

Critical Thinking for Intelligence Analysis for Nigerian Students: Evaluating the Pedagogical Challenges in Real Life Scenarios

Awal Isa

Nigerian Defence Academy, Kaduna, Nigeria.

Ngboawaji Daniel Nte

Novena University Ogume, Delta State, Nigeria.

E-Mail: profndte@novenauniversity.edu.ng or ngbodante@gmail.com

Abdulaziz Baba-Ahmadu, Doctoral Candidate,

Novena University, Nigeria.

Abstract

Twenty-first Century intelligence issues involve uncertainty, mysteries, and risk. This differs from the 20th Century paradigms of security, secrets, and prevention. Analysis of current complex issues requires its practitioners' novel approaches including a productively imaginative process of inquiry. Questions analysts ask not only serve as devices for attracting existing evidence, but also as devices for generating new evidence not presently considered. In this way, analysts meticulously examine complex issues and aided by technology, are predisposed to creating novel actionable intelligence and preventing strategic surprises. Normatively, this brand of reasoning is at odds with how most people, including intelligence analysts naturally think, as people seek to confirm the first answer to a problem they discover, selectively use evidence to support that position even when there are compelling pieces of evidence that an alternative hypothesis may actually be the correct one. That people routinely fall prey to such poor thinking is well documented and indeed, most commercial advertisers strive to take advantage of this, so do adversaries. One element of most intelligence failures includes poor thinking on the part of analysts. Poor thinking which adversaries usually take advantage of. So how can analysts avoid such thinking? One solution is to teach intelligence analysts to think critically. Critical thinking therefore provides structure to the reasoning processes that identify for analysts where they are most likely to go astray. It offers a means for self-reflective reasoning that leads to improved thinking. If such thinking is aided by structured analytic techniques, then analysts will, and do improve on how they resolve security-laden issues with clarity and effective response.

Key words: Critical Thinking, Intelligence, Analysis, Pedagogy, Challenges, Real Life, Scenarios

INTRODUCTION

Integrating critical thinking into the orientation and foundational training programmes for newly recruited analysts is one possible technique for facilitating the skill development of these employees. Assigning these analysts to teams that value and encourage critical thinking is another way to spread this mind-set. If junior analysts could shadow more seasoned professionals, their doubts about critical thinking techniques might be allayed. Analysts may be encouraged to develop their critical thinking skills through the introduction of a "skills pay" system. It is common practise in both the public and private sectors to offer financial incentives for the development, retention, and application of specific skills. Financial incentives are offered to intelligence agencies that meet certain benchmarks in foreign language competency. This is an effective way to ensure that a specific intelligence agency's staff maintains the necessary language skills. To ensure the continued success of the intelligence analysis process, it is strongly advised that financial incentives be offered to analysts in order to boost their confidence in adopting cutting-edge tools and demonstrating positive analytical habits.

In contrast, if an intelligence organisation fails to recognise and reward the development and use of analytical abilities like critical thinking, it sends a clear message: the organisation does not value such qualities. The most brilliant and skilled analysts, especially those in lower-level jobs, may decide to leave when faced with such a message and a lack of incentives to exhibit remarkable performance. Mid-level workers may also choose to stay put instead of aggressively seeking promotion because of personal and financial commitments. Both outcomes may have unfavourable effects on vital operations but are avoidable with the right measures. Recognising and rewarding people for their superior critical thinking skills is one way to get an edge in the war for talent. The idea behind this strategy is that skilled analysts are more likely to remain active within their respective intelligence agency's workforces.

It is vital for an analyst to become certified in their field if they have developed a wide range of skills that increase their critical thinking competence and are being financially compensated for their expertise. An internal appraisal of these abilities becomes conceivable if there is a well-defined curriculum in place to guide their cultivation. An example of a test designed specifically to measure critical thinking skills is called the "Thinking Skills Assessment Test."

Teaching critical thinking abilities is the first step towards better analysis. Different analysts and managers have different time constraints and requirements, necessitating different iterations of a training. Analysts and first-line supervisors can sign up for a thorough course, while middle managers can get their hands on a streamlined version of the material and upper-level managers get an overview. This strategy is currently being used by the Masters in Intelligence and Security Studies programmes at both Novena University in Ogume and the Nigerian Defence Academy (NDA) in Kaduna. The major goal of a degree in intelligence and security science is to train students to think critically about intelligence issues, express those issues clearly, and provide clear explanations of how they work. However, specific abilities or education are required to realise these goals. These abilities include the ability to recognise the origins and characteristics of information, gain access to that information in an expedient and effective manner, evaluate the credibility and usefulness of the information's origins and contents, apply the information with confidence and understanding the social, economic, political, and legal implications of its application, and follow all relevant rules, laws,

regulations, and policies pertaining to information access. A well-rounded education that places a premium on intellectual growth is the only path to acquiring such vital skills and knowledge. Studying intelligence and security at the graduate level (whether through a Postgraduate Diploma or Master's degree) helps students develop analytical and explanatory skills that are valuable in a variety of fields and fields of study. This course is designed to help students of all backgrounds learn the tools they'll need to investigate, define, and understand issues related to intelligence, whether they plan to work in the subject or not. However, it's worth noting that getting there calls for a certain set of abilities or education. Knowledge of and adherence to the rules, laws, regulations, and policies pertaining to information access are included in this category, as are the abilities to recognise the origins and types of information, gain access to and use that information effectively, evaluate its reliability and usefulness, and understand the political, economic, and legal considerations related to its application. These skills and knowledge must be acquired, and the only way to get them is through a well-rounded education that places a premium on mental growth.

