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Introduction

This paper examines the nexus of intelligence education, training and practice in the context of intelligence internship experiences at the Advanced Technical Intelligence Center for Human Capital Development (ATIC) for students from three Midwestern universities. Students matriculating from intelligence studies programs often find their academic credentials are adequate, yet they lack practical training and experience necessary to secure entry-level positions within the Intelligence Community. The most efficient way for students to bridge this gap is through a professional internship, supplementing classroom study with field experience. While professional internships have existed for some time among Intelligence Community (IC) agencies and associated industry, the relatively low number of seats and the competitive nature of the selection process ensure only a small percentage of students are actually afforded these opportunities. Likewise, most of these programs do not provide practical skills training that entry-level analysts will see during their initial tenures once hired into the community. ATIC launched its Intelligence Internship Program in the fall of 2011 with an eye toward addressing all of these shortcomings. This paper highlights successes and strategic challenges that ATIC has encountered along the way in developing and maturing its program.

Issues in training and educating a professional intelligence workforce

...[The]distinctions between training and education are disappearing. Government agencies are providing educational opportunities to their students in addition to the more frequent training opportunities, while academia is simultaneously beginning to provide training in analytic production while maintaining its traditional educational role. Thus, at least in the U.S., the lines between government and academia, in terms of providing analytic training and education, are beginning to blur.¹

Stephen Marrin

The Problem

As Marrin points out, the lines between training and education for the professional intelligence workforce are becoming more and more blurred. Academia continues to explore the concept of intelligence studies as a true and independent academic discipline. Concurrently agency- and service-level training components face their own unique set of challenges in developing and delivering relevant and timely curriculum, while balancing skills enhancement with organizational and cultural competencies. Somewhere in the middle, the individual practitioner is

¹ Stephen Marrin, "Training and Educating U.S. Intelligence Analysts," *International Journal of Intelligence and Counterintelligence* 22:1 (2009): 131-132.

challenged with constantly evolving target sets, rapid technological innovation, wandering policy priorities, and the ever-present constrained budget.

At the entry level, there is no identified shortage of bright, talented and energetic young people who want to pursue a career in the intelligence workforce. However, securing a position in the IC is unlike almost any other profession, given the unique barriers to entry that the novice job seeker will face, particularly a recent college graduate with no relevant work experience. The challenge in human capital strategy for the IC is to marry their potential with proven capacity to perform at the high intellectual levels and professional standards required to become a successful intelligence analyst. This is a difficult exercise when the only credential they bring is an educational experience, i.e. a degree or certificate in intelligence studies, or some other substantive discipline with supplemental study in intelligence. Without practical experience within the community, particularly analytic experience, each entry-level personnel acquisition is a gamble for an IC agency, and a particularly expensive one given the up-front direct cost in non-productive wages and resource expense of an initial background investigation to determine eligibility for a security clearance. While the security clearance cost barrier is unique to the IC, the problem of vetting potential employees is certainly not. One way industries have elected to test the transitioning student is through a professional internship.

The concept is relatively simple: bring a student into the company for a short period of time (without assuming the risks associated with fully hiring them) and evaluate their performance in controlled situations to determine if the intern would make a good candidate for a position within the company. The internship concept is well established in the IC, for example with summer and other internship programs at intelligence agencies like National Security Agency (NSA) and the Central Intelligence Agency (CIA). However the availability of those internship opportunities is limited and therefore highly competitive. With the increase of intelligence-focused education programs around the country, and the resultant increase in the candidate pool for these limited opportunities, it is likely government agencies will not be able to expand their programs sufficiently to keep pace with the growing demand for these positions, if they have the capacity to grow them at all. Additionally, students who are selected for internships are not afforded extensive practical training to supplement their intelligence studies education curriculum. While some may receive limited training, the bulk of initial skills training will be reserved for the candidate who is officially hired into an agency. Adding the non-productive labor period while awaiting security clearance adjudication and initial training, it becomes clear that each entry-level employee hired into the IC is an expensive resource, long before they offset the initial investment with fruitful analytical production.

