and broad. It is not clear what aspect of these disorders will be discussed, or what the reader will learn. In addition, it is silent on what specific aspects of these eating disorders will be discussed. The purpose may be similar to the aim but not necessarily so. The purpose conveys the broad knowledge the reader should gain, while the aim conveys a specific message/knowledge the writer wished to pass on. Sometimes there may be little difference in the wording of the purpose and the aim, but in complex papers, the difference is considerable.

f. **Scope of the Paper.** The scope tells what the writer is going to cover in his paper in order to achieve his aim. It consists of the sub-topics that will form the main body or discussion segment of the paper. It is to be embedded in the introduction usually in the same paragraph with, but after, the purpose and alongside the assumptions and limitations.

g. **Assumptions.** Assumptions are conditions that should exist in order for facts and deductions in your paper to hold true or become acceptable. Another approach is to say assumptions are statements presenting situations the writer holds to be true/facts..., even though these may not be backed by evidence. Note that in Service papers, assumptions are made to help reduce the scope of what must be covered. Assumptions can be categorized into 4 types. They include methodological, theoretical, instruments or measures based and topic-specific assumptions. In methodological assumption, the adopted study design necessitates certain assumptions. The theoretical framework adopted in some studies could also compel the imposition of assumptions while others are needed as a result of the type of instrument or measures used in the study. Topic-specific assumptions on the other hand are assumptions directly related to the topic of the paper. Topic-specific assumptions are mostly applicable to Service papers produced in the College. It is therefore, the recommended type of assumption for Service papers in AFCSC. An assumption can only be known when one understands what he wants to do in a paper. For instance, a study was aimed at investigating why a significant number

of people in doctoral programmes complete all the course requirements, yet they do not go on to complete the research and produce the dissertation. The assumption for the study was, *'because students have successfully completed all their course requirements, they should be able to carry out a research project and write a dissertation'*. This assumption is directly related to the topic and is believed to be true. It is recommended that assumptions are presented in 3 sections/sentences. The first sentence should capture the 'type' or 'status' of the potential reader, the second then states what the reader 'should know' or be familiar with by virtue of the 'status'. The third sentence then gives the assumption proper.

h. **Limitations.** The limitation for a research work is derived largely from the methodology. Limitations should vindicate the constraints faced by the researcher in the course of gathering or analysing data. This dictates that past tense is used. Limitations are potential weaknesses in the study that are mostly out of your control, given limited time, funding, choice of research design, or other factors. They also help to tell the reader that certain aspects if excluded, have been excluded deliberately and not through oversight. For instance, *'the study is limited to the period between 1993 -1999. In the life of a nation, 6 years may not be very significant, however, this period is relevant to the subject of the study'*. Limitations should not be confused with delimitation. Delimitations are those characteristics that limit the scope and define the boundaries of your study. The delimitations are in your control. Delimiting factors include the choice of objectives, the research questions, variables of interest, theoretical perspectives that you adopted (as opposed to what could have been adopted), and the population you choose to investigate. Delimitations are not required to be stated in Service papers at the AFCSC.

FORMULATING THE AIM

11. The aim states what the writer seeks to achieve at the end of the paper. The aim is the key to the whole paper and must be simple, single and unambiguous. Without a clear aim, the writer's arguments will have no

focus; the paper could then become muddled, or deviate and end up dwelling on diverse subjects. The aim should, therefore, be clearly defined and written in a precise statement which ensures the writer does not stray into irrelevancies. **In stating the aim, the writer must refrain from prompting any conclusion or recommendation(s).** For some simple papers, not much effort is required to coin the aim. For others, much thinking and painstaking effort is required.

12. At every stage of writing, you must bear in mind your aim. In fact, the topic and aim could be written on a separate sheet of paper for quick reference as you write. This technique helps to keep you on course, as it is easy to delve into irrelevancies while writing. Everything you say in your paper must be logically related to the aim. In essence, the aim controls and directs the choices you make about the content of your paper. **The aim is expressed by a simple verb, in the infinitive and should state if any recommendations are to be made.** There are 2 important parts in an aim: *process* word and *content* words.

a. **Process Word**. The process word is a verb which determines how you must deal with the content of the paper. Your choice of words, expressions and sentence structure depends on your process word. The 3 aims below are different because of the different process words.

- (1) To ***examine*** the impact of HIV/AIDS on NAF operations.
- (2) To ***highlight*** the impact of HIV/AIDS on NAF operations.
- (3) To ***discuss*** the impact of HIV/AIDS on NAF operations.