Degree programmes in intelligence security and studies aim to train future intelligence and security professionals with an in-depth understanding of the interplay between politics, economics, social dynamics, scientific and technological advancements, and the trajectory of military power, and how these factors affect the safety of nations and the development of Nigerian society in the context of globalisation. Experts in a wide variety of fields can benefit from the degree's multidisciplinary training, which strengthens their ability to analyse the interplay between many factors and improves their capacity to articulate their ideas in writing and speech. Upon completion of the programme, students will be able to demonstrate superior problem-solving and critical-thinking skills in a wide range of contexts, including but not limited to terrorism, security strategy, security governance, intelligence tradecraft, national security concerns, intelligence law and ethics, the role and function of intelligence agencies, and transnational security challenges. The program's foundational modules equip participants with the background knowledge and analytical skills necessary for any job in the intelligence community.

To what extent analysts will incorporate critical thinking into their work is the question at issue. Analysts' reluctance to fully embrace new ways of thinking has been widely documented. This claim holds true even when analysts are confronted with data suggesting their previous findings were wrong. A counterargument may be made that those with the most experience and knowledge in the field of analysis would benefit the most from formalised instruction in critical thinking. These professionals are analysts with technical leadership roles, and it is their job to tackle the trickiest parts of the most complicated targets. The consequences of failing to notice and understand a problem could be severe. However, a question emerges as to whether or not it would be beneficial for the company to provide training to analysts who are close to retirement age in order to improve their critical thinking abilities in analysis, despite their natural desire to not engage in such practises. This claim could very well be correct. Heuer, a former head of the CIA's procedures and Forecasting Division, claims that analysts have shown a positive response to the implementation of new analytical methods, viewing them as intellectually interesting and worthwhile efforts.

Several intelligence analysts have used cutting-edge analytical methods that improve the precision and utility of their research. Intelligence personnel involved in R&D have created a

system for coordinating target attributes and vulnerabilities with the capabilities and costs of exploiting them. The results of these studies were essential in allocating sufficient resources for data collecting and adapting the procedure for gathering this information to better suit the needs of production analysts. Despite the model's potential to reduce the volume of material research analysts need to review, at first several declined to use it on the grounds that it required too much time. Effective persuasion strategies were required for the adoption of the analytic worldview.

Analysts' frustration with the difficulty of the topic at hand may lead to an interesting form of self-persuasion. This dissatisfaction could encourage researchers to try new methods. Analysts with years of experience tend to feel more frustration than those with less experience. Experienced analysts are receptive to new approaches to their work after spending years wrangling massive amounts of data with inadequate analytical frameworks and tools. New analysts may be hesitant to adopt rigorous analytic paradigms like those made possible by critical thinking because they have not yet experienced the unhappiness resulting from inadequate analytical frameworks.

Study Objectives

This study seeks to validly establish between critical thinking, argumentation and intelligence analysis within pedagogical spectra. Consequently the work will;

- i. Review the domains of critical thinking
- ii. Evaluate the intricacies of critical thinking in intelligence analysis
- iii. Explore the challenges of teaching critical thinking to students of intelligence and security studies in Nigerian Universities
- iv. Attempt to resolve these challenges
- v. Proffer useful pedagogical alternatives in critical thinking and intelligence analysis.

RESEARCH DESIGN

The research design for this study is the historical and analytical design. The historical design is adopted in this study because of its consistency. It is a study in which researchers seek understanding by striving to establish concrete facts, in order to arrive at judgments concerning past events. In other words, a historical research or analysis can provide the researcher with a thorough account and understanding of current events on the subject under study. Data on past events also throws more light on the questions; what happened, why they happened, and their impacts on current situations or events. The qualitative method adopted in this study is of relevance because it helps in the following areas; (i) Gathering of pertinent data from already existing literatures; and (ii) It also assists the researcher in gathering materials that are related to the area of interest.

Sources of Data

The data used in this study were collected from secondary sources. Secondary sources of data collection refer to materials which were not originally from the researcher but from already existing literatures. The secondary data were gathered from textbooks, journals, scholarly articles and internet materials.

Instrument of Data Collection

This study made use of secondary sources of data obtained from such sources as libraries, books, journals and newspapers etc. This presupposed that the secondary data were derived through content analysis instrument. The instrument was utilized in collecting relevant data from textbooks, journals, scholarly articles and internet materials in an analytical manner that is important to this study.

Method of Analysis

This study is historical in nature; therefore data generated from secondary sources. These data were synthesized and analysed using trend analysis instrument/techniques, which made it possible to show the trend or pattern of relationship between the variables investigated in a meaningful manner and also permitted the generalization of the study. In other words, the technique relied on examining and synchronizing different literatures on the challenges of teaching critic thinking for intelligence analysis to Nigerian students at the undergraduate and postgraduate levels.