The Approach

Given the current conditions outlined above that recent college graduates face who intend to pursue a career in the IC, three distinct components emerge as critical for selection into the professional intelligence workforce:

- *Education.* Before the emergence of intelligence studies programs, students came from relevant substantive discipline programs. Today, many either supplement a substantive discipline degree with an intelligence studies minor or certificate program, or major in intelligence studies either at the undergraduate or graduate level.

- *Training.* Although many will have adequate qualifications through their education programs, most will not have focused, skills-oriented training in analysis, tools, tradecraft, or software.
- *Experience.* Recent graduates lack the experience of applying principles and concepts they learn in the classroom within a real-world operational environment.

The Advanced Technical Intelligence Center for Human Capital Development, a Dayton, Ohio not-for-profit firm established in 2006 to address human capital and technological shortfalls in the IC, recognized these challenges and launched its Intelligence Internship Program in September, 2011 to specifically address each of the three problem areas. With its initial focus primarily in the entry-level training domain, traditional ATIC alumni by 2011 were finding success in securing positions within the IC. ATIC felt it could extend this practical training experience to support college students through an internship experience. However while ATIC alums were enjoying success in placement, an internal review and survey of alumni indicated not having practical analytic work experience was a significant challenge for them in finding positions within the IC. In order to address this need, and also to address an identified critical shortfall among local law enforcement agencies, ATIC established the Center for Law Enforcement Analysis Training (CLEAT). The mission of CLEAT was to bring tools, techniques, and tradecraft from the IC and apply them to real-world law enforcement data sets. Drawing on advanced analytic techniques like Link Analysis, Human Terrain Mapping, Social Network Analysis, and geospatial visualization, ATIC alumni working as interns quickly established CLEAT as a critical law enforcement resource in Southwest Ohio. In return for their service, alumni were acquiring essential proficiencies and real-world practical experience, both to enhance skills learned in the classroom and to build their professional resume. In marrying the skills training learned in ATIC classrooms with the practical experience earned in CLEAT, alumni were well positioned to enter the IC job market. This two-tiered approach, with both a classroom and an experiential component, served as the foundational architecture of the internship.

In late 2011, ATIC entered into a pilot partnership with the School of Criminal Justice at Tiffin University to bring talented juniors and seniors from its Criminal Justice and Security Studies programs to ATIC under the umbrella of an internship. These students would spend a fifteen week semester in-residence at ATIC, with the first ten weeks in a training classroom and the remaining five weeks in an experiential learning exercise. From that initial partnership, now a year and a half later, ATIC has expanded the number of college and university partnerships to four, including Cedarville University, Indiana State University, and Westminster College (Missouri), and has graduated twenty-nine students from the Intelligence Internship Program. The process has been a vital learning experience not only for the interns, but also for the staff and faculty of ATIC. Some concepts initially thought important turned out to be not so, while other components grew out of necessity or simply as ideas and suggestions from the students themselves.

Building an Intelligence Internship Program

Program design

Education programs generally focus on conceptual and theoretical frameworks, while training programs on the skills required to perform tasks. Intelligence analysis is somewhat unique, in that the practice of analysis (i.e. the applied skill) is inherently an intellectual enterprise. In this context, training for an intelligence analyst necessarily is comprised of the application of mental and intellectual rigor *as a skill or technique*. This is the tradecraft of intelligence analysis, and over the several years has evolved through the application of structured analytic techniques like Analysis of Competing Hypotheses, Red Teaming, Alternative Futures, and a host of others. This bridge between understanding the conceptual foundations of critical thinking and applying them as skills to conduct intelligence analysis fundamentally defines the distinction between education and training within the analytic domain. The mission of ATIC's Intelligence Internship is to demonstrate this distinction to students in a classroom, and then afford them the opportunity to apply it to live missions.