The process word has been written in bold italics in each case. To 'examine' is different from to 'highlight' and from to 'discuss'. So when you formulate your aim, be conscious of the meaning of the process word. In the past, students have stated that their aim was to 'review' something but they ended up 'evaluating' it. A poor understanding of the process word accounts for many instances in which an author is dismissed for 'not having achieved the stated aim'.

b. **Commonly Used Process Words**. The following are examples of some commonly used process words and their accepted meanings.

(1) **Analyse**. The word *analyse* indicates an intention to meticulously study the constituent parts of something, so as to extract relevant information. In addition, it is to break down into basic structure, components or essential features; in order to discover meaning, true nature, etc. It could also refer to a careful study of something to learn about its parts, what they do, and how they are related to each other.

(2) **Assess**. The word *assess* means to consider in a balanced way the points for and against in a bid to show the value or quality of something. It is also to estimate or determine the nature, significance, or ability of something in an unbiased manner. An assessment considers the value or importance of something, paying due attention to positive, negative and disputable aspects. An assessment eventually cites the judgement(s) of any known authorities, as well as your own.

(3) **Discuss**. The word *discuss* means to explore by lucid argument; giving all details of the points for and against. It is also to exchange views or deliberate about a matter taking into account different issues or ideas. Using the word 'discuss' suggests a decision(s) would be reached and presented to the reader.

(4) **Evaluate**. To 'evaluate' is to make a judgement about the value, importance, or worth of something. When you *evaluate* something, you are making a judgment, one that most likely results from some degree of analysis. In addition, it is to form an idea of the amount, number, or value of something. The words *assess* and *evaluate* are similar; however, evaluation goes a step further by proffering the outcome or expected conclusion.

(5) **Examine.** The word *examine* indicates the writer will conduct an in-depth investigation and present the apparent nature of/reveal the true condition/implication of something. It is also to inspect, observe, test, or investigate, something thoroughly, carefully or critically in order to determine their condition.

(6) **Explain.** To *explain* is to make clear the nature of something by revealing all details, intricacies/facts. It is also to make an idea or situation clear to someone, or to account for something or tell why something happened; thus, making it understandable.

(7) **Review.** To *review* is to make a critical study of an issue with the intention of suggesting the changes needed. The process of review involves a formal assessment, with the intention of instituting change if necessary.

(8) **Highlight.** The word *highlight* indicates the writer will present the main features, structure, general principles or other important/outstanding aspects of a topic, omitting minor details.

c. **Content Words.** The content words tell you what you must focus on in the paper. It determines what you should include and what should be eliminated. The content words in the 3 aims in Para 12a are the same; and this is 'impact of HIV/AIDS on NAF Operations.' You must take out each element of your content words, understand their meaning individually and then relate them together. Using the 3 aims in Para 12a, you must know thoroughly the meanings of the factors 'HIV/AIDS' and 'NAF Operations; and then relate them together based on the 'impact' of the first factor upon the second. Anything in the paper that has no relation to HIV/AIDS, NAF Operations and the interplay between these factors vis-à-vis impact, would be unnecessary and may be irrelevant!