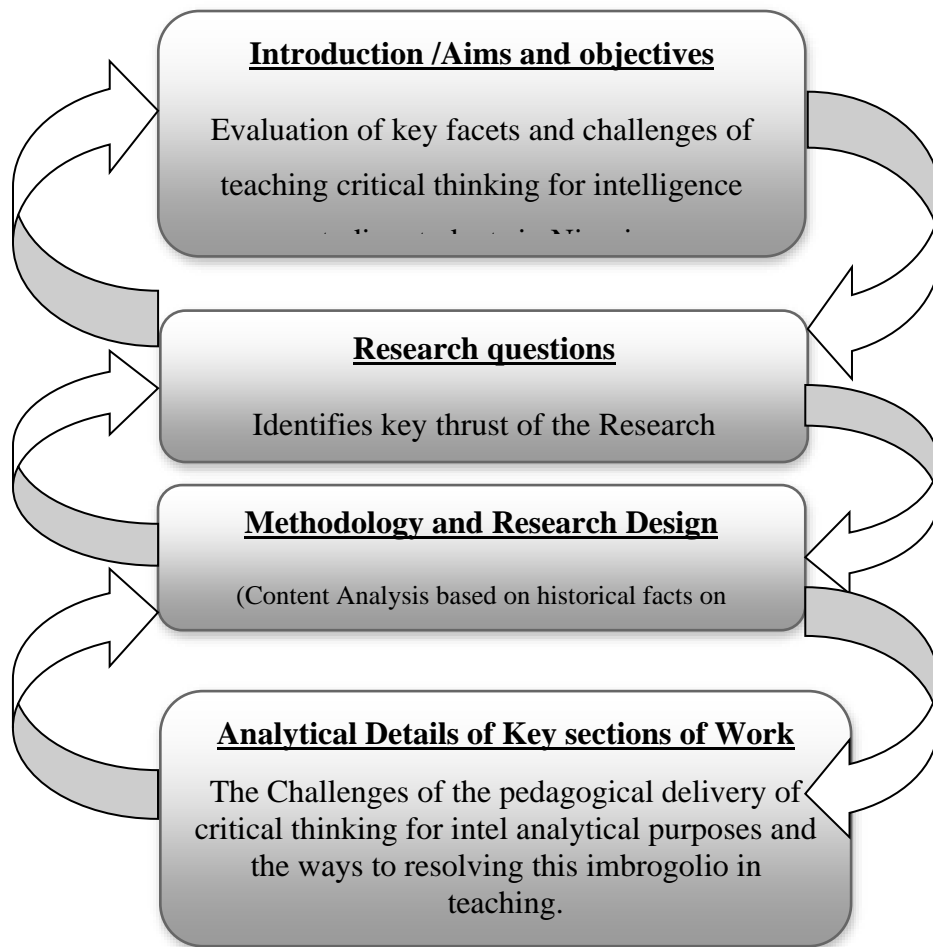


Fig 1. Research Design Summarised.

THE CHALLENGES OF TRANSFORMING CRITICAL THINKING

There can be no successful institutional transformation unless all those who will be affected by the change, regardless of their position in the organization's hierarchy, accept the need for and value the outcomes of that change. Former World Bank executive Stephen Denning claims that there are many obstacles to be overcome before this goal can be realised. Employees cannot be persuaded by logically sound arguments. But workers insist on believing that their existing efforts are adequate. In addition, employees believe that external consultants

demonstrate arrogance by insinuating that the current order of affairs is faulty and demands change, therefore they fight outsiders who try to instigate transformation.

Initiating change may be accomplished, for example, by telling a "springboard story." This approach contrasts with traditional attempts at transformation, which mostly failed and focused on tweaking the existing systems. Buzzword overuse was a common feature of these earlier efforts.

Raise standards and boost productivity. It's time for some organisational streamlining and reform. Use grids and charts to analyse data from several sources. Plan out methods of training people to conform their behaviour to that of obedient machines. Build and hone our social skills and our toolbox of abilities simultaneously. Think of the problems you're facing as opportunities to fix things, and approach them with the attitude that you can correct your past mistakes by explaining things more clearly.

Denning argues that the aforementioned approaches ignore the messy reality of the operational environment in which organisations, especially intelligence organisations, must function. Truthful communication with entities outside of the agency's internal framework, such as mission-related targets, is required of these organisations.

Employees at various levels of the organization's hierarchy can benefit from using the springboard narrative since it helps them better understand the fundamental needs of the proposed change. Denning claims that this strategy gets people to draw parallels between their own experiences and knowledge biases. The author issues a word of warning about the usefulness of transformational stories, stressing that they are not a panacea. It's crucial to remember that there are situations and environments in which these tales won't work, especially if the proposed adjustment is fundamentally incorrect or unwise. Finding the right stories to tell in the context of your organisation is vital.