Classroom Training

The first ten weeks of the fifteen-week internship are spent in a classroom. Intelligence Interns are integrated into the Analyst Boot Camp (ABC), a full time (Monday through Friday from 8:30 a.m. to 4:30 p.m.) intelligence analysis training program for novice analysts. Interns sit side-by-side with "traditional" ABC students and must meet the same requirements for attendance, academic performance, and professional conduct. In the ABC, students spend ten weeks learning the functions, missions, and roles of intelligence from the analyst's perspective. The first five weeks are introductory, focusing on fundamental analytic competencies including critical thinking, research, writing, and briefing, as well as core disciplines, or "INTs", including HUMINT, SIGINT, IMINT, GEOINT, and MASINT. Following a mid-term research and briefing assignment, students advance to focused topical study including "theme weeks", five one-day classes clustered around a central theme. For example, a week on Space and Missiles Analysis might include classes on ballistic missile proliferation, foreign space programs, counter-space analysis, and missile defense. Following a week of hands-on software familiarization in the ninth week, students finish with a capstone project where they are formed into small teams and conduct research on an intelligence requirement, drafting a product and then presenting their findings as a team in a professional Current Intelligence Brief.

Integration with traditional students

During the initial design of the Intelligence Internship program, the question arose of whether to integrate interns into the existing ABC or conduct separate classroom training for the interns, possibly with a modified curriculum to shorten the classroom time to allow for more experiential learning. The issue was debated from multiple perspectives, including the interns, the traditional ABC students, and the faculty. Ultimately, as is often the case, the decision was primarily driven by fiscal reality. Simply put, adding additional courses for the interns would drive up the cost past an acceptable level. Interns are integrated into the classroom with traditional ABC students, and it appears at this stage the decision turned out to be the right one, not only from the fiscal perspective, but from the student experience.

The demographics of a traditional ABC is anything but consistent. In its four-year history, the ABC has drawn students from a broad variety of backgrounds. When not taking the interns into consideration (as they drive down the average), the typical age of an ABC student is in their early to mid-thirties. Most of these are seeking a mid-career transition, meaning they generally hold a decade or more of professional experience. Career transitioning ABC students have included teachers, architects, software engineers, a commercial airline pilot, an ophthalmologist, and even a professional figure skater. Over ninety percent hold an undergraduate degree, with around thirty percent holding a graduate degree. The importance of the interaction among the interns and these students cannot be overemphasized. Sitting side-by-side, and partnering in team exercises, with older peers who bring professional experience gives the interns a daily lesson in how to conduct themselves in a professional environment. To reinforce this, all students, whether intern or traditional, are required to wear business casual for classes, and business attire when presenting briefings.

Writing: Representing results of structured analysis

One of the biggest challenges faced by students in the internship is the breaking of some bad habits learned in academia. This is not to say that these habits are not relevant and useful in an academic setting. Quite the contrary. These are proven and effective ways to learn, but as students begin to make the transition from learning to doing, it is essential for them to unlearn some old habits and start forming new ones. Foremost among these is shifting their audience from a professor to a policymaker. While professors want the student to demonstrate all they have learned, a policymaker only needs to know what is most important for them to do their job. Moreover, policymakers generally have a solid grasp of the background of issues and therefore are focused on new or upcoming details, not the long history of an issue that is so often the focus of academic papers.

Students in the internship are taught to focus on brevity and clarity over meeting a certain expected page count. While professors may assign ten, twenty, or even thirty page papers, no policymaker has the time to read such lengthy pieces. Intelligence analysts will generally write one to two page papers or deliver three to five minute briefings. This requires a more rigorous process that places the bottom line up front (BLUF) and focuses the analyst on only the most important information. Many students struggle with this transition as much of their educational experience and their related academic scholarship tends toward longer, more detailed expository papers. To overcome this challenge the students are given strict limits in space and time, as well as detailed feedback about how to better structure their pieces to meet policymaker needs.