SELECTING A TOPIC

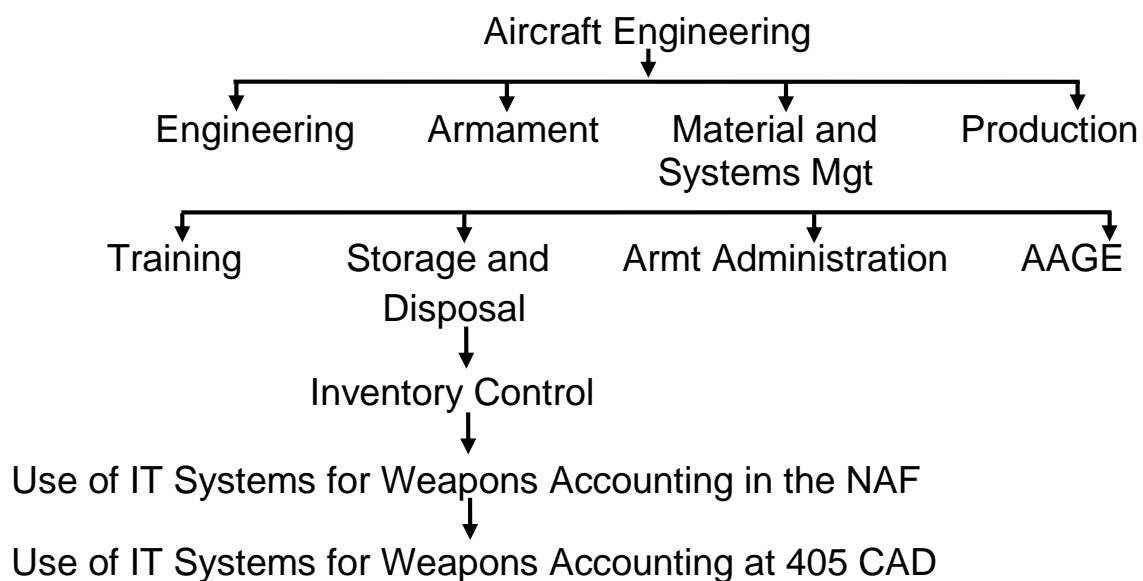
13. The topic of a paper is the subject heading of the paper and promptly captures the essence of the paper. It is a statement, which aptly reveals what the paper is all about. It is supposed to immediately tell the reader what the paper wants to do. The topic allows the reader to make a choice as to continue reading or not. It must not deceive or be sensational but rather do what it says it will do. It is expected that the keywords in a topic, when defined, would paint the picture of the paper in the reader's mind. Therefore the selection or coining of the topic of a paper is an essential step to the development of the paper. You should choose a subject based on where you already know something or where you are curious about and wish to expand your knowledge.

14. The topic should be as short as possible and reflect the aim. The topic should be coined like a phrase and not a sentence. In doing this, the topic of a Service paper should come only after the concept has been developed. The concept of a paper first starts from a general idea or interest and gradually narrows down to the specific problem the study intends to address. Thus, a draft aim of the paper is initially developed which is later fine-tuned into the specific focus or aim of the paper. It is at this point when the focus of a paper is known that a topic is derived. **Consequently, the topic is crafted to reflect the aim and not the reverse.** A common misconception among students is that the first step in the development of a Service paper is selecting the topic; this line of thought is discouraged in AFCSC.

15. Often, a topic would readily emanate from observed problems or the actions to ameliorate the problems. The topic of a Service paper presenting research work requires with at least 2 variables, so as to allow for clearer comparative analysis and easily inferred deductions. **Furthermore, a topic is considered researchable when there is an independent variable and a dependent variable.** The dependent variables, as the name suggests, rely on the action of the independent variables. They are the result or implication of the action of the independent variable. The independent variable is usually the source or cause. It is the 'issue' at hand. If you remove it, there will be no need for the paper. In a way, the independent and dependent variables can

be referred to as the cause and effect respectively. For example, in a topic '*Security Arrangements for Combating Piracy in the Gulf of Guinea*', *security arrangements* is the independent variable while the level of *piracy in the Gulf of Guinea* is the dependent variable. Thus, as you adjust the security arrangements, you expect to see measurable changes in the degree of piracy.

16. A topic is the specific aspect of a subject. Subjects such as logistics, administration, and operations are too broad to be dealt with adequately in a short Service paper. Even a book would focus on selected aspects of such subjects. You therefore need to select a manageable topic within your chosen subject area. You may consider using a flow diagram to select your topic, bearing in mind the word limitation. For example, if your subject area is aircraft engineering, the flow chart could look like this:



17. Considering the word limitation, writing on the topic 'Use of IT Systems for Weapons Accounting at 405 CAD' could be too restrictive; and as such, it would be advisable to move a step up to 'Use of IT Systems for Weapons Accounting in the NAF'. In such circumstances, 405 CAD could be made a case study.

DEVELOPMENT OF A FRAMEWORK

18. A framework helps you to organise your material so as to present a logical sequence or flow of ideas and to provide the strongest support for your aim. It helps to observe the feasibility of the intention of a Service paper. Furthermore, a framework reveals the alignment between the topic, aim, scope items and the potential recommendations. Therefore, once a decent framework has been developed, it is likely that a good Service paper will evolve. There are 2 types of framework: the informal/basic framework and the formal framework.

a. **Basic Framework.** In the basic framework you state the topic, the purpose, the aim and give highlights for 3 parts of the Service paper; i.e., the introduction, the body and the conclusion. The body in this case will be your scope items arranged in a logical order, with one or 2 sentences to show why they were selected. This is the first framework usually derived in the course of writing a Service paper, and it serves as a basis for discussion with your Supervising DS.

b. **Formal Framework.** In a formal framework, you develop the introduction fully and state the aim, before listing the scope items along the supporting ideas and information under each. The gist of the conclusion and possible recommendations are then provided. This is the framework produced after information on the topic is collected. As with the basic framework, your Supervising DS must approve the formal framework before you start writing the first draft of the Service paper. Please be aware that the formal framework must show the syllogistic link between your topic, aim, scope items as well as conclusion and possible recommendations.