Examining successful intelligence analysis cases in which critical thinking plays a significant role is one way to find such stories. Just telling a success story isn't enough; it needs context and background. One of the most important skills a listener can have is the ability to identify with the speaker's situation and the other people in it. The story in question is about people who have worked to spread information, and it follows the natural progression of events. The achievement of verifiable and actionable outcomes, such as in a trial or experiment to evaluate the effect of critical thinking on the intelligence analysis process, strongly influences persuasion.

ASSESSING EVIDENCE IN CRITICAL THINKING

If analysts want to improve their ability to engage in logical and informed reasoning on evidence, they must first get a thorough understanding of the process by which evidence is appraised. Professionals in the intelligence area face hurdles to their reasoning due to the prevalence of incomplete and contradictory information and data. Due of their inherently unreliable and unpredictable nature, sources' dependability and consistency are questioned. Antagonising denial and dishonesty just heighten the uncertainty. When data and information sources can't be relied upon, the resulting evidence is murkier, and any conclusions formed from it may be dubious. Analysts may be able to reduce this uncertainty by drawing reasonable inferences from the data at hand. These findings are predicated on the evidence's credibility (its likelihood of being accepted as true), its applicability to the issue at hand, and its inferential or

probative force (its ability to successfully answer the questions raised by the issue). Unfortunately, it is clear that the field of intelligence, like other fields, lacks pre-established features like mass or body of evidence. The aforementioned characteristics are established to aid in the process of inferentially reducing uncertainty. Only by the use of argumentation, the development of novel hypotheses, and the construction of convincing lines of reasoning is this position established. Trustworthiness of physical evidence must be determined according to standards including authenticity, accuracy, and reliability.¹²⁸ is the user-provided value. The question "Does the evidence possess the characteristics and qualities that it appears to possess?" is one that an analyst can ask in their search of authenticity. If the evidence or the underlying system doesn't have enough resolution to discover the information the analyst expects the event or record to expose, then the evaluation of correctness is doomed to fail. Assessing reliability requires checking to see if there is consistency in results across different data collection techniques.

In contrast, different standards are applied when the evidence is testimony. Assessing the reliability of the source is the first step. Truth is not a universally accepted or unchanging tenet. However, it depends on the length of time that has passed and the particulars of the situation at the time. A source's claims may be true because of their sincere belief in their accuracy or because the source has good reasons to knowingly misrepresent the facts. The aforementioned barriers to veracity in relation to the aforementioned source may not exist in relation to the aforementioned source in a different chronological context and about a different matter. Therefore, the analyst faces a significant challenge when attempting to confirm the reliability of a source. In a perfect world, an analyst would be prompted to weigh the likelihood of multiple hypotheses in order to arrive at a conclusion on the best way to approach a problem or issue. During this analysis, you may find that it's necessary to revise some of your theories or come up with some brand new ones. Or, an investigator may theorise that a certain piece of evidence will be a reliable predictor of whether or not a person or group would engage in criminal activity. The analyst may need to re-evaluate or even discard information due to its lack of relevance if none of the available evidence is relevant to the issue at hand. The analyst must also account for the fact that the subject may opt out of taking part in the activity.

Statements made about the future have the same degree of reliability as those made about the past and the present. Lack of supporting data for a certain position should prompt analysts to reconsider their assumptions. The analyst is also concerned with determining the extent to which the evidence supports or refutes the particular hypotheses under investigation; this is known as the evidence's probative strength. There might be wide discrepancies in the weight of evidence depending on where it came from. In some cases, physical evidence may be more convincing than witness testimony. Consider a hypothetical situation in which biological weapons are used. More convincing than the government of the country where the facility and the gathered samples were found is the detection of particular dangerous compounds in close proximity to the supposed biological weapons facility.

It is also the job of the "ideal" analyst to judge the neutrality, perceptiveness, and expertise of the sources used in the analysis. The impact of biases on the compromised objectivity of a specific source is an important consideration in this assessment. Was the witness able to take in the evidence visually or aurally, and if so, what were the specifics of the witness's experience? At this point, it's a good idea to do a reality check. Is it reasonable for

that person to claim to have made the observation or to have had access to that data? Consideration also needs to be given to the ideas of concealment and concealment. The analyst must always ask, "What is the probability of encountering deception?" when assessing the given information. It's difficult to give a satisfactory answer to this question. Analysts sometimes cherry-pick evidence that supports their pre-existing views due to the prevalence of anchoring biases and confirmation heuristics in the analytical process. This lends credence to the idea that people are deliberately lying to themselves. The practise of critical thinking, which requires careful consideration of alternative viewpoints, poses a threat to this worldview. Intelligence analysts gain a great deal, especially in cases when contradictory evidence is scarce, from gathering information in a proactive, targeted, and clandestine manner. Questions like "What is the probability that I am not being subjected to deception?" take on new meaning in this context. Expert intelligence analysts create a wealth of new information when they immerse themselves in their task.