Critical and Creative Thinking, Analytic Bias, and Tradecraft

Thinking is a fundamental component of intelligence analysis and tradecraft. Analysts often sift through volumes of data, some of which may be false or otherwise compromised, and make analytic assessments of its importance or impact, not simply a recitation of the most salient or common data points. In its approach to thinking, ATIC has woven critical, creative, and to a lesser extent divergent, thinking throughout the ABC curriculum. Intelligence Interns are exposed to these important concepts, and are expected to display their understanding of these concepts in analytic products that they generate throughout the course.

ATIC has adopted a simple definition of critical thinking: thinking about thinking while you're thinking. Although somewhat contrite, this definition captures the spirit of the reflective nature of pure critical thought and Socratic method. Interns are first introduced to critical thought early in the curriculum, in a class called "How to Think Like an Analyst" which focuses on not only reflective thought, but also on creative thinking (outside the box approaches to problem solving), and divergent thinking (viewing problems from more than one context and understanding that there can be more than one correct answer). Another foundational element introduced to students throughout the course is bias. Almost all ABC students and interns bring no previous study of thought bias from their education programs, and so a significant emphasis is placed on introducing them to the most common forms, and potentially most costly in terms of analytic judgment errors.

In both the How to Think and How to Write Like an Analyst courses, interns study cognitive and behavioral biases like Confirmation Bias and the Focusing Effect, probability and belief biases like Anchoring and Authority Bias, as well as social and ideological biases including Mirror Imaging and Projection Bias. A review of student course evaluations for these classes routinely reveals a high percentage of students who report they have had no formal instruction on the topic of bias in their own thought, which is not surprising outside psychology, sociology and related departments or programs within universities. Here again, like the ABC approach to writing, the curricular focus is on presenting bias through a set of techniques that analysts can use to identify and mitigate the negative effects of bias within their own analysis, and that of others.

Experiential Learning: Applying Skills

Once the student has completed the training component of their internship, they have an option to complete either a directed research project under the guidance of a sponsoring faculty member at their home institution, or to work in the CLEAT applying the skills they learned during the ABC. While it remains an option, no student has elected to write the paper. As a component of the internship agreement, all of the college's award internship credit goes to the intern, and most students are required to provide a written reflective assessment of their experience in the Intelligence Internship program. All of the interns to date have spent five weeks conducting analysis of law enforcement data to satisfy the experiential component of the internship program.

Law Enforcement Analysis in the CLEAT

The CLEAT provides an opportunity for students to apply the tradecraft they studied for ten weeks during the ABC against real-world live datasets. While the data and materials interns will work with are not classified, they are Law Enforcement Sensitive information and the students are required to strictly adhere to guidelines for handling sensitive information. Interns use cutting edge Link and Human Terrain analysis tools and software to build analytic products in support of ongoing local, state, and federal prosecutions. The CLEAT partners with law enforcement agencies and prosecutors, whose offices often do not have the resources to conduct the detailed and painstaking analysis conducted by CLEAT analysts. In this way, interns are exposed to a professional work environment, with deadlines and high expectations of quality in both their analysis and written and graphic products. According to one intern, Patrick who was a senior from Tiffin University, "In a way, the internship was a maturing process. I was treated as an adult and expected to perform as an adult."

Conclusion

The Intelligence Internship Program at ATIC in many ways draws from a traditional field-learning experience that many students would be familiar with. However by focusing on the skills domain, in a training vice education environment, in order to enhance the conceptual principles they learn in the college classroom, the Intelligence Internship seeks to provide a bridge from education to training, and ultimately to a career in the analytic community. The experience during the first year of the internship program was as expected, with some administrative and institutional challenges in negotiating terms and desired learning outcomes with individual colleges. Also, the structure of the program has survived the first year fundamentally intact, however minor administrative changes had to be made, always with an eye toward ensuring a positive student experience. The program continues to grow. In addition to the four universities who have already finalized agreements for their students to participate, nine more are in the process, at various stages in drafting and approval.