19. In summary, a completed framework starts with a topic. The introduction, drafted in full, explains the background and leads logically to the aim. The discussion is defined by main, group and paragraph headings. Under each is grouped a series of related ideas which the writer is presenting. The logic and direction of the argument and the need for supporting detail should be clear. Each paragraph must be related to the

aim. If no deductions can be made from a set of paragraphs, they probably contribute nothing to the argument. Such sections of the text are often superfluous and should be discarded. Notwithstanding, any uncomfortable facts or inconsistencies must be ruthlessly and honestly pursued, and not dismissed or ignored.

20. At this point it is important to take a good look at the structure of the paper. Every scope item and the related group or paragraph headings must contribute directly to the aim. If no relevant deductions could be made from a group heading, it contributes nothing to the aim and should be expunged. Many students are often at a loss as to how many scope items a Service paper ought to consist of. Please note that there is no rule regarding the number of scope items for a Service paper. It is a function of the type of paper being developed and the ingenuity of the writer. However, for simple Service papers which are routinely written at the AFCSC, a simple structure of about 4 or 5 scope items is adequate. A typical 4 scope item paper would utilize 4 distinct sections to address the aim. These are the standard, principal, challenges and way forward.

a. **Standard**. The standard is presented in the first scope item. This section would consider the normal or typical situation/circumstance of the main subject of discourse. It usually requires going back into literature to discover the typical situation of the subject. A good insight into the typical situation of the focus of the paper is brought into limelight which would now serve as a basis for comparison with the current situation. For instance, a Service paper with the topic, '*The Military Component in the Fight against Terrorism in Nigeria*' could have its first scope item as '*An Overview of Terrorism in Nigeria*'.

b. **Principal**. The principal is presented in the second scope item, and this is where the writer considers the issue at hand. In this scope item, the main gist of the problem the paper intends to solve is discussed. For instance, the second scope item to the topic highlighted in Paragraph 22a could be '*Roles of the Armed Forces in Combating Terrorism in Nigeria*'.

c. **Challenges.** The third scope item could focus on difficulties (or challenges) hindering the resolution of the problem(s) identified in the Service paper. These are the issues whose resolution would ultimately lead to the achievement of the aim of the paper. Some of the challenges could be identified from a thorough discussion of the 'standard'; i.e, the first scope item. However, most of the challenges are expected to be derived from a good work on the 'principal' or the second scope item.

d. **Way Forward.** The fourth scope item is expected to proffer workable solutions to the identified challenges; implementation of which would lead to the resolution of the problem at hand. Note that the 'Way Forward' is not necessarily a reversal of the challenges noted in the paper. For instance, if an identified challenge is '*inadequate funding*', it would not be apt to have '*provision of adequate funding*' as a way forward. Rather it would be better to proffer alternatives, issues/ideas that have not been previously considered which would be effective in solving the problem. Furthermore, in most Service papers, the accepted style is for the way forward section to discuss each challenge that has been considered in the order stated. This means that if there are 4 challenges, there should be 4 solutions presented; i.e, one way to address each challenge stated.

THE DISCUSSION

21. The discussion section contains the substance of the paper. Included in this section are the facts, opinions, arguments and proof(s) collected during preparation. There is no fixed format for presenting this section. It must be planned in detail so that it can eventually be written in the most direct, concise, logical and persuasive manner to achieve the aim. The planning of the structure of the discussion, initially down to main and group headings and subsequently down to paragraphs, is the next important task. The main body should, in a nutshell, deliver what is promised in the introduction. It should develop the topic within the limit the writer has set, and in the way promised. Consequently, the material must all be pertinent to the aim of the paper and should be arranged in such a way that the reader can

see that is leading directly from the aim to a logical conclusion, and finally the recommendations. Service papers should not be mere collections of related facts without an element of progression of cohesion. Various aspects of the subject should be developed in proportion to their relative values by employing all possible illustrative methods such as description, narration, analysis, details, examples and references.