FACILITATING EVIDENTIARY ASSESSMENT

The inquiries that necessitate examination about each fragment of data are congruent to the ones utilised in the realm of critical thinking. The analyst employs a systematic approach to determine the criteria for evidence by consistently posing the question "why": "Why do I hold the belief that this information is pertinent to the central inquiry (either in support of or against it) and thus qualifies as evidence?" What factors contribute to the credibility of the source in my belief? Further inquiries may emerge on the cognitive processes of the analyst, including introspective considerations such as: "What are the underlying biases influencing my thought patterns and how do they contribute to my current perspective?" In practical application, inquiries of this nature and like ones can be promptly resolved. Analysts frequently respond to certain tasks inadvertently while grappling with the pressure of meeting tight time constraints. Nevertheless, due to the absence of scientific procedures or other systematic and analytical thinking approaches, their thought processes primarily rely on intuition.

Analysts often disregard the impact of mind-sets and preconceptions on their judgements. On the other hand, critical thinking serves to ensure that the process of reasoning is characterised by self-awareness. Through the process of bringing the unconscious into consciousness, analysts are able to uncover any potential biases they may possess. This serves the purpose of ensuring that the questions they examine are thoroughly and impartially evaluated. The interaction between the intelligence question and each method of analysis is distinct, leading to potentially significant variations in outcomes. Consequently, the selection of method(s) can greatly impact the analyst's ability to arrive at the most precise and reliable answer. A committed analyst, dedicated to the practise of critical thinking, consistently engages in a process of inquiry, posing relevant questions during the course of gathering substantial material in order to evaluate a given matter.

Evidence is derived from the successful resolution of inquiries. Exclusion of information occurs when questions that cannot be adequately answered are omitted, following the analyst's contemplation of the evidence development procedure. The examination of biases, as well as potential instances of deliberate denial and deceit by an adversary, warrants attention in relation to the impact on the choice of questions and replies. One method of detecting bias is employing a line of inquiry that entails posing questions such as, "In the event that the contrary outcome

were to be accurate, what additional evidence would be anticipated?" The process of marshalling evidence entails a systematic examination in which data and information are evaluated, leading to the production of evidence. The task can be accomplished individually, through a Socratic approach with a partner, or collaboratively inside focus groups comprised of members from the Intelligence Community. Productively inventive intelligence analysis is reliant upon a crucial component. Every inquiry posed by an analyst serves as a mechanism to gather current evidence and simultaneously produces previously unseen evidence. The process of identifying new evidence enhances the comprehensiveness of evaluating the issue and augments the likelihood of discovering the accurate remedy.

EMBRACING A METHODOLOGY

When enough data has been collected, the analyst can decide which types of analysis will be most useful going forward. Different methods of analysis have different interactions with the intelligence question, which can lead to substantial differences in the results. Therefore, the analyst's capacity to arrive at the most accurate and dependable response can be significantly impacted by the choice of approach or combination of methods. A possible answer to the issue stated above. It's important not to gloss over the differences between various methods of analysis and analytical software. The solution's accuracy and correctness can be verified in a number of ways, one of which is by comparing the results obtained from different analysis approaches. A thorough study by several analysts provides an ideal framework for critical thinking, allowing for the discussion and debate of these findings, especially when different methods of analysis provide divergent answers. That's why it's important to switch gears, get a second opinion, weigh the merits of other options, and check back in with your original goals as you evaluate the information at hand. An analyst will use their skills of interpretation and evaluation to select a comprehensive dataset for study.

CREATING BETTER INFERENCES

The main purpose of critical thinking is to determine whether or not conclusions are reasonable and supported by evidence. Concurrent with the start of analysis, the process of drawing conclusions begins. As evidence is reviewed, either piece by piece or as a whole, conclusions can be reached. The "chains" of inferences drawn from the evidence and used to support the hypotheses under consideration are called arguments. If a chain of inferences converges, it strengthens an argument, but if it diverges, it weakens it. The self-reflection inherent in critical thinking is a defence mechanism against these inferences. Questions like "Do the inferences I have drawn stem from the evidence?" and "Are the inferences I have made logically consistent with the evidence and other inferences I have formulated?" are posed by the analyst to ensure the validity of the analysis.

Inferences require people to go on a hunt for more information to back up their conclusions. An analyst may draw inferences about the presence of other sources of information that should be considered based on the evidence at hand. The analyst evaluates their own thought processes and any biases that may have influenced them in order to curb counterproductive ideas and consciously foster creative ways of interpreting the data at hand. Self-control is useful when it comes to making sense of the data at hand. Collaborating with others who have different backgrounds and viewpoints than you can help you achieve your

goal. The underlying premise is that there are substantial disparities in their biases, which allows for fruitful and thorough investigation to take place.

CRITICAL THINKING IN PRODUCING INTELLIGENCE

Critical thinking and decision-making

The primary goal of critical thinking is to make sound decisions and reliable assessments. Because our judgements and choices appear to be based on our perception of sensed information, the necessity for proper sensation and perception becomes even more pressing when considering the importance of decision making. Understanding sensation and perception is crucial to developing one's critical thinking skills.