22. The main body must carry the burden of satisfying the aim. It must not pre-empt the conclusion and attempt to make unsupported assertions. The persuasiveness of a writer's argument will depend, to large extent, on their orderly arrangement and effective use of transitional sentences and paragraphs. A careful use of aptly-worded headings throughout the paper, can also help make the structure of argument readily apparent to the reader. However, when using headings, the writer must remember that the wording and logical argument should not be dependent on the heading; the reader should be able to follow the reasoning smoothly even if all of the headings were removed. To the writer, headings are a useful aid for structuring the paper. To the reader, they are an aid to clarity and reference.

23. **Logic and Flow.** The order in which the main headings are arranged depend on how the logic of the paper is developed. The logic and the heading order are inextricably linked. As the framework is refined, the extent to which supporting detail must be included in the text will become evident. Too much detail disrupts the development of the logic and breaks the flow of the argument. It is also important to arrange your points in a chronological order from the weakest to the strongest. This ensures that your strongest point is the last thing read by your reader and thus lingers more in his mind. The author should equally be conscious of the requirement to establish proper linkage between the various segments of the discussion. It should be noted that the paper ought to be logically arranged such that there is a link between each paragraph and between headings in order to establish a good flow of the paper. Therefore, the last sentence of a paragraph should give an insight into what the next paragraph would discuss. Similarly, the last sentence of a group heading or scope item should be connected to the next heading or scope item. This would establish a good flow for the paper.

24. **Balance.** The main body of a paper should be seen to be balanced without being apparently skewed towards an idea or leaning. Avoid emotional, passionate and sensational expressions, it could make your paper devoid of balance and make your reader see you as a biased writer. When arguing a point for instance, the pros and cons must be well brought out to assist in making a sound deduction. Even where the writer holds a particular view, it must not be apparent, rather every aspect of the subject matter must be discussed in an objective manner. Sound reasoning must be allowed to prevail over personal interest and sentiments. In cases where annexes are employed in a Service paper, they must be referred to in the paper. It is not enough to merely mention the title of the annex. The real test is its usage in the argument while presenting an issue.

25. **Basic Components of the Discussion.** We shall now consider the basic components of a discussion under a group heading. Note that adopting the approach suggested by these components helps ensure logical and convincing arguments that address the group heading. There are 4 basic components of a good discussion that would address a group heading. They are: the claim, reason, evidence and deduction. The claim is usually a well-known point, a statement of fact or a strongly held opinion. The reason expresses why that opinion or fact is upheld by the writer. Evidence is thereafter given to corroborate the claim. Lastly, a deduction is derived from the arguments generated in the discussion. For instance, a group heading 'Siltation' in a paper titled '*Disaster Management in Nigeria: Challenges of Jigawa State*' could be used for illustration. The 4 basic components in the discussion which addressed the group heading could be as follows:

- a. **The Claim.** 'Siltation is another major ecological challenge in Jigawa State'.
- b. **Reason.** 'Alluvial materials generated by erosion of the degraded wetlands and watersheds silt up River Hadejia and its tributaries, thereby causing impediments to the natural flow of the river.
- c. **Evidence.** 'The siltation of River Hadejia has raised the river level, in addition to forming silt banks and islands which divert the flow

of river water. Thus, River Hadejia no longer flows along its traditional course due to the siltation of the original channel. This process of diversion is evident as flood in various places. Therefore, siltation is the root cause of flooding in the southern parts of Jigawa State’.

d. **Deduction.** ‘Management efforts such as the use of traditional implements to clear silt deposits from water channels have been encouraged and employed at local levels. This method is however ineffective due to the rapid silting up of the river course occasioned by heavy accumulation of alluvial materials generated by erosion. The dredging of silted channels would facilitate the flow of the river along its traditional course. Therefore, dredging of River Hadejia and its tributaries would be an effective solution to the siltation problem’.

26. **Deduction.** Each major part of the discussion should end with a summary or a definitive statement of the writer’s intent or deductions showing precisely how he is fulfilling the aim of the paper. It may be necessary to summarize the arguments and deductions derived at intervals, for example at the end of each section. These concluding statements form part of the discussion and must not be confused with the conclusions of the paper itself. **A deduction is defined as the conclusion drawn from available information. It is the inferences reached when the rules of logic have been applied to a premise or set of premises. It tells the why, the what, the who, the how and sometimes the effect.** The test of every deduction is, does it relate to the aim of the paper?. If it does not, discard it. The reasoning process will be employed to aid our understanding of how to make deductions. There are 2 types of reasoning process. They are the inductive and the deductive reasoning processes. The major difference between the 2 is that the deductive reasoning process begins with a conclusion or premise while the inductive reasoning process does not. The inductive reasoning process is more demanding and requires more ingenuity from the writer than deductive reasoning.

a. **Inductive Reasoning.** **Inductive reasoning is the process of arriving at a conclusion from study of evidence when the evidence is in the form of specific instances.** In other words, you gather data in the

form of specific instances, you study and evaluate this data, then you arrive at a conclusion. Here is an example: *Envuladu bought a used Daewoo Racer, it ended at his mechanic after 2 years. Jinadu bought a used Daewoo Racer which ended up at the mechanic after 18 months. Baka also bought a used Daewoo Racer and this car too was abandoned at the mechanic. If I buy a used Daewoo Racer, where is the likely place it will end up? The Mechanic!* One can equally generalize that all used cars are unreliable. We have just made a deduction (note the assumption....the make of vehicle must be the same). Now if we want to make a deduction that suggests you buy a new car, we give opposite instances of how a number of officers bought new cars and they lasted..., therefore, buy a new car. This method is useful when you have a lot of data (figures – quantitative analysis).

b. **Deductive Reasoning.** Deductive reasoning is the process of starting with a conclusion (or premise) and attempting to derive another conclusion from it through the application of specific instances to the conclusion. In other words, start with a conclusion, attempt to apply some specific instances to it, then derive a new conclusion about the specific instance.

c. **Example 1.** Here is an example:

All used cars are unreliable.
Ajare bought a used car.
Ajare's car is unreliable.

The first statement is a conclusion (we call it the major premise). The second statement is an attempt to apply a specific instance to the major premise. (call this the minor premise). The third statement is the new conclusion or deduction. This way of breaking the logical process down is known as syllogism. Most qualitative analysis will follow this pattern. Syllogism is a deductive reasoning process which employs the logical breakdown of an argument using 3 or more propositions (as

shown in the example above). It makes use of a major and a minor premise to arrive at a conclusion validly inferred from the premises.

d. **Example 2.** Here is another example:

All Yoruba girls like owanbe.
Funke is a Yoruba girl.
Therefore, Funke likes owanbe.

We must take note that once the major premise is not true, the ensuing deduction though logically valid, will not be true. Same applies for the minor premise. As in the case of the 'owanbe' example, one can successfully argue that not all Yoruba girls like 'owanbe'. When we examine the truth of a statement, we are concerned with the factual exactitude. When we examine the validity, we examine the soundness of the way in which one statement is built on another in the progression of the argument. Therefore, we cannot examine the validity of a single statement in isolation. Apply this knowledge in the writing of your Service paper; don't assume your reader already knows the argument, or that the argument is always correct.

THE CONCLUSION

27. The conclusion of a Service paper should give a comprehensive but concise summary of the main deductions developed in the discussion section, and in conjunction with the introduction and aim should give the reader the general sense of the paper. **The conclusion of a paper is the summary of the major deductions and not a summary of the paper.** All deductions and inferences should follow easily from the arguments already presented. **The conclusion must be predictable and should not contain any new material that was not argued in the body of the paper.** Just like the introduction, the conclusion section should not be more than 10 per cent of the paper (this guideline is not applied in this handbook). Always bear in mind that a busy reader should be able to make sense of a Service paper by reading only the introduction, aim, conclusion and recommendations. As it is with the introduction, so also is much effort required for the conclusion (at

times even much more). The process involves going through the script again and again to fish out those points from which the writer has expressed his stance and opinion in line with the aim of the paper. From these, he can recommend a course of action.

28. Students have a tendency to copy and paste sections of the discussion without summarizing the major deductions. **It is instructive to expunge words like, 'therefore, thus, there is the need' and so on in the conclusion. Words that suggest a deduction need to be expunged.** The flow must not be broken hence the need to sum up properly using appropriate conjunctions and phrases. See the conclusion as a statement of your conviction. **At the end of each conclusion paragraph, the paragraph(s) from where the deduction was derived in the discussion should be cited.** This is termed cross referencing. Note that you cannot cross-reference any paragraph in the introduction. Students often cross reference conclusion paragraphs citing a stretch of paragraphs at times up to 6 or more. This clearly reveals a lack of understanding because it is highly unlikely to have 6 unbroken paragraphs of deductions in the paper. It is thus imperative to reiterate that the conclusion is only derived from the deduction paragraphs in the paper. In addition, not all the deduction paragraphs are included in the conclusion but only a summary of the major deductions. For this reason the word 'summary' seems more appropriate rather than 'conclusion'. Therefore, the conclusion requires painstaking effort; mere copying from the discussion and pasting would not give you a good conclusion section.