Sensation and Perception

What we call "sensation" is the act of taking in information about the world around us through our senses. The term "sensation" is used to describe an organism's innate ability to perceive and interpret sensory stimuli, which includes the senses of sight, hearing, taste, and smell. Sensation is the mental operation by which living things become conscious of physical input from the environment. A feeling begins when a sensory organ, like the eye or ear, is activated by a stimulus, which can be any kind of energy, such light rays or sound waves. Specialised cells called sensory receptors are required for sensation because they pick up on external stimuli and transform their energy into neural impulses that are then sent to the brain. The brain then interprets the sensory data and, depending on the outcome, prompts an appropriate behavioural response.

The term "perception" is used to describe the mental process through which sensory information is sorted into meaningful patterns that may be used to interpret the world around us. Processing, modification, and extension of sensory data are common practises for improving humans' ability to understand and perceive the world around them. Various conceptualizations of perception have been proposed by psychologists, but none of them threaten the dominant view of perception. Definition: Perception is the mental act of analysing and making sense of sensory data. As described by Phil. G.Z., perception is "the cognitive process by which living beings interpret and make sense of their surroundings through the use of their sensory faculties" (Adishi, 2011).

Perception creates a bridge between people and their environments, paving the way for accurate interpretations of the world around them. People tend to view perception as an inactive mental procedure. The five senses—sight, sound, smell, taste, and touch—are the channels through which humans take in the world around them. It's generally accepted that staying objective is the key to accurately recording the world as it is. Perception, on the other hand, is not a passive process, as it actively creates and stores our idea of "reality." Understanding and awareness are components of perception. The phenomena being explained is the mental operation by which people construct their own understanding of the world based on data collected by their five senses.

Perceptions, and the degree to which people perceive things, are heavily influenced by a variety of elements, including, but not limited to, a person's background, education, culture, values, role expectations, and sensory input. Studies have shown that the information an observer gathers is highly dependent on the observer's own underlying assumptions and preconceived conceptions.

To that end, it is helpful to lay a solid groundwork for analysing evidence by providing direction for the thinking process, gathering input from a variety of sources, and identifying the most feasible and rational answers in connection to reaching one's goals. The analyst uses purposeful interpretive and evaluative skills to sift through a mountain of associated material for nuggets of insight. Therefore, the major goal of critical thinking is to ensure that the conclusions produced from it are robust and applicable in every situation (Heuer, 1982). A rigorous cognitive process, involving thorough judgements and complete evaluations, leads naturally to intelligence, which can then be put into action and defended. Taking into account more options during the decision-making process is a good thing.

Given the stakes involved in intelligence analysis, it's important to admit that the links between critical thinking and intelligence analysis haven't been thoroughly tested in real-world situations. The problem stems from a failure to adequately weigh the potential repercussions of critical thinking on intelligence analysis. Most experts agree that a lack of time is to blame for the widespread perception of connection miscommunication and underestimation.

According to Peter Facione, those who generate intelligence ratings and make sound decisions are endowed with the core cognitive capacities of critical thinking. Interpretation, analysis, appraisal, inference, explanation, and self-control are all examples of these skills. All of these skills are necessary for drawing the best possible conclusion from a body of facts by following a logical chain of thought. The ability to articulate one's thoughts and give a detailed explanation of the thought process that led to one's conclusions is a hallmark of critical thinkers, as stated by Facione. Analysts go beyond merely reporting results and developments by explaining their thought processes and providing justifications for their methods. To put it in the words of Josh Kerbel, "limiting analytical approaches focused on a single outcome" are put to the test when people's preconceived notions and assumptions are called into question. As a reflection of their character, analysts often display an important quality: the ability to think critically.

As a result, critical thinking is vital in both the here-and-now and the big picture. Undoubtedly, the application of critical thinking is required to determine the inclusion or exclusion of past reporting as part of the process of creating a complete grasp of a subject matter or purpose. The analyst may wonder, "How do the individual parts work together to form the whole?" An additional inquiry is, "How does the whole have more value than the sum of its parts?" Analysts rely on the critical thinking process to ensure that the divergence is properly and impartially analysed, and to prevent the resulting information from being a just satisfactory solution, when faced with previously published intelligence reports that are at odds with one another.

How can Analysts be taught to Think Critically?

Many people would rather die than think – in fact, they do. Bertrand Russell

Critical thinking provides a systematic approach to problem-solving by offering a defined framework. However, despite the existence of a body of related literature, the field of critical thinking is still in its early stages of development. The concept remains widely misconstrued, mostly existing as a product of preconceived notions rather than factual understanding, and predominantly shaped by superficial perceptions rather than actuality. The numerical value provided is 143. As per Bertrand Russell's witty remark, it is important to note that critical thinking is not an innate disposition obtained solely by existence. Ideally, it is imperative to

cultivate valuable talents and dispositions among prospective analysts prior to their integration into intelligence-producing organisations. However, the author's observations with recently employed intelligence analysts indicate that such occurrences are infrequent, if they occur at all. This inquiry prompts two inquiries: "What are the potential avenues for aspiring analysts to develop critical thinking skills prior to their employment?" Frequently, individuals inquire, "What is the reason behind the absence of these opportunities?"

Despite its significant value, the teaching of critical thinking is not frequently integrated into educational curricula at schools and universities. According to a study conducted in the mid-1990s, which examined the incorporation of critical thinking in the curricula of public and private colleges, it was determined that this talent is widely regarded as a prestigious concept among educators. The research findings indicate that university faculty members experience a sense of obligation to assert their familiarity with and dedication to a particular concept in their instructional practises, despite the prevalent lack of a comprehensive comprehension of its nature and the necessary components for its effective integration into teaching. The study's authors discovered that a significant disparity existed between the faculty's stated emphasis on critical thinking as the major objective of their instruction and their actual understanding and implementation of the concept. Specifically, out of the faculty members interviewed, only 19% were able to provide a clear definition of critical thinking, and a mere 9% were seen incorporating it into their instructional practises on a daily basis. If the findings of the California study may be considered as indicative of the entire nation, they provide an explanation for the lack of critical thinking skills observed among college graduates who are seeking employment.

The notion is supported by informal chats had by the author with recent hires in the intelligence community. Although a significantly smaller proportion of these individuals, less than half, report having been exposed to critical thinking skills during their college education, the majority of them have encountered this exposure in a single course. Furthermore, this exposure has primarily been limited to utilising critical thinking as a means to comprehend the subject matter taught in that particular course. Although not explicitly discouraged, it appears that respondents were not actively encouraged to transfer their acquired talents to other academic disciplines. Consequently, the cultivation of a disposition for critical thinking is infrequently encouraged. Moreover, a significant number of young analysts shown a lack of ability to provide a thorough definition of critical thinking when prompted to do so. In conclusion, a limited number of individuals engage in critical thinking during their analytical or reasoning processes unless they have received specific training in this area.

It is important to acknowledge that the level of critical thinking awareness, attitude, and skills might differ across various academic disciplines. For instance, those pursuing studies in the physical sciences who apply the scientific method within a communal context are likely to have a heightened propensity for fundamental critical thinking, even if just through passive absorption. Additionally, several educational programmes at the primary, secondary, and university levels have embraced a metacognitive approach to critical thinking. While the evidence about the impact of such programmes is primarily based on anecdotal accounts. The components of the scientific method, including hypothesis generation, data collecting, hypothesis testing and evaluation, and logical conclusion derivation, align well with the process of critical thinking. Considering that the majority of recently employed intelligence analysts,

particularly within the Intelligence Community, are from disciplines other than the physical sciences, it is reasonable to anticipate a deficiency in their proficiency in critical thinking abilities. If we consider the newly recruited intelligence analysts as a typical sample of the overall hiring trend within the Intelligence Community, it is likely that just a small proportion of the numerous new hires possess sufficient critical thinking abilities.

A significant challenge lies in the endeavour to enhance critical thinking skills. In general, the enhancement of critical thinking skills is heavily dependent on experiential, hands-on practical sessions, as well as consistent modelling sessions. It is advisable for trainers to offer students sufficient training opportunities for both demonstration and practise. According to experts, this approach is believed to effectively educate pupils with practical skills. The technique described is widely adopted in the United States, particularly by agencies like the NSA. Additionally, it offers students a regular and sustained feedback system on a weekly basis. Furthermore, the incorporation of regular missions into the learning process significantly minimises disruptions. The evident prioritisation of experiential learning in the context of critical thinking for intelligence analysis has demonstrated notable efficacy. In Nigerian universities, where there is a significant shortage of qualified academic personnel, the implementation of experiential learning can contribute to the development of both theoretical and practical skills necessary for students and educators to enhance their critical thinking abilities. This, in turn, will greatly enhance their analytical intelligence. Furthermore, there is a scarcity of training options for students and analysts in this crucial skill required in the field of security management.

CONCLUDING REMARKS

In conclusion, for decades intelligence analysts have played a key role in national security decision making of all kinds, and have increasingly been used by law enforcement agencies at the federal, state, and local levels, as well as the private industry. Even with its rich history, intelligence analysis has historically been practised more as a craft reliant on the intrinsic skill and expertise of the individual analysts than as a highly developed profession with structured personnel practices to select and develop desired characteristics, skills, and behaviours. (Marrin, 2006). However, a key factor in the production of high-quality intelligence analysis is the skill and ability of the intelligence analyst, yet no official standards exist to ensure the competency of individual analysts. Any occupation that lacks performance standards or other formal personnel practices will have difficulties improving both its practices and management, and this has been the case with intelligence analysis across its different disciplines.

References

- Anderson, Terence J., and William Twining. *Analysis of Evidence: How to Do Things with Facts Based on Wigmore's Science of Judicial Proof*. Chicago, IL: Northwestern University Press, 1991.
- Anderson, Terence J., David A. Schum, and William Twining. *Analysis of Evidence*. Cambridge, UK: Cambridge University Press, 2005.
- Bathurst, R. B (1993). *Intelligence and the Mirror: On Creating an Enemy*. Oslo, Norway: International Peace Research Institute.