THE RECOMMENDATION(S)

29. Recommendations should be written in a crisp and clear manner, without any supporting argument, making full use of sub-paragraphs. Basically the conclusion is a platform on which to base recommendations. **The recommendation is a proposal of what should be done and who should do it. It never talks of why it should be done. No justification is required, as this should have been taken care of in the main discussion and in the conclusion, where you should have convinced the reader.** When presenting a recommendation, a writer should put the major proposals first but in a

logical manner. The recommendation should state the courses of action or solution which will address the 'statement of the problem'.

30. A recommendation should be short and crisp, straight to the point and most importantly workable. As much as possible, one should avoid the use of 'and'. In addition, recommendations should flow logically from the conclusion. The paragraph(s) in the conclusion which form the basis of the recommendation should be cross-referenced.

REFERENCING

31. A reference is usually an acknowledgment of ideas, facts, figures and so on, that are not original to the writer but used in the course of the study. Students fall victim of plagiarism, not out of fraudulent intentions but due to their inability to adequately and properly reference materials used. To forestall this, it is important that students grasp the technique of correct referencing. There are principally 3 types of referencing, namely: the Harvard or American Psychological Association (APA) style, the Modern Language Association (MLA) style and the Chicago or Turabian style. AFCSC recommends the Turabian Reference style. The style is used in the Service paper in a footnote form below the page with numbers of the footnote written in superscript numbers within the text. At the end of the paper, all references used are arranged alphabetically under a heading 'REFERENCE'.

32. Students are sometimes at a loss between the use of 'Reference' and 'Bibliography'. It is thus important to distinguish between them. A reference list is composed of only all the sources that you have cited in the text of your paper. A bibliography on the other hand is composed of all those sources you read or consulted in the course of the paper, whether cited or not. Both bibliography and references are arranged alphabetically. However, a reference list can also be arranged in numeric style, which means arranging the references according to the numbers in the text. A list of references is used in AFCSC for acknowledgement of materials consulted in writing a Service paper.

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33. For ease of understanding, the different types of works and how they are referenced are discussed as follows:

a. **Published Works by an Author.**

1. Edgar Gold , **Maritime Affairs**, (New York: Long Man Group UK Ltd, 1991), P.3.

b. **Published Works by an Editor.**

2. Edgar Gold (ed), **Maritime Affairs**, (New York: Long Man Group UK Ltd, 1991), pp.3-5.

c. **Unpublished Work.** Please be sure that the author allows his work to be quoted.

4. Sunday Ochoche, 'The Meaning of Security: An Africa Perspective', (Unpublished). P.7.

d. **Papers and Lectures.**

10. Olayiwola AO, 'Research Methodology', Being a Lecture delivered to students of SC 30 AFCSC Jaji, 20 September 2007.

e. **Article by an Author Contained in a Book by another Author.**

16. Mary Valencia, 'International Cooperation for Petroleum Development' in Gerald H Blake, **The Peaceful Management of Transboundary Resource**, (London: Kluwer Law Limited, 1995) P.20.

f. **Quotation in a Book whose Author is not the Originator.**

Fred C. Weyand quoted in Sam C. Sarkesian, **The US Military Profession into the Twenty-First Centaury**, (London: FRANK CASS Publishers, 1999), P.138.

g. **Authored Article in a Journal.**

12. Ali IS (Lt Col), 'Service Paper Writing Made Easy', **The Eagle**, Vol 9, No 3, 2009, P.35.

h. **Magazines and Newspapers.** Journals, magazines and newspapers follow the same pattern.

16. Arowolo A, 'Appropriate Pricing of Petroleum Products', **The Punch Newspaper**, (Lagos), 28 May 2007, P.15.

i. **Quoting from an Official Document.**

20. Nigerian National Petroleum Corporation, **Annual Statistical Bulletin**, 2005. P.2.

j. **Reference to Former Research Work by Other Students.**

21. Bako Mohammed, 'Emergence of Terrorism in Nigeria: Implications for Training', (Service Paper, AFCSC 2001) P.19.

k. **Reference to Oral Source.**

23. SA Odesola, AFCSC Jaji, 23 January 2004.

l. **Reference from the Internet.** The College has not produced any standard for this but from other sources, materials from the Internet could be referenced as follows:

25. Okoko C, 'Overview of Nigerian Economy and Oil Crisis', Electronic Article at www.dsm_socialistworld.net, accessed 20 September 2007.

34. **Use of Idem, Ibidem and Opere Citato.** Idem or 'id' meaning the same is used when the immediate next reference is culled from the same author and from the same page. Eg,

1. Edgar Gold , **Maritime Affairs**, (New York: Long Man Group UK Ltd, 1991), P.3.

2. id.

The next is Ibidem or Ibid. which means from same source, is used as long as you continue to use the same source (author) uninterrupted, but different pages of his work. Eg,

3. Gerald H Blake, **The Peaceful Management of Transboundary Resource**, (London: Kluwer Law Limited, 1995) P.20.
4. Ibid. P.21.
5. Ibid. P.30.
6. id.

Finally we have Opere Citato (Opus Citatum) or op. cit. which means already cited or previously mentioned. It is used when the work of an author that had been quoted before, thereafter other quotations of different authors were referenced before returning to the previous one. Example here will be:

7. Edgar Gold, op. cit., P.15.

For further reading, consult the AFCSC Guide to Research Methodology.

CORRECTING THE DRAFT

35. Among educated people, few issues create an immediate impression of poor intellect as bad grammar does. As you write your draft, bad spellings and grammatical errors creep into your paper unintentionally. To eliminate these errors, as well as other errors from your paper, you should give your draft an honest appraisal and make corrections accordingly. There are 3 ways to check your works for corrections:

- a. Revision.
- b. Editing.
- c. Proofreading.

36. **Revision**. Revision is the logical first step for correcting your paper. When revising, you should concentrate on the large elements of your paper, which include the structure, paragraphing and general flow. As you go along, keep asking yourself questions about relevance and truthfulness of what you have written; this is the best way to revise. Otherwise, you could stare at a draft for a long time, wondering what errors you should be looking for. You should also ask yourself the following questions.

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- a. Is my topic well focused?
- b. Does my aim relate to my topic and does it clearly state the point of my paper?
- c. Have I chosen the best pattern of organising my thoughts given my purpose?
- d. Are my paragraphs effective and are they followed by appropriate deductions?
- e. Does my paper conform to the dictates of Chapter 6 of the JSWM?

In answering these questions, you may discover that parts of your paper bear little or no relationship to your aim and purpose. Do not hesitate to expunge such areas and replace them with substantial material.

37. **Editing**. When revision of the draft is completed the process of editing must start. This is often the most time consuming part of producing a Service paper. Failure to do it properly and thoroughly spoils many potentially excellent papers. The aim is to shorten the paper by between 10 per cent and 50 per cent, to polish the style, to re-check facts, accuracy and to choose the words most appropriate to the argument. Every sentence, every paragraph, every section must be ruthlessly appraised. Superfluous words such as 'therefore', 'since', 'because', and 'consequently' should be crossed out. Spelling must be checked. The meaning of words must be examined. The text must be punctuated so that it flows. The tools needed are a dictionary, thesaurus, the AFCSC English Revision Book and Notes on Effective Writing. A good test is for the author to read his paper aloud, this would help to identify long sentences, poor expressions and stilted prose. In essence, editing helps you ensure that your paper complies with the rules and conventions of Service writing and English grammar.

38. **Proofreading**. After revision and editing, you may produce 2 or more copies of your paper for proofreading. You should proofread one of the copies yourself; while the remaining should preferably be given to your colleagues to help you proofread. When you proofread your work, pay

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particular attention to the kinds of errors you frequently make. In addition, ask yourself the following.

- a. Did my paper print out as I expected it to?
- b. Is it properly line-spaced? Recall that the accepted line spacing measurement is one-and-a-half.
- c. Are all the text legible? Please be wary of some older models of office printers and photocopiers which leave smudges and crop or misalign words in the text.
- d. Confirm that the paper is written in Arial font, size 14 for Department of Air Warfare exercises and Times New Roman for College exercises.

CONCLUSION

39. The writing of Service papers is one task a 'trained' staff officer would find difficult to avoid. This handbook, which is by no means exhaustive, seeks to outline the principles of writing a good Service paper. Student officers and staff officers alike must remember that though writing is said to be a gift, it can be improved upon through constant practice.