- Ben-Israel, I. (1989). "Philosophy and Methodology of Intelligence: The Logic of the Estimate Process." *Intelligence and National Security* 4, no. 4 (October 1989): 660–718.
- Blight, J. G., and A. Welch, D. A (Eds) 1998. *Intelligence and the Cuban Missile Crisis*. London, UK: Frank Cass.
- Callum, R. (2001) "The Case for Cultural Diversity in the Intelligence Community," *International Journal of Intelligence and Counter Intelligence* 14, no. 1, Spring: 25–48.
- Cooper, J. R. (2005). *Curing Analytic Pathologies: Pathways to Improved Intelligence Analysis*. Washington, DC: Centre for the Study of Intelligence.
- Denning, S. (2001). *The Springboard: How Storytelling Ignites Action in Knowledge-Era Organizations*. Boston, MA: Butterworth Heinemann
- DiSpezio, M. (2005). *A. Classic Critical Thinking Puzzles*. New York, NY: Main Street.
- Facione, P. A. (1998) *Critical Thinking: What It Is and Why It Counts*. Milbrae, CA: California Academic Press, 1998, updated 2004. URL. Last accessed 22 July 2022.
- Facione, P. A. Facione, N.C and Carol A. Giancarlo, C.A. (2000). "The Disposition Towards Critical Thinking: Its Character, Measurement, and Relationship to Critical Thinking Skill," *Informal Logic* 20, no. 1: 61–84.
- Facione, P. A., Facione, N.C. and Giancarlo, C. A. (2002). *Professional Judgment and the Disposition Towards Critical Thinking* (Milbrae, CA: California Academic Press,
- Feldman, D. (2002). *Critical Thinking: Strategies for Decision Making*. Menlo Park, CA: Crisp Publications, Inc, 2002.
- Fisher, A. (2001) *Critical Thinking: An Introduction*. Cambridge, UK: Cambridge University Press,
- Gilovich, T., Griffin, D and Kahneman, D. Eds. (2002) *Heuristics and Biases: The Psychology of Intuitive Judgment*. Cambridge, UK: Cambridge University Press,
- Heuer, R. J. (1978). *Adapting Academic Methods and Models to Governmental Needs: The CIA Experience*. Strategic Studies Institute. U.S. Army War College. July 31, .
- Heuer, R. J. (1981). "Strategic Deception and Counterdeception: A Cognitive Process Approach." *International Studies Quarterly* 25, no. 2 (June 1981): 294–327.
- Heuer, R. J. (1999). *Psychology of Intelligence Analysis*. Washington, DC: CIA Center for the Study of Intelligence, 1999
- Hughes, F.J., and David A. Schum, D.A. (2003). *Credibility Assessment: A First Step in Intelligence Analysis*. Unpublished tutorial. Joint Military Intelligence College, April.
- Kerbel, J. (2004). "Thinking Straight: Cognitive Bias in the US Debate about China." *Studies in Intelligence* 48, no. 3 , URL: . Last accessed 22 February 2022.
- LeGault, M. R. (2006).. *Think: Why Crucial Decisions Can't Be Made in the Blink of an Eye*. New York, NY: Threshold Editions.
- Moore, D., and Lisa Krizan, L.(2001). "Intelligence Analysis: Does NSA Have What it Takes." Reprint: NSA Center for Cryptologic History. *Cryptologic Quarterly*, 20, nos 1/2 (Summer/Fall): 1–33.
- Moore, D., and Lisa Krizan, L.(2001. "Core Competencies for Intelligence Analysis at the National Security Agency." In Swenson, Russell G., ed. *Bringing Intelligence About: Practitioners Reflect on Best Practices*. Washington DC: Joint Intelligence Military College, 2003: 95–2.

- Moore, D. T., Krizan, L and J. Moore, E. J. (2005). "Evaluating Intelligence: A Competency-Based Model." *International Journal of Intelligence and Counterintelligence* 18, no. 2 (Summer) : 204–220
- Moore, B. N and Parker, R. (2009). *Critical Thinking*: McGraw- Hill Higher Education, New York.
- Moore, D. T. (2002). *Creating Intelligence: Evidence and Inference in the Analysis Process*. MSSSI Thesis. Washington, DC: Joint Military Intelligence College, July
- Moore, D.T. (2002). "Species of Competencies for Intelligence Analysis." *Defense Intelligence Journal* 11, no. 2 (summer): 97–119.
- Paul, R.W., and Gerald Nosich. (nd). *A Model for the National Assessment of Higher Order Thinking*. Dillon Beach, CA: Foundation for Critical Thinking,.
- Paul, R. W., Elder, L. and Ted Bartell, T. (1997). *Executive Summary, Study of 38 Public Universities and 28 Private Universities To Determine Faculty Emphasis on Critical Thinking In Instruction.*" California Teacher Preparation for Instruction in Critical Thinking: Research Findings and Policy Recommendations. California Commission on Teacher Credentialing, Sacramento, California, 1997. Dillon, CA: Foundation for Critical Thinking,
- Paul, R.W (2003). "A Draft Statement of Principles," *The National Council for Excellence in Critical Thinking*, URL:, last accessed March 18, 2022.
- Paul, R.W., and Elder, L. (2004). *The Miniature Guide to Critical Thinking Concepts and Tools*, 4th Edition. Dillon Beach, CA: The Foundation for Critical Thinking,